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Consideration of funding proposals – Addendum XXXIII Gender assessments and action plans

Summary

This addendum contains the gender documentation for funding proposals submitted for the consideration of the Board at its nineteenth meeting (FP059 – 081). The documents are included as provided by the accredited entities in the respective annex to each funding proposal.

Table of Contents

Gender documents for FP059

Gender documents for FP060

Gender documents for FP061

Gender documents for FP062

Gender documents for FP063

Gender documents for FP064

Gender documents for FP065

Gender documents for FP066

Gender documents for FP067

Gender documents for FP068

Gender documents for FP069

Gender documents for FP070

Gender documents for FP071

Gender documents for FP072

Gender documents for FP073

Gender documents for FP074

Gender documents for FP075

Gender documents for FP076

Gender documents for FP077

Gender documents for FP078

Gender documents for FP079

Gender documents for FP080

Gender documents for FP081

**Gender Assessment and Action Plan
for a funding proposal to the
Green Climate Fund**

Project Title:

Climate Resilient Water Sector in Grenada (G-CREWS)

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Table of Contents

Table of Contents	1
List of Abbreviations	3
1. Introduction	4
2. GCF and GIZ Guidelines for the promotion of Gender Equality.....	4
3. Methodology	5
4. Gender-related Aspects of Water Management and Climate Change.....	6
5. The Contextual Situation of Gender Equality in Grenada	9
5.1. Meta Level: Norms and Traditional Roles of Women and Men.....	9
5.2. Macro Level: International and Regional Commitments & National Legislation and Policies	11
5.3. Meso Level: Institutions and Non-Governmental Organizations	13
5.4. Micro Level: Gender Equality among the Target Group.....	14
6. Gender Expertise Necessary to the Future CREWS-Project Team.....	18
7. Gender-Sensitivity and Equal Opportunities in Partner Organisations	18
8. Recommendations for the Programme	20
Annex I – List of people interviewed during the mission	24
Annex II - List of international, regional and national agreements, declarations, policies and legislation relevant to gender equality and the empowerment of women and girls.....	25
List of Reference	27

List of Abbreviations

CDB	Caribbean Development Bank
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CREWS	Climate Resilient Water Sector in Grenada
CSO	Civil Society Organizations
ESIA	Environmental and social assessment
GCF	Green Climate Fund
GDI	Gender Development Index
GEPAP	Gender Equality Policy and Action Plan 2014-2024
GII	Gender Inequality Index
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HDI	Human Development Report
MoALFF	Ministry of Agriculture, Lands, Forestry and Fisheries
MoFE	Ministry of Finance and Energy
MoWPU	Ministry of Works and Public Utilities
NAWASA	National Water and Sewerage Authority
PCU	Project Coordination Unit
UNFCCC	United Nations Framework Convention on Climate Change

1. Introduction

Grenada's water supply sector relies largely on surface water sources and rainwater harvesting. While during rainy seasons the available water resources exceed the demand for water, there is a considerable deficit in dry seasons. Climate change related impacts exacerbate this problem of limited water availability due to the predictable annual rainfall decreases. At the same time, if average temperature rises saltwater intrusion in coastal groundwater aquifers will further limit the availability of water in the future. Additionally, more frequent heavy rainfall events –predicted to be another major impact of climate change – aggravate the problem of more frequent water supply outages due to high turbidity in the raw water supply. The water sector of Grenada represents therefore, one of the key sectors affected by climate change. As an accredited entity, and at the request of Grenada's government, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH intends to submit a funding proposal entitled "Climate Resilient Water Sector in Grenada" (CREWS) to the Green Climate Fund (GCF). This fund of the United Nations Framework Convention on Climate Change (UNFCCC) provides financial resources to low-emission and climate-resilient projects and programmes in developing countries.

The CREWS project aims at improving the climate resilience of Grenada's water supply system in order to increase the country's adaptive capacity to climate change. The major lines of the funding proposals comprise the following six components: Firstly, on the supply side, the project will support the National Water and Sewerage Authority (NAWASA) to render its water resources management more sustainable. Secondly, on the demand side, the project intends to reduce the water loss and water consumption by the private sector and households. Thirdly, various infrastructure measures shall help to improve the abstraction of water and its availability. Fourthly, sufficient financing is made available to ensure that future measures to make the system more climate-resilient can be implemented when needed, and allow for an introduction of climate-specific price-based demand management. Fifthly, preparedness of the existing and new infrastructure and the institutions for potential natural disasters like heavy rainfall events or hurricanes shall be increased. Sixthly, an awareness component is designed to complement and support the five components of the CREWS project as well as create awareness about the actions of the project itself.¹

In order to guarantee a gender-sensitive approach and implementation of the project and to meet the standard requirements of the GCF and GIZ, this gender analysis provides recommendations for the funding proposal for the CREWS project. This gender analysis does not claim to cover the entire gender equality situation of Grenada. It rather focuses on areas and sectors that are relevant to the CREWS project.

Overall, a multitude of recommendations have been identified by means of which the funding proposal can be designed in a gender-responsive manner. These can be found in Chapter 8 of this analysis.

2. GCF and GIZ Guidelines for the promotion of Gender Equality

According to the GCF's Gender Policy, "proposed projects or programmes submitted to the Fund are required to be aligned with national policies and priorities on gender and with the Fund's gender policy".² In the GCF's Action Plan 2015 - 2017, it is further described that "core elements include:

- 1) A mandatory initial socioeconomic and gender assessment, complementary to the environmental and social safeguards (ESS) process, which accredited entities will be required to undertake in order to collect baseline data, and to:
 - (i) Determine how the project/programme can respond to the needs of women and men in view of the specific climate change issue to be addressed;

¹ For more detailed information on the CREWS-project, the funding proposal can be consulted

² Green Climate Fund, Gender Policy and Action Plan, March 2015, GCF/B.09/10, Annex II, section IV, paragraph 4.4.

- (ii) Identify the drivers of change and the gender dynamics in order to achieve the project/programme adaptation or mitigation goals;
 - (iii) Identify and design the specific gender elements to be included in the project/programme activities;
 - (iv) Estimate the implementation budgets;
 - (v) Select output, outcome and impact indicators; and
 - (vi) Design project/programme implementation and monitoring institutional arrangements;
- 2) Gender equitable stakeholders' consultations with the gender parameters provided in the policy;
 - 3) Inclusion of gender perspective in the application of the mandatory project/programme social and environmental safeguards in line with project/programme-specific requirements of the Fund's ESS in accordance with decision B.07/02;³
 - 4) Project screening for gender sensitivity at the various stages of the project preparation, appraisal, approval, and monitoring process, by the relevant bodies ([National Designated Authority] NDAs, accredited entities, the Secretariat).⁴

In line with the above mentioned GCF Gender Policy, GIZ's Safeguards+Gender Management System and Gender Strategy⁵ require that a gender analysis is conducted at an early stage of the preparation phase of a project in order to identify potentials for promoting gender equality and risks that need to be avoided or at least mitigated through specific measures. The results and recommendations of this analysis are directly taken into account for the objective, indicators, the methodological approach and the results monitoring system of the project.

3. Methodology

As stated already in the introduction, the objective of this gender analysis provides an analysis tailored to those areas and sectors that are relevant to the CREWS project and makes recommendations in line with the requirements (a) (i)-(iii) and (v) as well as (b) of the GCF and GIZ's requirements as described in Chapter 2.

This gender analysis has been elaborated in three phases:

1. A desk review of relevant national, regional and international websites of the government of Grenada and statistical online databases;
2. Consultations with government and civil society representatives in Grenada in the framework of a five day mission to Grenada concluded by a stakeholder workshop;
3. Further research and finalization of the gender analysis.

Overall, the availability of documents and up-to-date sex-disaggregated data is limited. The Central Statistical Office of Grenada conducted the last population and housing census in 2011. Many databases, such as the Social Institutions & Gender Index (SIGI) and the Gender Institutions and Development Database 2014 (GID-DB), do not provide any, or only partially, statistics for Grenada. In the Human Development Report (HDI)⁶ the data for the Gender Development Index (GDI)⁷ and the

³ Green Climate Fund, "Guiding Framework and Procedures for Accrediting National, Regional and International Implementing Entities and Intermediaries, Including the Fund's Fiduciary Principles and Standards and Environmental and Social Safeguards", 7 May 2014, GCF/B.07/02.

⁴ Green Climate Fund, "Gender Policy and Action Plan", March 2015, GCF/B.09/10, Annexe III, Section II, paragraph 7, GCF/B.09/10.

⁵ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), „Gender Strategy – Gender Pays Off“, March 2012.

⁶ The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living (UNDP, Human Development Index).

⁷ The Gender Development Index (GDI) measures the ratio of female to male HDI values

Gender Inequality Index (GII)⁸ are not available for Grenada. Reports such as the “Climate Change Adaptation in Grenada: Water Resources, Coastal Ecosystems and Renewable Energy” compiled on behalf of the United Nations Department of Economic and Social Affairs (UNDESA) in cooperation with the Ministry of Environment, Foreign Trade and Export Development of Grenada in 2012 do not address gender roles and concerns.

The mission to Grenada took place from 15th to 19th of May 2017; at the same time with the mission of the external consultant who compiled Environmental and Social Assessment for the CREWS-project. Whenever judged appropriate, meetings with some stakeholders were held together. Consultations for this gender analysis were held with representatives from governmental ministries and bodies and civil society organizations (see Annex I for a full list). Amongst them civil society organizations working on gender equality issues and providing counselling services to women, children and people with disabilities which are in close contact with the population in their day-to-day work and thus have a thorough insider-perspective on the situation of gender inequality and discrimination in Grenada. Unfortunately, all representatives of the civil society organizations were women so that it was only to a limited extent possible to get to know the point of view of men on gender-related issues in these face-to-face consultations. However, at the concluding workshop with representatives from all stakeholders consulted during the mission for the environmental and social assessment and the gender analysis, both men and women participated.

With regard to the recommendations in this gender analysis, the nature and scope of the CREWS project has to be taken into account. Large parts of the envisioned measures and activities are of very technical nature. Hence, there is a limitation to what the project can accomplish with regard to the promotion of gender equality. Some discussions during the stakeholder workshop revealed that some participants seem to have the expectations that the CREWS-project might be able to tackle larger gender inequality problems in Grenada. This analysis attempts to identify the best entry points in order to respond to the different needs of men and women, girls and boys, as well as to leverage the potentials for promoting gender equality and hence, the positive impact of the project as a whole. Its minimum standard is the do-no-harm approach, meaning that the intervention of the CREWS-project does neither consolidate nor worsen existing gender inequalities nor create new ones.

4. Gender-related Aspects of Water Management and Climate Change

The following chapter gives an overview of important gender strategies in the water and climate change sector at international, regional and national level.

International level: Agenda 2030 and Integrated Water Resources Management

The **Agenda 2030** for Sustainable Development that heads of states and governments adopted in September 2015 at the UN Summit in New York represents the new overarching framework for international cooperation and provides a path forward for national and international sustainable development policy. It comprises seventeen Sustainable Development Goals (SDG). In addition to the stand-alone SDG 5 on gender equality and the empowerment of all women and girls, there are gender-responsive sub-goals in eleven other SDGs. With regard to water management, the second target of SDG 6 on availability and sustainable management of water and sanitation is in this regard important: “By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situation.” The international community, hence, acknowledges the importance of a gender-responsive approach also with regard to water management. Target 6.b of SDG 6 is important in this regard as well. It reads: “Support and strengthen the participation of local communities in improving water and sanitation

⁸ In the Gender Inequality Index (GII) countries are divided into five groups by absolute deviation from gender parity in HDI values. Group 1 comprises countries with high equality in HDI achievements between women and men (absolute deviation of less than 2.5 percent), while group 5 comprises countries with low equality in HDI achievements between women and men (absolute deviation from gender parity of more than 10 percent).

management". The international community, hence, sees the promotion of inclusive participation and consultations as key.⁹

The **Integrated Water Resources Management (IWRM)** is an internationally accepted, holistic approach in order to provide for an efficient, equitable and sustainable development and management of limited water resources. According to the definition of the Global Water Partnership (GWP), "IWRM is a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems."¹⁰ The IWRM comprises the following three areas:

- 1) creating an **enabling environment** by means of sound policies, legal frameworks as well as financing and investment structures. The goal is to ensure for environmental quality as well as the rights and assets of all stakeholders, including individuals, public and private sector organizations and companies, women as well as men, the poor as well as the better off.
- 2) setting up **institutional arrangements** by means of regulation and enforcement; water supply and sanitation services; coordination and facilitation systems as well as capacity building.
- 3) using **management instruments** to enable decision-makers to make rational and informed choices when it comes to water management and to tailor their actions to specific situations.

The first area explicitly includes that IWRM recognizes "the role of women as users and managers of water resources". Moreover, it underlines the importance of consulting civil society organizations (CSOs) are effective channels as "to ensure that the needs of the population are transmitted to other involved parties, especially to the government, and vice-versa."¹¹

The GWP "Strategy Towards 2020" published in 2014 contains firm commitments to gender equality by stressing that "women play a central part in the provision, management, and safeguarding of water".¹² In the same year, the GWP also launched its Gender Strategy providing analysis as well as policy advice on gender related issues and water resource management. It states that "gender roles do not only determine how women and men are affected by the way water resources are developed and managed; gender roles also determine how and what women can contribute to achieving universal access and to managing the resource sustainably, both in their individual capacity and as a Major Group in society."¹³ The GWP's Gender Strategy comprises three goals:

- 1) to "catalyse change in policies and practice" by means of "gender mainstreaming in integrated water resources management policies, planning, and implementation";
- 2) to "generate and communicate knowledge", which includes the collection of sex-disaggregated data; and
- 3) to "strengthen partnerships" on gender mainstreaming between the GWP and the 13 Regional Water Partnerships.¹⁴

In this regard, GWP Chair Dr. Oyun Sanjaasuren, explains that "gender equality is not only about equal access to resources, but it also means women should have an equal voice in decision-making."¹⁵ On 19 June 2017, the results of the GWP commissioned research on gender equality and inclusion in water resources management (WRM) and water, sanitation and hygiene (WASH) were presented and

⁹ United Nations, "Goal 6: Ensure access to water and sanitation for all".

¹⁰ United Nations Department of Economic and Social Affairs (UNDESA), "Integrated Water Resources Management."

¹¹ Global Water Partnership, "IWRM ToolBox!", accessed at 29 June 2017.

¹² Global Water Partnership, "Global Water Partnership Strategy Towards 2020", 2014, p. 12.

¹³ Global Water Partnership, "GWP Gender Strategy", 2014, p. 5.

¹⁴ Global Water Partnership, "GWP Gender Strategy", 2014, p. 9.

¹⁵ Global Water Partnership, "IWD2017: How Can the Water Community Step It Up for Gender Equality?", 8 Mars 2017, accessed 29 June 2017.

discussed at a high-level workshop in Stockholm, Sweden.¹⁶ In his opening statements, Jean Paul Penrose of the Department for International Development of the United Kingdom (DfID) said: “We need to articulate the case for water and gender better.”¹⁷ Maitreyi Bordia Das, Global Lead for Social Inclusion at the World Bank, pointed at the importance to use evidence and criticizes that “the narrative of gender and water is still stuck in an old framework of female vulnerability or women being a homogenous group.” The Gender and Social Specialist of the GCF, Rajib Ghosal, stressed that addressing gender equality and social inclusion in the water resource sector should be a combination of setting up frameworks, laws, and human rights principles to guarantee access to water as well as of addressing uneven power relations at community level and archaic social norms.¹⁸ Results and recommendation of the workshop are not yet publicly available.

The Integrated Water Resource Management in the Caribbean

The regional branch to which Grenada belongs is the Global Water Partnership-Caribbean (GWP-C). It has also adopted a gender approach. One of the key objectives of the GWP-C is “to establish proactive alliances in water resources management that are representative, gender sensitive, and participatory at the community, country, and regional levels.”¹⁹ According to the GWP-C technical focus paper on “Integrated water resources management in the Caribbean: The challenges facing Small Island Developing State”, “Women play a central role”. However, a sentence later, the paper states: “There is much debate about the extent to which this holds in the Caribbean and, as a result, the issue of gender in water affairs has received limited action. The urbanised nature of many of the Caribbean islands tends to mask the gender aspects around water management.”²⁰ The last aspect hints to the aspect that gender-related aspects in the Caribbean cannot be compared to those in other regions like Africa. In the case of Grenada, water provision at home does not imply that women and children in rural areas have to walk long distances in order to fetch water at remote lakes, rivers or waterholes and that thereby frequently become victims of sexual abuse and rape. In Grenada, more than 90% of households are connected to the water system.

Water Management in Grenada

In Grenada, the integration of gender-related aspects and the role of women in water resource management have been identified but not yet properly addressed and acted upon. The 2007 official “Road Map Towards Integrated Water Resources Management Planning for Grenada” stated that “as custodians of family health and hygiene and providers of domestic water and food, women are the primary stakeholders in household water and sanitation. Hence, a crucial element of the [concept of integrated water resources management] IWRM philosophy is that water users, rich and poor, male and female, are able to influence decisions that affect their daily lives.” Mr. Trevor Thompson of the Land Use Division, Ministry of Agriculture of Grenada, who served as Chair of the Global Water Partnership-Caribbean (GWP-C) from 2010 to 2013²¹ and has been consulted during the mission to Grenada, was quoted in the same report of highlighting the “side-lining of the role of women in water management and use”.

The Gender Equality Policy and Action Plan (GEPAP) for 2014-2024, which was approved by Cabinet of Grenada in June 2014, responds to that as it addresses water management in chapter “Gender, Climate Change, Natural Disaster and Natural Resource Management” (see also chapter 5.2). In the

¹⁶ Global Water Partnership, “Gender equality and inclusion in water resources management- High Level Workshop 19 June 2017”, accessed on 29 June 2017

¹⁷ Global Water Partnership, “Gender Equality from Theory to Practice”, 21 July 2017

¹⁸ Rajib Ghosal, Interview at the practitioner’s workshop on the gender equality and inclusion in water resources management on 19 June 2017 in Stockholm, Sweden.

¹⁹ Global Water Partnership - Caribbean, “Handbook”, April 2013, p. 2

²⁰ Global Water Partnership, “Integrated water resources management in the Caribbean: The challenges facing Small Island Developing States”, 2014, p. 44.

²¹ Global Water Partnership, “GWP-C Honours Former Chair Trevor Thompson for Long-Standing Service”, June 2015; accessed on 20 June 2017.

policy statement, the Government of Grenada formally states its commitment to “recognise and integrate the complementary roles of men and women into policies and programmes on disaster management, climate change, and natural resource development, and building a ‘green economy.’”²² However, the key findings in the same document show that “despite the fact that many aspects of the ‘green economy’ have gender dimensions, e.g. water management [...] discussions on gender equality are relatively absent from policy making, planning and development programmes on these issues”.²³

Implications for the CREWS-Project

The CREWS-project should build upon existing international, regional and national policies and strategies on gender-responsive water management, including the GEPAP 2014-2024, and support their further elaboration and operationalization in the Caribbean and Grenadian context. It should support the process of gender mainstreaming in all relevant policies, strategies and action plans at national level relevant to water management and climate change. This includes that women and men can equally participate in decision-making related to water management. In this regard, the CREWS-project can also build upon and enhance the capacity of relevant stakeholders to meet the Global Water Partnership-Caribbean (GWP-C) key objective “to establish proactive alliances in water resources management that are representative, gender sensitive, and participatory at the community, country, and regional levels” and relevant commitments of GEPAP 2014-2024.

5. The Contextual Situation of Gender Equality in Grenada

The state of Grenada is a tri-island nation consisting of Grenada, Carriacou and Petite Martinique. It is located in the Caribbean and one of the smallest states in the world. Overall, the islands have an area of 344 square kilometers (133 square miles), with the island of Grenada being 311 square kilometres (121 square miles). According to the latest census of 2011 realised by the Central Statistical Office of Grenada, the Grenada’s population amounted to 105,539, out of them 52,531 were females (49.77%) and 53,008 were males (50.23%).²⁴ According to the World Bank, the total population amounted to 106,825 in 2015 without specifying sex-disaggregated data.²⁵ The majority of the country’s population lives on the biggest island Grenada and about 5.000 people in Carriacou (around 51% of whom are males) and 500 people on Petite Martinique.²⁶

According to the Human Development Index (HDI) of 2016, Grenada’s HDI values 0.754. With this score, Grenada ranks 79 (together with Brazil) out of 188 countries and territories and is, therefore, placed in the high human development category. The HDI does not provide data on the Gender Development Index (GDI) and the Gender Inequality Index (GII) for Grenada. In fact, these indexes have never been measured for Grenada due to a lack of data provided by the Grenadian government.

5.1. The Meta Level: Norms and Traditional Roles of Women and Men

The Minister for Social Development and Housing states in the Handbook for the Gender Equality Policy and Action Plan 2014-2024 (GEPAP) that “gender-based discrimination [...] persists in some laws, traditions, customs and religious practices that prevent men’s and women’s full enjoyment of rights and

²² Ministry of Social Development and Housing, Government of Grenada, “Gender Equality Policy and Action Plan 2014-2024 – Handbook”, p. 20-21.

²³ Ibid.

²⁴ Dr. Rawwida Baksh, “Country Gender Assessment (CGA) Grenada”, Caribbean Development Bank, 2014, p. 17

²⁵ The World Bank, Data, accessed on 9 June 2017.

²⁶ CARILED, Country Study 2014: A review of gender related challenges affecting Local Government and MSMEs in Grenada”, February 2015.

equal participation in national development.”²⁷ This was further confirmed during the CREWS appraisal mission in May 2017. Respondents pointed to the traditional role of women in the household, the wage gap and the prevalence of gender-based violence committed predominantly against women and minors. All female respondents interviewed during the consultations explained that there is an unequal division of labour in the household with women shouldering the large burden including those related to use and management of water. In times of water supply outages or bad quality of water, this responsibility conflicts with other duties, including going to work on time. According to some interviewees, women are expected to wait until water is running again in order to ensure the water provision for the family while men are going to work as usual. Grenada has a high number of female-headed households where women have to provide for the family alone. If there is a lack of water, the situation is especially difficult for these women because they are simply alone with this task. The stereotype according to which men are supposed to be the breadwinner also largely persists despite the fact that in reality, many households are headed by women alone (see also sub-chapter 5.4).²⁸ The prevalence and intensifying incidences of sexual and gender-based violence that is mainly but not exclusively committed against women and girls is another manifestation of entrenched norms of male dominance, its cultural acceptance, the unequal position of women and the association with masculinity.²⁹

Even though there has been some transformation of traditional gender relations, including the responsibility in the household and at work according to the Caribbean Development Bank’s (CDB) country gender assessment for Grenada from 2014, the government of Grenada states that the public remains overall resistant to changes in this regard.³⁰ Even though the five CSOs consulted are working since several years on these topics, the interviews have revealed that, in general, discussions on gender equality and gender mainstreaming are still relatively new in Grenada. According to one interviewee, the majority of Grenadians do not know what gender equality means. Professor Eudine Barribeau, Vice Chancellor and Principal at the University of the West Indies, also shares this view. She is specialized on Gender and Public Policy and born in Grenada. She stated in a lecture held on 9th of May 2017, in St. George, Grenada, that “the country has no deep seated track record of promoting gender equality or seeking to change the ideological relations of gender that position women as ideologically inferior to men.”³¹ Moreover, according to her, the failed referendum on seven constitutional amendments of 24th November 2016 and the discussions before and after the referendum revealed that the notion of gender equality is not really understood by the majority of Grenadians. The sixth amendment bill on rights and freedoms comprised, amongst others, the inclusion of gender equality in order to guarantee equal rights and equal status in all spheres of life for both women and men. Even though the overall participation rate for this referendum was rather low as only 22,539 of 72,241 registered voters took part (31.2%), it is worth mentioning that this bill received the highest number of no votes. According to Barribeau, the discussion on gender equality was reduced to the fear that it provides a basis for legalizing same sex

²⁷ Ministry of Social Development and Housing, “Gender Equality Policy and Action Plan 2014-2024 - Handbook”, p. 1. ; See also: Committee on the Elimination of Discrimination against Women, “Concluding observations of the Committee on the Elimination of Discrimination against Women”; February 2012, CEDAW/C/GRD/CO/1-5, para. 19, p. 4

²⁸ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 79

²⁹ Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, pp. 6, 20, 29, 36, 61; Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p.68; Caribbean Local Economic Development Project (CARILED), “Country Study 2014: A review of gender related challenges affecting Local Government and MSMES in Grenada”, p. 8, February 2015.; U.S. Department of Labor, “Grenada 2015 Human Right Report”, 2015, p. 7.

³⁰ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, pp. 78-79; Government of Grenada, “National Report on the Fulfillment of the Brasilia Consensus of the Government of Grenada”, p. 5

³¹ Barribeau, Dr. Violet Eudine Violet, “The Signal and the Noise: Constitutional Reform and Contemporary Challenges for Grenada”, IGDS Professorial Lecture Series Marryshow House, St. Georges Grenada, May 9th, 2017, p. 19.

marriage and strengthening the rights of Lesbians, Gays, Bisexuals and Transgendered (LGBT) Persons whereas the matter of providing equal opportunities and rights was sidelined.³²

Implications for the CREWS-Project

Even though the CREWS-project's main goal is not about changing existing inequalities and gender-based discrimination in Grenada, it is important that the CREWS-project does not perpetrate or aggravate existing norms and traditional roles that disadvantage women in the Grenada's society. Therefore, the methodology and design of measures and activities as well as the monitoring system has to be gender-responsive and take into account the existing norms and forms of discrimination. Furthermore, the specific needs of women and men have to be considered in order to generate informed strategies to economise water usage and to realise behavioural change. Thus, women and men should be equally consulted and be asked on how they use water at home and how water consumption could be possibly reduced at household level. This would have the positive effect that men contemplate on household-matters that normally concern women. Overall, awareness raising campaigns have to recognise, but not promote, stereotypes and support re-thinking and -division of household labour based on sex. Furthermore, women and men should not be seen as two homogeneous groups but according to their specific situation, including their economic situation (see also Chapter 5.4.).

Consumption patterns differ in line with the different tasks and needs. Women use much more water for the private domain since they cook, clean, do the laundry and are responsible for taking care of the children and elderly, which includes their hygiene. Therefore, they have the tacit knowledge and can serve as multipliers to reduce water consumption at household level. Men tend to use water in the private domain for cleaning vehicles and for gardening. They have to be sensitized how to reduce the amount of water used for these tasks. Therefore, women's and men's behaviour and knowledge related to water usage at home should be identified in order to develop informed strategies, design gender responsive awareness raising campaigns and educative materials, measures and activities to effectively address economise water use and to realise behavioural change at household level.

With regard to gender-based violence, the CREWS-project cannot tackle the general problem. For Grenada, there are no indications that this type of violence is directly linked to water related issues, like in other countries where women and girls in rural areas frequently become victims of sexual abuse and rape while fetching water at remote lakes, rivers or waterholes. If the CREWS-project supports to some limited extent capacity-building of women in matters related to water management (such as plumbing) or if NAWASA tries to increase its female staff in more technical fields (see Chapters 5.4. and 7) GBV might play a role. Within interviews, it has been mentioned that some jobs (e.g. security guards, plumbers etc.) are difficult to be filled by women due to risk of sexual harassment.

5.2. Macro Level: International and Regional Commitments & National Legislation and Policies

In June 2014, the Cabinet of Grenada approved the Gender Equality Policy and Action Plan (GEPAP) for 2014-2024, which was elaborated by the Ministry of Social Development and Housing in a wide consultation process with civil society and the private sector. The GEPAP aims at eliminating persisting gender-based discrimination of some laws, traditions, customs and religious practices and at advancing gender equality accompanied by equity.³³ It "aims to provide a framework for:

- (i) the full and equal participation of men and women in the development process;
- (ii) assessing the different realities, needs and interests, challenges and opportunities of women/girl and men/boys through gender analysis;

³² Barriteau, Dr. Violet Eudine Violet, "The Signal and the Noise: Constitutional Reform and Contemporary Challenges for Grenada", IGDS Professorial Lecture Series Marrayshow House, St. Georges Grenada, May 9th, 2017, p. 21-22.

³³ Ministry of Social Development and Housing, "Gender Equality Policy and Action Plan 2014-2024 Handbook.

- (iii) identifying male and female ‘gender gaps’ in areas of political, economic, social and cultural life, and putting in place policies, plans and programmes to address these imbalances;
- (iv) allocating the necessary financial and human resource to address gender gaps in all sectors and at all levels through gender-responsive budgeting and planning, and
- (v) the equitable, effective and sustainable outcomes of programmes, actions undertaken by the Government, civil society and the private sector.”³⁴

The GEPAP covers ten policy areas: Culture and Socialization; Education and Training; Labour and Employment; Agriculture and Tourism, Economic Growth and Poverty Reduction; Climate Change, Natural Disaster and Natural Resource Management; Health and Well-being, Violence and Security; Leadership and Decision-Making as well as Legislative and Institutional Framework for Advancing Gender Equality.

The GEPAP is the national response to Grenada’s international and regional commitments targeting human and women’s rights, the elimination of discrimination against women and the protection of children (see Annex II for a full list). Grenada signed, amongst others, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1980 and ratified it ten years later without any reservation. In the same year of 1990, the country also ratified the Convention on the Rights of the Child (CRC) without any reservations and acceded its two Optional Protocols on the involvement of children in armed conflict and on the sale of children, child prostitution and child pornography in 2012. The Convention on the Rights of Persons with Disabilities was signed in 2010 and ratified in 2014 without any reservations. Moreover, Grenada supports international declarations and platforms such as the Beijing Declaration and Platform for Action of 1995 for women’s empowerment, the Brasilia Consensus of 2010 to promote and defend women’s rights and to achieve gender equality, and the Commonwealth Plan of Action on Gender Equality 2005-2015. Adopting the joint Caribbean position, Grenada also actively supported the inclusion of gender equality as a standalone goal and its mainstreaming in other goals in the Agenda 2030.³⁵

At regional level, Grenada is state party to the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women, also known as Convention of Belem do Para, in 2000. At national level, the Constitution of Grenada guarantees the human rights of everybody and prohibits discrimination by law and person.³⁶ Moreover, Grenada’s government has taken several legislative measures since 1990 with the aim to eliminate discrimination against women, amongst other in the area of sexual offences and child abuse, employment and equal payment for equal work, and education. In general, the Grenadian legislation does not directly discriminate against women even though wording is sometimes male-driven.³⁷

In practice, however, Grenada makes slow progress in implementing laws as well as international and national policies. The principle of non-discrimination is not fully enforced and there is no holistic gender mainstreaming among different ministries and departments.³⁸ The consideration of gender-related aspects, including the role of women, is also still underdeveloped in the policy-making, planning and development of the water management sector as shown in Chapter 4.

³⁴ Ministry of Social Development and Housing, Government of Grenada, “Gender Equality Policy and Action Plan 2014-2024 – Handbook.

³⁵ Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014

³⁶ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 82

³⁷ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 82

³⁸ Barriteau, Dr. Violet Eudine Violet, “The Signal and the Noise: Constitutional Reform and Contemporary Challenges for Grenada”, IGDS Professorial Lecture Series Marryshow House, St. Georges Grenada, May 9th, 2017, p. 21; Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 82; Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, p.10 - 12

Implications for the CREWS-Project

The foundation for the promotion of gender mainstreaming into policies exists. The GEPAP 2014-2020 comprises not only general goals on the promotion of gender equality, gender-responsive policy-making and women's participation but also strategic objectives and policy commitments in a specific chapter on climate change, natural disaster and natural resource management. In the framework of its first component, which includes the establishment of a climate-proof legislative and institutional framework in the water sector and the mainstreaming of climate change in policies and plans with relevance for the water sector, the CREWS-project should take into consideration this relevant chapter. It is key that the CREWS-project facilitates gender mainstreaming in policies and operational action plans related to water management (see also chapter 4). This requires, amongst others, that the project consults and actively involves gender focal points of all ministries relevant to the CREWS-project and of NAWASA as well as the responsible division of the Ministry of Social Development and Housing (see also chapter 5.3.).

5.3. Meso Level: Institutions and Non-Governmental Organizations

In Grenada's government, the Ministry of Social Development and Housing is responsible for the promotion of gender equality and mainstreaming. Within this Ministry, the headed by a female senior programme officer is principally dealing with this issue. The division is only responsible for the island of Grenada while for the other two islands the Ministry of Carriacou & Petite Martinique Affairs & Local Government is in charge. The division consists of three units: a gender unit, a parenting unit and a gender-based violence unit and as of May 2017 of 16 staff members out of which 6 are permanent. The CDB's country gender assessment on Grenada and the interviews revealed that due to a relatively low budget, staff shortages, inadequate technical capacities and deficient decision-making power, the Division's leverage for implementing its mandate is restricted and it remains highly dependent on external financial aid.³⁹ This also limits the Division's capacity to facilitate gender mainstreaming in other ministries and institutions in a pro-active way. When asked about the cooperation with the Ministry of Carriacou and Petite Martinique in order to implement gender-mainstreaming also to the other two islands of the State of Grenada, the Division of Gender and Family Affairs replied that they collaborate sometimes with its gender unit but there is no regular and institutionalized exchange and cooperation.

The instalment of a gender focal point system in April 2017 - as foreseen by the GEPAP - bears the potential to overcome this deficiency in the long run. As of May 2017, fourteen out of seventeen gender focal points were appointed, some with an alternate. They are all at senior levels in their Ministries. According to the GEPAP, their role comprises ensuring that gender equality and equity is mainstreamed in every policy, planning and service delivery. The first monthly meeting between them took place in April 2017. However, in order for the newly established gender focal point system to accomplish its tasks, more staff, appropriate budget allocations as well as special training on gender-mainstreaming, the promotion of gender equality and women's empowerment are needed according to the Division of Gender and Family Affairs.

There is a multitude of civil society organizations (CSOs) in Grenada participating in national, regional and international discussions on various issues, including, amongst others, gender equality, human and women's rights, child protection, support of people with disabilities, environment, education and health. The following organizations focus on the promotion of gender equality⁴⁰, of which the first two have been consulted in May 2017:

- Grenada National Organization of Women (GNOW);
- Legal Aid and Counselling Clinic (LACC)
- Programme for Adolescent Mothers (PAM),

³⁹ Caribbean Development Bank, "Country Gender Assessment (CGA) Grenada", 2014, p. 89, 92.

⁴⁰ Caribbean Development Bank, "Country Gender Assessment (CGA) Grenada", 2014, p. 91; Inter-American Development Bank, „Private Sector Assessment of Grenada“, 2013, p. 8.

- Grenada Planned Parenthood Association (GPPA); and
- Inter-Agency Group of Development Organizations (IAGDO).
- also GrenCap that promotes LGBT rights ⁴¹

Some of them have been also able to influence policy-making. GNOW, for instance, has mainly drafted the Protocol on Domestic Violence and Sexual Abuse for Grenada, initiated national consultations and handed it over to the government. In general, the government of Grenada works together with NGOs to promote issues on gender equality and human rights and raise awareness on gender issues and the rights of women.⁴²

Implications for the CREWS-Project

Like in the case of an existing policy and action plan on promoting gender equality (see chapter 5.2.), there is a basis on which the CREWS project can build upon. The Division of Gender and Family Affairs has the mandate to promote gender mainstreaming in other sectors, including the water sector and climate change-related sectoral policies. Additionally, there is a gender focal point system. The CREWS-project should collaborate with the Division of Gender and Family Affairs and the gender focal points of relevant ministries. The Division of Gender and Family Affairs and CSOs (such as GNOW as umbrella organization) could also be invited to relevant consultations, including the meetings of the steering committee of the CREWS-project. Under component 1, this support could include the active involvement in policy-making and stakeholder consultations in the area of gender mainstreaming with regard to water management and climate change. If they have not been sufficiently trained by the time of the implementation of the CREWS-project, they should also receive training on these issues.

Furthermore, the Division of Gender and Family Affairs and CSOs that are actively promoting gender equality could support the conception and implementation of awareness raising campaigns under component 6.

5.4. Micro Level: Gender Equality among the Target Group

This section briefly examines the gender equality situation in the areas of political participation, decision-making and leadership; education and economic participation.

Political participation, Decision-Making and Leadership

Despite a high representation in politics, judiciary and trade unions, the Division of Gender and Family Affairs points out that there are still challenges to gender equality in leadership. As Professor Eudine Barriteau phrases: “Grenadian women are everywhere in the economy, political system and civil society, but this is more by the force of their personalities and work ethics than any state sponsored mechanisms to redress built in biases that hamper women’s participation.”⁴³

Since the last elections in 2013, there are five female representatives of fifteen members in the House of Representatives (Lower House), which represents 33%. In the Senate (Upper House), 2 out of 13 members are female, which constitutes 15.2%. Thereby, women also took over prominent positions. For

⁴¹ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 91; Commonwealth Education Online, „ Civil Society in Grenada”.

⁴² United Nations, Commission for Latin America and the Caribbean (ECLAC), “Caribbean synthesis review and appraisal report on the implementation of the Beijing Declaration and Platform for Action”, October 2015, p. 38.

⁴³ Barriteau, Dr. Violet Eudine Violet, “The Signal and the Noise: Constitutional Reform and Contemporary Challenges for Grenada”, IGDS Professorial Lecture Series Marrayshow House, St. Georges Grenada, May 9th 2017. , p 21.

instance, three women were President of the Senate between 1990 and 2013. In May 2013, the Queen of England has appointed for a second time – the first time since independence in 1974 – a woman as female head of state. Moreover, a Women’s Parliamentary Caucus was established in 2010.⁴⁴ In the civil services, many women serve in the corps of Permanent Secretaries supervising respective government ministries.⁴⁵ In the judiciary, men tend to be underrepresented. All Registrars of the Supreme Court of Grenada are women and 4 out of 6 magistrates are females. While trade unions remain in Grenada largely male dominated, the Trades’ Union Council is headed by a woman.⁴⁶

Education

In Grenada, literacy levels are high and boys and girls have equal access to education. The Education Act of 2002 explicitly aims “to promote the principle and practice of gender equality”. The government provides free, compulsory universal primary education and secondary education for all who qualify. Subsidies for tertiary education are available as well.⁴⁷ According to figures provided by UNESCO Institute for Statistics, the total percentage of net enrolment rate⁴⁸, of children at primary education age, rose from 90.09% in 2007 to 95.73% in 2015. More girls do enroll in tertiary education than boys.

Economic participation

Overall, Grenada’s economy is largely dependent on services (especially tourism, hotels and catering), agriculture and fisheries. All three are closely connected to and depend on a well-functioning water management system.

The data of the 2011 Population and Housing Census indicate that men predominate in the following occupational fields related to water management and use: agriculture, forestry and fishing; water supply and sewerage, waste management and remediation activities, construction, information and communications and in administrative and support services. In agriculture, they are most often field worker and more farms are owned by men. In tourism, they are employed in agro-tourism and horticultural sections and tend to be owners and managers of hotels, guesthouses and restaurants.

Women on the other side predominate among others in food services; scientific and technical activities; education; health and social work. Women tend to work in agro-processing within the agricultural sector and as market vendors of local food, spices and crafts and as administrative staff, cooks and waitresses in hotels, guesthouses and restaurants within the tourist sector. In primary and secondary education, female teachers are more often represented than male teachers are.

⁴⁴ Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, p. 2, 5

⁴⁵ Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, p. 25; United Nations, Commission for Latin America and the Caribbean (ECLAC), “Caribbean synthesis review and appraisal report on the implementation of the Beijing Declaration and Platform for Action”, October 2015, p. 28.

⁴⁶ Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, p. 1, 5

⁴⁷ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 50; Caribbean Local Economic Development Project (CARILED), Country Study 2014: A review of gender related challenges affecting Local Government and MSMEs in Grenada”, February 2015, p. 7; Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, pp. 8, 20; U.S. Department of Labor, “Grenada 2015 Human Right Report”, 2015, p. 5

⁴⁸ Net enrollment rate: Total enrollment in primary education expressed as a percentage of the population of official primary education age, whereby it excludes overage and underage students.

Occupational fields, which show some gender parity, are mining and quarrying; real estate; and public administration; defence and social security. When men establish their own micro, small and medium enterprise (MSME), they often choose primary production or retail of primary produce or manual labour such as fishing, farming, and construction. In contrast, women's business and offered services tend to be based on value added products of local produce, such as agro-processing or confectionary, art and craft and catering; many of which they can do at home.⁴⁹

Even though the boundaries are not strict, there is restricted mobility between the type of work that women and men can perform in Grenada. The interviews revealed that past employment creating opportunities in the framework of which women were trained in traditional male-dominated jobs face some challenges as they failed to address and sensitize the co-workers on traditional gender roles and stereotypes. Interviews have revealed that a women, for instance, who became a mechanic felt ridiculed in her new job because her male colleagues felt that she should not do heavy manual work and mainly assigned her to do cleaning.

With regard to labour force participation and unemployment, the latest figures available from the Central Statistical Office of Grenada are from 2011. According to these, there is a higher predominance of women in the labour force. Nonetheless, women's participation in the labour force was lower than among men (53.5% female: 67.4% male), particularly on the islands of Carriacou and Petite Martinique. This tendency is also reflected in the unemployment rate of 2011, which were much higher among women (31.8%) than they were among men (17.9%). Among the 36.3% unemployed youth who were younger than 25 years, young women were also more often unemployed than young men were. Hence, women tended to be disadvantaged with regard to formal employment. The highest unemployment rates are found among rural women.⁵⁰ One has to acknowledge, nonetheless, that there have been improvements with regard to the number of women in the workforce.

Those women who are formally employed tend to earn a lower wage than men despite of a legally enshrined minimum wage law. The percentage of poverty among the high number of female-headed households in Grenada exceeds the poverty of male-headed households.⁵¹

Overall, men do work more often in the private sector, while women are more likely to be employed in the service sector where wages are typically lower. Additionally, due to the traditional division of labour at home (see chapter 5.1.), women who work also have to take care of the household and childcare so that they spend more time than men on reproductive, unpaid work.⁵²

⁴⁹ Caribbean Development Bank, "Country Gender Assessment (CGA) Grenada", 2014, p.49; Caribbean Local - Economic Development Project (CARILED), "Country Study 2014: A review of gender related challenges affecting Local Government and MSMES in Grenada", February 2015, p. 6, 11; Inter-American Development Bank, „Private Sector Assessment of Grenada”, 2013, p.6; Ministry of Social Development and Housing, Government of Grenada, "Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action", April 2014, p. 6; Ministry of Finance and Energy, "Grenada Census of Agriculture 2012: Gender Thematic Analysis Document", 2015, p. 28.

⁵⁰ Caribbean Development Bank, "Country Gender Assessment (CGA) Grenada", 2014, p. 17, 48; United Nations, Commission for Latin America and the Caribbean (ECLAC), "Caribbean synthesis review and appraisal report on the implementation of the Beijing Declaration and Platform for Action", October 2015, pp. 6-8, 16; Ministry of Social Development and Housing, Government of Grenada, "Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action", April 2014, p. 16

⁵¹ Caribbean Local Economic Development Project (CARILED), Country Study 2014: A review of gender related challenges affecting Local Government and MSMES in Grenada", February 2015, pp. 13; Inter-American Development Bank, „Private Sector Assessment of Grenada”, 2013, p. 23; Ministry of Social Development and Housing, Government of Grenada, "Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action", April 2014

⁵² Caribbean Local Economic Development Project (CARILED), "Country Study 2014: A review of gender related challenges affecting Local Government and MSMES in Grenada", February 2015, pp. 6-7; Ministry of Social Development and Housing, Government of Grenada, "Grenada National Beijing+20 – Review an Examination of

With regard to access to credit and loans women tend to receive less than men do, even though there are no discriminatory laws and women are typically seen as more diligent in the payment of loans. For instance, 57.8% of the borrowers of the National Development Foundation of Grenada were men in 2013 and they received loans accounting for 70% of the total funds available. The situation is similar with regard to access to land. Even though there is no discriminatory law, fewer women than men access and own land in Grenada.⁵³

Implications for the CREWS-Project

The government provides for free primary and secondary education and the net enrolment rate of girls and boys for primary education is almost equal. Hence, girls and boys have in principle the opportunity to pursue, for instance, careers in technical fields such as water management. During the stakeholder workshop at the end of the mission, one wish was that more jobs are created for women in this sector. Not being a project in the area of employment promotion, it will be not possible that the CREWS-project fulfils such expectations on a large scale. However, in the framework of awareness raising campaigns on water management and efficiency in water usage, for instance in schools, the CREWS-project could also raise awareness about technical jobs in this field. Moreover, the CREWS project could train economically disadvantaged women without a steady job as advisors in water-saving techniques, small plumbing measures, rainwater harvesting, water use for home gardening, cooperating with NAWASA etc. These women could assist as change agents and multipliers in their communities and homes for efficient use of water. At the same time, this would provide opportunities for women to generate income as advisor in their communities and reduce expenses, such as fees for hired plumbers for small reparations. The approach of the Water Wise Women Initiative (WWWI) project of GIZ in Jordan could be used as a basis while being adapted to the cultural context of Grenada. The interviews have shown that such measures would have to be flanked by sensitization measures – especially among men and male co-workers – about the advantages of women taking over such roles and opportunities in order for women to be accepted in these fields of employment.

Women also tend to be already more aware of the necessity to save water which is one more reason to promote them as change agents. Two “knowledge, attitudes and practices” (KAP) surveys conducted by UNDP within the Japanese-Caribbean cooperation in 2013 and 2016 have shown that there tend to be a general awareness among Grenadians for the danger of water shortage and the necessity to save and collect water at home. The possibility of saving water is often or at least sometimes discussed whereby women are more likely than men to talk about it. One reason is certainly the role of women in the household and as primary caregivers for children and the elderly.⁵⁴

In the political and economic sphere, there tend to be higher and more prevalent discrimination against women. The CREWS-project should take care that especially economically disadvantaged households benefit from freely provided infrastructure measures by NAWASA that aim at reducing water consumption at home. The planned tariff study assessment should also take into account the ability of economically disadvantaged households to pay for water bills and provide for remedies if a raise of the water tariffs becomes necessary. For the latter case, the existing assistance programmes where the state pays the water bills of the poorer households should be further increased.

the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, p. 15.

⁵³ Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, 2014, p. 37; Caribbean Local Economic Development Project (CARILED), “Country Study 2014: A review of gender related challenges affecting Local Government and MSMES in Grenada”, February 2015, p. 6, Ministry of Social Development and Housing, Government of Grenada, “Grenada National Beijing+20 – Review an Examination of the Achievements and Challenges in implementing commitments of the Beijing Declaration and Platform for Action”, April 2014, pp. 16, 25

⁵⁴ OECS, “Climate Change Knowledge, Attitudes and Behavioural Practices in the OECS - report on the KAP survey of six participating member states”, July 2013, p. 47; UNDP-JCCCP, “UNDP-JCCP In-Country Specific Campaign for Grenada - Results of Climate Change Awareness survey”, October 2016, p. 6-7.

With regard to funding small water efficiency measures via a fund, criteria should be developed to ensure that structural or other existing barriers do not prevent female entrepreneurs from applying for and receiving these funds. This is important in order to avoid that mainly male entrepreneurs receive these funds as it often happened in the past with regard to loans and credits. If a bank will process such a fund for the CREWS-project, it has to be ensured that this bank has a gender policy in place for the disbursement of a fund or that the bank is assisted to develop a (preliminary) gender-policy beforehand. During a meeting with the Grenadian Development Bank (GDB) in the framework of the appraisal mission, the general manager expressed his willingness to create a gender policy that does not exist yet.

6. Gender Expertise Necessary to the Future CREWS-Project Team

The CREWS-project should comprise at least one advisor who possess in-depth knowledge in gender equality and gender mainstreaming. This expertise should be included in the descriptions for the vacancy. Additionally, all members should have a general knowledge on gender mainstreaming. The employee responsible for the monitoring should be familiar with gender responsive monitoring and evaluation.

If necessary, staff should receive training on gender-responsive project management. The Academy for International Cooperation of GIZ that provides human resource development and training courses for internal customers and external clients offers, for instance, trainings on gender-responsive project management and on conducting gender-analysis. Additionally, they should participate in gender-related trainings for the water sector.

Moreover, staff members of the CREWS project should respect the present GIZ Gender Strategy and apply internal guidelines and handbooks related to gender mainstreaming such as the Guidelines on Designing a Gender-Sensitive Results-Based Monitoring System, the Practical Guide to Gender-Responsive Project Management and the Guidelines on Gender in Reporting.

A gender-focal point who is responsible for gender mainstreaming and a gender-responsive monitoring in the CREWS project should be appointed. Moreover, the focal point should be responsible for the communication and cooperation with the GIZ gender focal point for the Caribbean as well as the gender focal points of the other relevant ministries, Grenada's National Water and Sewerage Authority (NAWASA), the Project Coordination Unit (PCU) (see also Chapter 7).

7. Gender-Sensitivity and Equal Opportunities in Partner Organisations

Grenada's National Water and Sewerage Authority (NAWASA), the Project Coordination Unit (PCU) and other relevant ministries of Grenada will be the main partner organizations.

NAWASA will be the main recipient entity of the CREWS project and mainly responsible for the day-to-day implementation of most of the technical components. It has a staff compliment of 229 employees, which consist of both permanent and contracted workers. Of these employees, 179 (78.2%) are male and 50 (21.8%) are female. Hence, there is a general gender imbalance at NAWASA. Male employees are predominant in the technical fields including the Department of Production Quality, Department of Transmission and Distribution, Department of Planning and Development as well as the garage. In the Finance Department, there is an equal balance. Women predominate in the Human Resource Department, the Communications Unit and the Legal Unit (see Table 1). According to the Environmental and Social Assessment, current observed material conditions for women at NAWASA (including cloakrooms, toilets) seem sufficient (see Chapter 6.3. on Labour and working conditions of the Environmental and Social Assessment for the CREWS-project). This division of gender is also reflected in the current NAWASA's senior management team, that has currently a gender balance: four manager are women (finance manager; human resources manager, legal counsel/corporate secretary manager and administrative assistant to the general manager) while four are men (the general manager,

production and quality manager; transmission and distribution manager, planning and development Manager).⁵⁵ NAWASA's board consists of 5 men (62%) and 3 women (38%) for the period of 2015 – 2017.⁵⁶

The PCU under the Ministry of Finance and Energy (MoFE) will be the executing entity in charge of procurements and management for the infrastructure components of the project. There are currently nine staff members working in the PCU and all of them are female. Besides the MoFE, other relevant ministries include Ministry of Works and Public Utilities (MoWPU) which provides oversight for NAWASA's activities as a water utility as well as the Ministry of Agriculture, Lands, Forestry and Fisheries (MoALFF). The exact female-male-ratio of their staff have not been assessed. During the appraisal mission, the meeting with the MoALFF has revealed that they have neither a gender policy nor a monitoring system that provides for sex-disaggregated data (e.g. with regard to how many farmers have benefited from capacity building measures). This underlines the observations that gender mainstreaming is still not widely entrenched in policy-making and implementation (see also Chapter 5.2.). While the MoFE has appointed two gender focal points (incl. one alternate) and the MoALFF one, there is not for MoWPU yet.

The Grenada Development Bank (GDB) is a public statutory financial institution specialized in providing funding to Small and Medium Enterprises (SME). The GDB will be the executing entity for the implementation of the grant-based funds. The bank does not possess a gender policy but it expressed its willingness during the consultations to establish one.

Implications for the CREWS-Project

The CREWS project should encourage all relevant partner ministries and institutions to appoint a gender focal point if they have not done it yet. These gender focal points should be trained if still necessary. Moreover, cooperation between them and the Division of Gender and Family Affairs of the Ministry of Social Development and Housing should be facilitated in order to guarantee gender-mainstreaming, gender-responsive project management and monitoring in policies, strategies and action plans related to the water sector (see also Chapter 5.3. and 5.4.).

For the case of NAWASA, the presence of women in technical fields and in the Planning and Development Department should be promoted. The GDB should receive advisory and training in order

Department / Unit	Number of employees		
	Female	Male	Total
Transmission and Distribution Department	5	56	61
Production and Quality Department	1	62	63
Planning and Development Department	0	20	20
Finance Department	29	29	58
Human Resource Department	9	1	10
Communications Unit	2	0	2
In-House Legal Unit	3	0	3
Information System Unit	0	1	1
Office of the General Manager	1	1	1
Garage	0	9	9
Total	50	179	229

⁵⁵NAWASA (official website), "Senior Management Team".

⁵⁶ Caribbean Development Bank, "Country Gender Assessment (CGA) Grenada", 2014; NAWASA (official website), "Board Directors 2015 – 2017".

to develop, implement and monitor its own gender policy. Both NAWASA, PCU and GDB should be advised to appoint a gender focal point who is responsible for gender-related issues in their organizations/institutions with regard to activities and measures in the framework of the CREWS-project.

8. Recommendations for the CREWS-Project (including specific actions)

The following recommendations are not listed according to importance and priority. They should be integrated as much as possible into the funding proposal as well as operational planning and monitoring systems. The gender analysis is a living document that should be continuously reviewed and developed during the project phase.

General recommendations:

Recommendation 1: In line with the Caribbean Development Bank, “Country Gender Assessment (CGA) Grenada”, communities should be trained in household water use and collection systems, supported to implement them at the household and neighbourhood level, and encouraged to engage in local and national decision-making on water use. Women and men should be equally involved in related consultation processes, surveys, assessments and especially the water tariff study.

Recommendation 2: In order to take into consideration multiple discrimination and special needs, it has to be ensured during the planning and implementation of measures and activities that disadvantaged groups such as poor households, female-headed households and people with disabilities – from rural and urban areas – are always consulted in order to take into account their views and needs. Also with regards to target groups for activities, funds and awareness raising campaigns such as farmers, service providers and the business community, an equal representation of female and men should be ensured.

Recommendation 3: The availability of up-to-date, sex-disaggregated data poses a problem in Grenada. In future assessments and surveys (e.g. as foreseen in component 6) data and information should be always generated in a sex-disaggregated manner. The sex-disaggregated data should inform the targeting and design of the measures, the monitoring system, reporting and evaluation of project activities. In this way, the CREWS-project can contribute to Grenada’s ability to deliver on and report against the Agenda 2030 and to support the Action Plan for Statistics of the Caribbean Community (CARICOM) that the CARICOM Heads of Government have endorsed in July 2016 and that the Prime Minister of Grenada advocates and supports.⁵⁷

Recommendation to support gender mainstreaming in the sector of water management

Recommendation 4: The CREWS-project should build upon existing international, regional and national policies and strategies on gender-responsive water management and support their further elaboration and operationalization in the Caribbean and Grenadian context. These existing policies and strategies include, for instance, the Global Water Partnership’s Gender Strategy and Strategy Toward 2020, the gender approach of the Global Water Partnership – Caribbean as well as the chapter relevant of the Grenadian Gender Equality Policy and Action Plan 2014-2024 (GEPAP).

This includes that women and men can equally participate in decision-making related to water management. In this regard, the CREWS-project can also build upon and enhance the capacity of relevant stakeholders to meet the Global Water Partnership-Caribbean (GWP-C) key objective “to establish proactive alliances in water resources management that are representative, gender sensitive,

⁵⁷ CARICOM, “Heads of Government endorse Action Plan for Statistics”, July 2016, accessed 20 June 2017.

and participatory at the community, country, and regional levels” and relevant commitments of GEPAP 2014-2024

Recommendation 5: The Division of Gender and Family Affairs and the gender focal points of the ministries to the CREWS-project should be activated as drivers of change in the design and implementation of climate change policies in the water sector (Component 1) as well as other documents and strategies. NAWASA and PCU should be advised to appoint gender focal points as well. In order to enable them to take up this role, they should be beneficiaries of capacity development measures.

The project should actively support the **Division of Gender and Family Affairs** of the Ministry of Social Development and Housing to enhance its capability of mainstreaming gender in the sector of water management and climate change as laid down in the GEPAP 2014-2021. This could include trainings and its active involvement in strategic policy development (see below) as well as financial and technical support in communicating the GEPAP to a broader audience in the ministries, NAWASA and other institutions that are relevant to the CREWS-project. The Division of Gender and Family Affairs should become part of the Steering Committee of the CREWS-project.

The newly installed **focal point system** at ministerial level should be supported, particularly those focal points of ministries relevant to the CREWS-project, and used as a multiplier to ensure that gender-related aspects and the needs of women and men are integrated into climate change policies, action plans and strategies. NAWASA, PCU and the GDB should be advised to appoint a gender focal point who is responsible for the implementation of measures and activities in the framework of CREWS as well.

Both staff members of the Division of Gender and Family Affairs, the gender focal points of the relevant ministries, NAWASA and PCU and climate focal points should benefit from **trainings** in the area of gender equality and gender mainstreaming with regard to climate change and water management. Furthermore, they should also receive basic training on gender equality and gender mainstreaming as well as on other crucial areas such as gender-responsive budgeting, project-management, reporting, monitoring and evaluation if they have not received such trainings yet. GIZ manuals and trainings on gender-sensitive project cycle management and results-based monitoring exist and can be used as a basis while they should be adapted to the context and needs of Grenada.

Furthermore, the relevant gender focal points should be **actively addressed and invited to strategic discussions and workshops**; their **input** to the development of policies, action plans and strategic documents **should be taken into account and actively requested**. In this way, the project can contribute to gender-sensitive policy and decision-making that take into account different needs of men and women while supporting the promotion of gender-equality.

Recommendation 6: With regard to the financing scheme to support water efficiency measures by water users (Component 2), it should be ensured that men and women have equal access to these funds as well as to information on how to apply for them.

The Grenadian Development Bank (GDB) has expressed its intention to develop a gender policy – also because it is one of the requirements to be accredited to the GCF in the future. Ideally, the GDB elaborates such a gender policy – or at least a first draft – before the fund is set up in the framework of component 2. In this way, it can be better ensured that the criteria for granting the fund is designed in a gender-sensitive way and that it takes into account the challenges that prevented women in the past to apply for and receive funds and credits. The CREWS project could provide advice to the GDB in the elaboration and early testing phase and – if necessary – revision and adaptation of the gender policy. Moreover, the GDB should be encouraged to appoint a gender focal point who is tasked to closely work together with the CREWS-project in general and its gender focal point in particular.

Recommendation 7: Actively involve women's organizations and female businesspersons in consultations and awareness raising campaigns (Component 6 and Component 1).

In the past, women's organizations have been a key driver in proposing laws and policies to the Division of Gender and Family Affairs and in initiating wider stakeholder consultations. At the same time, their expertise has nourished critical discussions. This driver should be supported by associating civil society organizations (CSO) that have been identified in Chapter 5.3 in all consultations and awareness raising campaigns. They can be furthermore multipliers as they are often in close contact with the population. One of the CSO umbrella organizations should be part of the Steering Committee of the CREWS-project.

If these organizations still lack special expertise with regard to gender, climate change and water management, it is recommendable to invite some members of women's organizations to trainings organized, for instance, for the gender focal points of the ministries.

Recommendations to promote gender equality in Grenada:

Component 2 (water demand management to reduce water loss and water consumption) and Component 6 (communication strategy to complement and support the five other components), are seen especially as entry points to generate effective leverage for drivers of change and gender dynamics and, thus, to promote gender equality and to empower women to a certain extent.

Recommendation 8: Address women and men at household level equally in the consultations as well as the planning and design of awareness raising campaigns and educative measures (Component 6).

Women are still predominantly responsible for taking care of household chores and often perceived as the sole managers of water resources at household level. While consumption patterns differ in line with the different tasks and needs, women's and men's behaviour and knowledge related to water usage at home should be generated in order to create informed strategies aiming at economising water use and realising behavioural change at household level. Hence, women and men should be equally consulted and be asked the same questions on how they use water at home and how their consumption could be possibly reduced. This would have the twofold positive effect that men contemplate on household-matters and that the typical misconduct of men in using water inefficiently at home (for instance with regard to washing vehicles) could be adequately addressed and integrated in strategies, the design of awareness raising campaigns and educative materials, measures and activities. Overall, awareness raising campaigns have to recognise, but not promote, stereotypes and support re-thinking and -division of household labour based on sex.

Recommendation 9: In the framework of awareness raising campaigns on water management and efficiency in water usage, the CREWS-project could promote women as change agents and multipliers at national and community level (Component 6) and that it addresses women, men, youth and children equally.

The tacit knowledge of women and men with regard to water management at home should inform strategies for efficient water usage at household level. Hence, they should be involved in developing these strategies. Additionally, the CREWS project could train women – especially economically disadvantaged and female-headed households – in water-saving techniques, small plumbing measures, rainwater harvesting, water use for home gardening, etc. They could spread this knowledge into their communities. At the same time, this would provide opportunities for women to generate income as advisor in their communities and reduce expenses, such as fees for hired plumbers for small reparations. The approach of the Water Wise Women Initiative (WWWI) project of GIZ in Jordan could be used as a basis while being adapted to the cultural context of Grenada. The interviews have shown, that such measures would have to be flanked by sensitization measures – especially among men and male co-workers – about the advantages of women taking over such roles and opportunities

Recommendation 10: The future employees of the CREWS-project need to have gender-competencies; ideally, one gender-expert or an advisor with sound gender-expertise is recruited. In order to ensure that gender-aspects are respected throughout the project cycle management – including activities, consultation of partners, reporting and monitoring – all project members should take part in gender-specific capacity-development measures.

Annex I – List of people interviewed during the mission

Surname, Name	Function, Institution/ Organisation
Bernard, Leonard St.	Head of Laboratory Service Division, Grenada Bureau of Standards
Cornwall, Shakey	Counsellor, Legal Aid and Counselling Clinic
Geiss, Marion	Advisor, Grenadian-German Pilot Project on “Integrated Climate Change Adaptation Strategies in Grenada” (ICCAS), Deutsche Gesellschaft für Internationale Zusammenarbeit
Granger, Simeon	Community Programme Officer, National Disaster Management Agency (NaDMA)
Henry-McQueen, Elaine	Senior Programme Officer, Division of Gender and Family Affairs, Ministry of Social Development and HosuiPascal, ng
Joseph, Jacinta	Permanent Secretary (PS), Ministry of Education, Human Resource Development and the Environment
Neckles, Dr. Kristyn	Clinical Psychologist, Legal Aid and Counselling Clinic
Ntaba ,Francis	Technical Officer, Grenadian-German Pilot Project on “Integrated Climate Change Adaptation Strategies in Grenada” (ICCAS), Deutsche Gesellschaft für Internationale Zusammenarbeit
Pascal, Louice J.	Project Manager, Grenada National Organization of Women (GNOW)
Palmer, D.	Forestry Division, Ministry of Agriculture, Lands, Forestry and Fisheries
Payne-Banfield, Gloria	President of Grenada National Organization of Women (GNOW)
Pezar, Carlene	Grenada National Council of the Disabled
Rothenberger, Dieter	Programme manager, Grenadian-German Pilot Programme “Integrated Climate Change Adaptation Strategies” (ICCAS), Deutsche Gesellschaft für Internationale Zusammenarbeit
Thompson, Trevor	Land Use Officer, Land Use Division, Ministry of Agriculture, Lands, Forestry and Fisheries
Trotman-Joseph, Avril Anande	Chairperson of the Grenada National Coalition on the Rights of the Child

Annex II - List of international, regional and national agreements, declarations, policies and legislation relevant to gender equality and the empowerment of women and girls

International Treaties and Agreements signed or ratified by Grenada:

- **Universal Declaration on Human Rights** of 1948
- **International Covenant on Economic, Social and Cultural Rights** (ICESC) of 1969: acceded in 1991 without any reservation
- **International Covenant on Civil and Political Rights** (ICCPR) of 1976 : acceded in 1991 without any reservations
- **Convention on the Elimination of All Forms of Discrimination against Women** (CEDAW) of 1979: signed in 1980 and ratified in 1990 without any reservation
- **Convention on the Rights of the Child** (CRC) of 1989: ratified in 1990 without any reservations
- **Optional Protocols to the Convention on the Rights of the Child** on the involvement of children in armed conflict and on the sale of children, child prostitution and child pornography: acceded in 2012
- **Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, Supplementing the United Nations Conventions Against Transnational Organized Crime** of 2000: acceded in 2004
- **Convention on the Rights of Persons with Disabilities** of 2006: State party since 2014 without any reservations.
- Several **International Labour Organization (ILO) Conventions** which impact women and girls and are currently in force, including
 - C111: Discrimination (Employment and Occupation) Convention, ratified in 1979;
 - C019: Equality of Treatment (Accident Compensation); and
 - C097 Migration for Employment ratified in 1979.
 - C138: Minimum Wage Convention minimum age is 16 years (2003),
 - C182: The Worst Forms of Child Labour Convention 1999 (2003); and
 - C016: The Medical Examination of Young Persons (Sea) Convention (1979).

Regional Treaties and Agreements signed or ratified by Grenada:

- **American Convention on Human Rights** of 1969: ratified in 1978
- **Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women** (Convention of Belem do Para) of 1994: ratified in 2000
- Caribbean Community and Common Market (**CARICOM**) **Charter of Civil Society**
- **CARICOM Social Development Crime Prevention**

International Declarations and Platforms supported by Grenada:

- **Declaration on the Right to Development** of 1986
- **Declaration on the Elimination of Violence against Women** of 1993
- **International Conference on Population and Development** (ICPD) of 1994
- **Beijing Declaration and Platform for Action** of 1995 for women's empowerment
- **Millennium Development Goals** (2000-2015)
- **Brasilia Consensus** of 2010 to promote and defend women's rights and achieve gender equality
- **Commonwealth Plan of Action on Gender Equality** (2005-2015)
- **Agenda 2030**

Relevant national legislation:

- **Labor Code of 1999** provides for maternity leave with pay
- **Employment Act of 1999** includes provisions on non-discrimination on the basis of sex and mandates, for instance, equal pay for equal work
- **Education Act of 2002** includes provisions on non-discrimination on the basis of sex
- **Domestic Violence Act of 2010**
- **Child (Protection and Adoption) Act of 2010** which recognizes sexual violence as a form of child abuse and makes it mandatory to report on child abuse whether suspected or actual has been enacted
- **Education (Amendment) Act (2012)**

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WATER SECTOR RESILIENCE NEXUS FOR SUSTAINABILITY IN
BARBADOS (WSRN S-BARBADOS)

Gender Action Plan

August 30th, 2017

Prepared for

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Gender Action Plan

Table 1. Activities for mainstreaming gender into the proposed project.

Activities	Indicators and Targets	Timeline	Responsibilities	Costs USD
<p>Impact Statement: This project mainstreams gender into all activities – fostering of utility/university/community/private sector partnerships, , promotion of stakeholder engagement, exchanging of knowledge, building of workforce, and supporting of entrepreneurship opportunities – to increase resilience of people and the water sector of Barbados to climatic natural disasters like droughts, tropical storms and hurricanes. As managers of homes, caregivers, service workers in the tourism industry, and heads of 62.2 % of poor households, women in Barbados are more vulnerable to water disruptions. They, however, make up a smaller percentage of the students or workforce aligned with water infrastructure services at a time when Barbados and the Caribbean region should make major investments in this infrastructure.¹ While this project provides benefits that cut across several industries, sectors, communities, and vulnerable groups, it also increases participation of women in water sector resilience both within the Barbados Water Authority (BWA) and across Barbados. It establishes a gender and certificate program to increase understanding and exchange knowledge on gender and infrastructure (all BWA employees and contractors will take). It builds capacity and increases awareness of women and vulnerable persons for water sector resilience. It benefits Barbados’ only public hospital and all of its polyclinics, community centers, schools, farms, and households, especially those with differently abled persons, welfare recipients, pensioners, and the economically disadvantaged.</p>				
<p>Outcome 1: Improved/Increased Resilience to Storm Events and BWA’s Carbon Footprint Reduced. <i>Increased capacity of population to understand, monitor, and operate Renewable Energy (RE) systems, and improved understanding of gender barriers associated with RE industry in Barbados.</i></p>				
<p>Output 1.1: Photovoltaic Renewable Energy (RE) Systems and Natural Gas Microturbines Installed and Integrated. <i>54% of the Barbadian population benefits immediately from resilience in water provision from BWA, including vulnerable communities, most densely populated areas, the capital Bridgetown, and several rural communities, setting an example for countrywide adoption of RE-water integration. Workshop and analysis to understand how gender intersects with RE in Barbados completed. Workshops and trainings on RE systems completed with particular attention paid to recruitment of women.</i></p>				
<ol style="list-style-type: none"> 1. RE at Belle, Bowmanston and Hampton Pumping Stations that benefit ~54% of population. UWI/USF will work with DREAM project² to hold stakeholder meeting on gender in PV/natural gas sector in Barbados, identify opportunities for overcoming gender disparities in field and at BWA, and disseminate report. 2. Conduct workshop with entrepreneurs and other relevant stakeholders, including training programs, for addressing gender integration in RE sector in Barbados. 3. Train BWA employees on RE systems, operation & maintenance. 	<p><i>Indicator:</i> List of RE participants in stakeholder consultation. <i>Target:</i> 50% female participation.</p> <p><i>Indicator:</i> Project reports. <i>Target:</i> Baseline gender analysis of renewable energy sector in Barbados produced, including recommendations for integrating gender into RE sector.</p> <p><i>Indicator:</i> List of workshop participants. <i>Target:</i> 50% female participation</p> <p><i>Indicator:</i> Evaluations of workshop. <i>Target:</i> >Average</p> <p><i>Indicator:</i> # BWA staff or interns trained through project. <i>Target:</i> Above baseline of 0 to at least 20% of persons trained being female.</p>	<p>By 2020</p> <p>By 2020</p> <p>By 2020</p> <p>By 2020</p> <p>By 2023</p>	<p>BWA, USF, UWI</p>	<p>Included in budget for knowledge management, Outreach, & Capacity Building</p>

¹ Caribbean Development Bank (2014) Public-Private Partnerships in the Caribbean: Building on Early Lessons. <http://www.caribank.org/uploads/2014/05/Booklet-Public-Private-Partnerships-in-the-Caribbean-Building-on-Early-Lessons.pdf>

² Disaster Risk & Energy Access Management (DREAM): Promoting Solar Photovoltaic Systems in Public Buildings for Clean Energy Access, Increased Climate Resilience and Disaster Risk Management was funded in 2015 in Barbados. An activity listed is a survey of homeowners for rooftop solar with disaggregated sex data.

<https://www.thegef.org/project/disaster-risk-energy-access-management-dreampromoting-solar-photovoltaic-systems-public>

Activities	Indicators and Targets	Timeline	Responsibilities	Costs USD
Outcome 2: Adaptation and Mitigation Initiatives Expanded through a Revolving Fund. <i>Both men and women access fund equally to make their homes and businesses resilient to climate change.</i>				
Output 2.1: Revolving Adaptation Fund Facility (RAFF) established. <i>RAFF has guidelines that consider gender mainstreaming, PR materials and pathways that reach equal numbers of men and women, and accessed by at least 25 persons, 50% female.</i>				
<ol style="list-style-type: none"> 1. Create RAFF fund with guidelines that address gender considerations, especially for vulnerable female headed households and female farmers. 2. Create multimedia materials for RAFF that reflect gender considerations of RAFF. 3. Disseminate RAFF PR materials to all sexes. 	<p><i>Indicator:</i> RAFF guidelines. <i>Target:</i> Gender addressed in guidelines.</p> <p><i>Indicator:</i> Report on outreach activities. <i>Target:</i> RAFF education and outreach activities feedback > average, 50% females reached.</p> <p><i>Indicator:</i> # persons benefitting from fund. <i>Target:</i> At least 25 persons benefited from the fund; 50% Female</p>	By 2023	BWA in partnership with Credit Union	\$100,000 plus included in budget for knowledge management

Activities	Indicators and Targets	Timeline	Responsibilities	Costs USD
Outcome 3. Improved resilience to climate change and disruptions in water supply. <i>Gender mainstreamed into development of water masterplan, decision making for mains replacement, potable water storage, and RWH with equal numbers of men and women benefitting from interventions.</i>				
Output 3.1: Climate Change Adaptation (CCA) Water Master Plan Completed. <i>Gender integrated into master plan.</i>				
1. Integrate socio-economic and gender impacts in Climate Change Adaption Water Master Plan.	<i>Indicator:</i> Climate Change Adaption Water Master Plan. <i>Target:</i> Master plan addresses gender impacts.	By 2020	BWA, Consultant, UWI, USF to ensure gender integrated	Knowledge management & gender budget
Output 3.2: 16 km of Mains Replaced. <i>Decision matrix for mains replacement considers gender and socio-economic factors.</i>				
1. Integrate socio-economic factors and gender into decision matrix for prioritizing mains replacement activities. Contractual TOR considers gender.	<i>Indicator:</i> # women impacted based on report on mains replacement. <i>Target:</i> report shows that gender was considered in site selection and contractor selection; gender disaggregated data included.	By 2023	BWA, Contractors	Ibid
Output 3.3: Real time decision making tool Implemented. <i>Equal number of men and women at BWA trained on use of Optiram for decision making purposes.</i>				
1. Install 1 Optiramp program and train BWA employees on its use to reduce disruptions in water supply.	<i>Indicator:</i> # persons trained on Optiramp at BWA. <i>Target:</i> 50% female BWA employees trained.	By 2023	BWA, consultant	300,000
Output 3.4: Potable water storage systems installed. <i>Installations at 1500 residences with vulnerable populations based on a needs assessment that ensures female-headed households are addressed, the country's only hospital, its 9 polyclinics, 10 schools, and procurement of 5 additional tankers to service new installations in event of water disruptions. Training of communities and households on potable water storage systems and ensuring that women are meaningfully participating in these training sessions.</i>				
1. Conduct needs assessment and develop a GIS coded database with information on vulnerable population disaggregated by gender.	<i>Indicator:</i> Database of vulnerable populations and needs integrated into GIS database. <i>Target:</i> database includes a gender layer.	By 2020	BWA, UWI, USF, Community Groups, Contractors	5,000,000
2. Use needs assessment to install personal tank systems.	<i>Indicator:</i> # personal tank systems installed. <i>Target:</i> 1500 systems installed at 100% vulnerable residences.	By 2023		
3. Install water storage at 1 hospital, 9 polyclinics, 10 schools, serving the entire Barbados population.	<i>Indicator:</i> # List of workshop participants. <i>Target:</i> 50% female participation	By 2023		
4. Conduct education & outreach activities on water storage systems.	<i>Indicator:</i> Evaluations of workshop. <i>Target:</i> >Average			
Output 3.5: Rainwater Harvesting (RWH) Programme Implemented. <i>Women and men equally benefit from installation, jobs, and education associated with RWH.</i>				
1. Conduct residential needs assessment & place in a GIS coded database with information on vulnerable population disaggregated by gender.	<i>Indicator:</i> # residential rainwater harvesting systems installed. <i>Target:</i> 400 systems; 50% installations with households with female decision makers.	By 2023	UWI, USF, BWA, Contractors, Vocational training	1,572,000
2. Install RWH at Schools, Community Centers, Polyclinics and use sites to educate all about water sector resilience.	<i>Indicator:</i> RWH at 22 schools, 9 polyclinics, and 20 community centers used as educational sites for public. <i>Target:</i> # people engaged & reached; 50% female.	By 2023		
3. Install RWH at farms with farm selection considering gender impacts of intervention.	<i>Indicator:</i> # farmers benefiting from RWH installation. <i>Target:</i> 50\$ female farmers benefit from RWH intervention.	By 2023		
4. Expand collaboration with religious organizations to train young men and women on RWH with practical experience integrated with residential installations.	<i>Indicator:</i> # Number of men and women involved in new technologies to improve adaptation at the community level. <i>Target:</i> 100 persons.	By 2023		

Outcome 4: Greater capacity, knowledge and awareness to build Climate Resilience in the Water Sector. <i>Gender mainstreamed in climate resilience for water sector.</i>				
Output 4.1: Personnel Trained and Certified. <i>All BWA employees certified in Gender & Infrastructure, course mainstreamed in Barbados. 50% female representation on specialized training for water sector resilience.</i>				
1. Establish gender and infrastructure team for the project and development of a gender policy for the BWA that is adopted.	<i>Indicator:</i> Gender and infrastructure training materials. <i>Target:</i> Materials developed for in person and online training.	By 2019	UWI, USF, BWA	160,000 for gender certificate program and training; 414,000 for knowledge management system; \$467,500 for training
2. Develop gender and infrastructure training materials and certificate program accessible by differently prepared learners.	<i>Indicator:</i> BWA policies. <i>Target:</i> BWA gender policy developed and adopted.	By 2019		
3. Certify BWA employees and relevant stakeholders on Gender and Infrastructure.	<i>Indicator:</i> # certificates awarded to BWA staff on Gender & Infrastructure. <i>Target:</i> All BWA staff certified in Gender and Infrastructure.	By 2020		
4. Target recruitment for training for water sector resilience to increase representation of the under-represented sex in key positions.	<i>Indicator:</i> # persons certified with ENVISION, CCORAL. <i>Target:</i> equal participation of males and females.	By 2023		
Output 4.2 Public Awareness Campaign Implemented. <i>Gender integrated into education and PR materials and these reach both males and females in Barbados.</i>				
1. Offer youth-focused activities at the nexus of gender and water sector resilience.	<i>Indicator:</i> report of education and outreach youth focused activities. <i>Target:</i> materials presented address gender.	By 2023	UWI, USF, BWA	352,500 + knowledge management
2. Produce materials for public education and outreach that address gender.	<i>Indicator:</i> Reports on outreach activities. <i>Target:</i> 50% female participants reached.			
3. Produce and disseminate educational material to diverse audiences in Barbados and internationally on gender mainstreaming for water sector resilience in Barbados.	<i>Indicator:</i> Outreach activities and evaluations of those activities. <i>Target:</i> 50% female representation, greater than average on evaluations.			
Output 4.3: Policies for water sector resilience and PPPs created. <i>Gender integrated into policies for water sector resilience and PPPs.</i>				
1. Hold workshops on water sector resilience and Public Private Partnerships (PPPs) with balanced gender participation and input.	<i>Indicators:</i> # attendees at stakeholder workshops, policy papers on water sector resilience. <i>Targets:</i> 50% female participation in stakeholder workshops. Policy addresses gender.	By 2020	BWA, Consultant	160,000
2. Integrate gender into new policies for water sector resilience and PPPs in Barbados to combat climate change.	<i>Indicators:</i> policy paper on water sector resilience. <i>Targets:</i> 50% female participation in stakeholder workshops. Policy addresses gender.	By 2023		

Implementation Arrangements

WSRN-S Barbados will mainstream gender throughout the project. This will be achieved by:

- Establishing a gender and infrastructure team for the project that brings together expertise from the University of the West Indies (Institute of Gender and Development Studies (IGDS), Centre for Resource Management & Environmental Studies (CERMES) and the University of South Florida (Civil and Environmental Engineering and Engineering Education) with the Barbados Water Authority and other relevant stakeholders to develop a gender policy for the BWA that is adopted and integrated across the utility.
- Building on the 22-year old Caribbean Institute of Gender and Development (CIGAD) summer program put on by the IGDS. Since 2015, the University of South Florida has led a “Women & Water” workshop for CIGAD and, with contributions from relevant stakeholders (e.g. Caribbean Community Climate Change Center, Caribbean Development Bank, Barbados Government of Barbados: Bureau of Gender Affairs, Association of Women in Agriculture), this will be expanded into a training component on gender and infrastructure to be offered in person and online, in formats that are accessible by differently prepared learners.
- Requiring that all BWA employees and relevant stakeholders obtain certification on gender and infrastructure developed as part of this project.
- Targeting training for water sector resilience to increase gender equity in key positions.
- Considering gender in Terms of References for contractual services associated with this project and other projects supported by the BWA.
- Targeted recruitment for BWA hires associated with this project to ensure women are reached and encouraged to apply.
- Requiring gender disaggregated data on activities associated with this project, with the eventual goal of mainstreaming such reporting into BWA reporting practice.
- Mainstreaming gender into new policies for water sector resilience, Public Private Partnerships in Barbados to combat climate change, and the RAFF.
- Producing and disseminating educational material to reach diverse audiences in Barbados and regionally (e.g. Caribbean Water and Wastewater Association conference³⁴) on gender mainstreaming for water sector resilience in Barbados.

³ Isaacs, W. and Trotz, M. (2016) *Gender mainstreaming in water and wastewater climate change adaptation projects: a case study for the Caribbean. Proceedings of the Caribbean Water and Wastewater Association 25th Annual Conference & Exhibition, Port of Spain, Trinidad and Tobago, October 24th-27th, 2016.*

⁴ Isaacs, W. and Trotz, M. (2017) *Gender, Climate Change and Water and Wastewater Management Practices in Barbados. Proceedings of the Caribbean Water and Wastewater Association 26th Annual Conference & Exhibition, Georgetown, Guyana, October 16th-20th, 2017.*

Conclusion and Recommendations

The recommendations from the baseline gender analysis completed for this project were to:

- identify clear gender objectives and targets prior to project implementation to ensure their incorporation in the project,
- allocate budget to appoint a gender focal point that would coordinate these activities,
- mainstream gender in existing and new policies for water sector resilience in Barbados to combat climate change,
- include socio-economic information as a criterion for prioritization of locations for project interventions,
- target training for water sector resilience to increase representation of women in key positions.

This gender action plan incorporates the recommendations listed above with:

- gender objectives and targets listed in Table 1,
- budget allocated to gender for the creation and implementation of a certificate training program that gets incorporated into project, BWA, and local university program with international reach,
- gender policy developed for, and with BWA and gender integrated into policies being funded by project for water sector resilience and PPPs,
- socio-economic information integrated into decision matrix for project activities with particular attention paid to vulnerable populations and gender,
- recruitment activities included that will ensure increased representation of women in key positions.

**Gender Analysis for a Water Sector Resilience Nexus for Sustainability
in Barbados**

August 31, 2017

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Table of Contents

Executive Summary

1. Introduction	5
2. Goals and Objectives	6
3. Study Methodology	6
3.1 Study Methodology Activities	6
3.1.1 Survey of Social Media Platforms	7
3.1.2 Focus Groups	7
3.1.3 Interviews	8
3.1.4 Water User Survey	8
4. Results	10
4.1 Literature Review	10
4.1.1 Population and Demographics	10
4.1.2 Gender Policies	13
4.1.3 Gender, Climate Change and Water Infrastructure Projects	14
4.1.4 Survey of Social Media Commentary	15
4.2 Focus Groups	16
4.2.1 Barbados Water Authority	16
4.2.2 University of the West Indies IGDS	18
4.3 Interviews	18
4.3.1 Financial Institution	18
4.3.2 Caribbean Water and Wastewater Association	19
4.3.3 Environmental Protection Department	19
4.3.4 Health	19
4.3.5 Tourism	20
4.3.6 Business	20
4.4 Water User Survey	20
5 Summary & Recommendations	24
6 References	25
7 Appendix	27

Executive Summary

This Gender Analysis was conducted for the proposed project formerly named, “Energy-Water-Nutrients Nexus for Sustainable Coastal Infrastructure (EWN-SCI) in Barbados,” and now renamed “Water Sector Resilience Nexus for Sustainability in Barbados (WSRN S-Barbados),” during the period August 8 – November 18, 2016. Gender issues relevant for water and wastewater management were identified, and project partners’ (Barbados Water Authority (BWA), University of the West Indies (UWI), University of South Florida (USF)) institutional capacities to meaningfully integrate gender considerations were assessed. Subsequent to the submission of this report, and based on feedback from the EWN-SCI stakeholder and gender analysis, the EWN-SCI project goals were adjusted to reflect stakeholder priorities leading to the expanded, and shifted scope of the WSRN S-Barbados Project.

The overall goal of the EWN-SCI in Barbados was to reduce the greenhouse gases emission intensity for water provision by: (i) integrating photovoltaic renewable energy production at the water supply facilities, (ii) designing and implementing sustainable Water Loss Reduction initiatives, and (iii) developing a trans-disciplinary education, training, and entrepreneurship network for climate resilient water-energy utilities in the Caribbean that facilitate adaptation to Climate Change. In addition to these expected EWN-SCI outcomes, the WSRN S-Barbados expanded scope also includes creation of a revolving climate adaptation and mitigation fund to pursue projects identified as priorities in the Climate Change Adaptation Water Master Plan, which is to be developed as part of WSRN project. Analysis specific to this latter outcome is therefore not included in this report but will be addressed during project implementation.

The gender analysis of the EWN-SCI project was conducted with the aim of identifying gender considerations and devising ways of streamlining gender equality in the project proposal. This analysis is intended to (i) provide an overview of existing national policies, strategies and action plans that elaborate on the importance of integrating gender perspectives into national Climate Change adaptation strategies related to water management and infrastructure in Barbados, (ii) develop an understanding of the project partners institutional capacity to meaningfully integrate gender considerations into the final project to align with best local, regional and international gender policies and practices, (iii) identify gender issues relevant for water management highlighting the socio-political, economic and cultural aspects of Climate Change adaptation and mitigation, and (iv) provide recommendations on how to mainstream gender in the proposal, and include specific tasks and activities designed to build capacity at the UWI Institute for Gender and Development Studies. It is anticipated that identification of these gender issues will highlight potential gaps in the EWN-SCI project goals that represent missed opportunities to align with stakeholder priorities, and that reinforce existing climate resiliency disparities. Project goals are expected to be adjusted to address these disparities and expand the potential project benefits.

Government of Barbados’ demographic and gender statistics, national climate change and gender policies, Caribbean literature on gender, climate change and water infrastructure projects, and social media commentary on the quality of water services received from the Barbados Water Authority were reviewed to gain cultural context, and community insight on

existing gender inequalities. Focus groups and interviews with project partners, key agency and business sector personnel were also conducted to identify issues with the management of water and wastewater resources.

There are currently no legislative commitments to gender equality in water and wastewater resources management in Barbados. A Draft National Policy on Gender is presently before parliament but the policy does not address gender and water. The University of the West Indies Institute for Gender and Development Studies (IGDS), Cave Hill Unit recognizes the importance of gender and infrastructure and is keen on building capacity in this area. The BWA has more men than women employed in technical (45% vs 3.5%), and leadership (9.1% vs 3.9%) roles which directly contribute to the design and management of the utility's projects. Most of these individuals are in the middle or near the end of their careers (> 40 years of age), and thus present a timely opportunity to recruit, train and promote women to fill these roles. On social media (Facebook and Twitter), many individuals criticized the lack of communication from the BWA during the water shortages. The lack of an online presence by the BWA represents a lost opportunity to engage its stakeholders on collaborative solutions to improved services.

Literature and tools for categorization of the gender dimension of water and wastewater infrastructure projects to determine the scope, and type of gender mainstreaming activities required are limited. The UWI IGDS, Cave Hill Unit has the opportunity to build capacity in this area by leveraging expertise from the Mona Unit and Barbados Bureau of Gender Affairs. The concept of gender integration was particularly new to many of the focus group members. Organizational members could benefit from gender training that includes roles of focal points, gender sensitive budgeting and gender competency. The water user survey revealed a statistical significant association ($p \leq 0.05$) between gender and type of water storage container used at the household level. Men were more likely than women to report use of larger tanks, while women showed a preference for smaller containers. Identification and consideration of design parameters will facilitate or limit the successful adoption or adaptation of rainwater harvesting systems. The proposition of a research arm of the utility that could study gender dimensions of health impacts of water quality and water interruptions, and economic studies assessing feasibility of introducing a tariff structure on water provision were priority projects from the BWA. Investment in equipment at the national government lab, and at the University of the West Indies (UWI) Chemistry Department represents a skills building and economic empowerment opportunity for women who form the bulk of workforce at these institutions.

The key recommendation identified from the Gender Impact Assessment for the EWN-SCI Projects are: 1) identify clear gender objectives and targets prior to project implementation to ensure their incorporation in the project, 2) allocate budget to appoint a gender focal point who would coordinate these activities, 3) target training and recruitment for jobs that will be rewarded through this project to increase representation of the under-represented sex for each position, 4) include socio-economic information as a criterion for prioritization of locations for project interventions, 5) include socio-economic information as a criterion for prioritization of locations for project interventions.

1. Introduction

Climate change and its impacts are not gender-neutral. Infrastructure projects developed to mitigate and or adapt to climate change impacts, will have different degrees of gender dimensions, based on the social and economic contexts within which populations are embedded. **Gender** is a socially constructed concept and refers to the roles assigned and opportunities ascribed to men and women, within a specific cultural context, and at a particular point in time on the basis of their sex (Hannan 2001, Dunn 2012). Since gender roles are socially constructed and not biologically determined, they can be changed. This change may be desired and it can lead to gender equality.

Gender equality is defined as the creation of equal rights, power and opportunities for women and men by allowing them to contribute on an even footing economically, politically, socially and culturally (UNFCC 2015, UNIDO 2014). It entails that society values the roles played by men and women equally. **Gender equity** leads to equality and is the process by which men and women are treated fairly. This often includes proactively compensating for disparity in historical and social disadvantages that otherwise reinforce the inequitable basis on which women and men operate.

The ultimate goal of **gender mainstreaming** is to transform unequal social and institutional structures into equal and just structures for both men and women (Dunn 2012). This requires the full participation of both groups (especially women) in the planning stage of projects particularly at the community level. Gender mainstreaming is achieved by pursuing actions that lead to gender equality and gender equity. Gender analysis is a useful tool to identify points of intervention in the project cycle at which existing or potential disparities can be compensated for/reduced or eliminated.

Incorporating gender differences in climate projects is smart economics, and as such the Green Climate Fund (GCF) is the first international fund to mandate the integration of a “gender-sensitive approach” throughout project life cycles. Projects that systematically address, rather than reinforce gender inequalities that increase the vulnerability of specific groups to climate change will provide greatest benefits and be most effective.

This report provides a gender analysis of a Proposed Project on Energy-Water-Nutrients Nexus for Sustainable Coastal Infrastructure (EWN-SCI) in Barbados. It concludes with recommendations on approaches to mainstream and operationalize gender throughout the life cycle of the project.

The proposed Food-Energy-Water water sector infrastructure project has overall goals to:

1. Reduce the greenhouse emission intensity and the energy bill of water provision by integrating photovoltaic renewable energy production at the water supply facilities.
2. Reduce the greenhouse emission intensity of water provision by designing and implementing sustainable Water Loss Reduction (WLR) initiatives.

3. Reduce the greenhouse emission intensity of water provision and make local use of embedded resources found in wastewater by demonstrating the use of reclaimed wastewater in agriculture, to safely and efficiently recover valuable resources from wastewater effluents and sludge.
4. Develop a transdisciplinary education, training, and entrepreneurship network for climate resilient water-energy-nutrient efficient resource recovery utilities in the Caribbean that mitigate greenhouse gas emissions and improve adaptation to climate change.

2. Goals and Objectives

This Gender Analysis was commissioned by the Caribbean Community Climate Change Center (5Cs), to form part of the proposal entitled “Energy-Water-Nutrients Nexus for Sustainable Coastal Infrastructure Barbados,” which is to be submitted to the Green Climate Fund (GCF). This proposal is designed to develop an interdisciplinary program in Barbados that implements demonstration sites with integrated water supply and efficient energy management systems that are designed to mitigate greenhouse gas emissions, support climate change adaptation strategies, build technical capacity in the Caribbean region and share lessons learnt with the rest of the CARICOM countries. This gender analysis is intended to:

- Provide an overview of existing national policies, strategies and action plans that elaborate on the importance of integrating gender perspectives into national climate change adaptation strategies related to water and wastewater infrastructure in Barbados
- Develop an understanding of the project partners institutional capacity to meaningfully integrate gender considerations into the final project to align with best local, regional and international gender policies and practices
- Identify gender issues relevant for water and wastewater management highlighting the socio-political, economic and cultural aspects of climate change adaptation and mitigation. It is anticipated that identification of these issues will highlight potential gaps in the projects goals that do not align with stakeholder priorities, and that reinforce existing disparities. Project goals can be adjusted to address these disparities and expand the potential project benefits
- Provide recommendations on how to mainstream gender in the proposal, and include specific tasks and activities designed to build capacity at the UWI Institute for Gender Studies so that they can address climate change and resiliency in the water resources management in the future

3. Study Methodology

3.1 Study Methodology Activities

The following activities were undertaken as part of the gender analysis:

- Review of Government of Barbados’ population and economic statistics, national gender policies and assessments to develop a comprehensive description of the socio-economic environment and national commitment to gender equality in Barbados.

- Review of region specific literature exploring the relationships between gender, climate change and appropriateness of water projects/initiatives proposed, as well as social media commentary on the quality of services received by customers of the Barbados Water Authority to gain cultural context and community insight on existing gender inequalities and impacts resulting from the types of water infrastructure projects pursued and their methods of implementation
- Conduct of focus Groups with Project Partners, and Key Agency and Business Sectors, and interviews to identify issues with the management of water and wastewater resources, and opportunities to maximize use of these resources with a goal of building climate resiliency
- Execution of a water user survey to determine gendered differences in social, economic and health concerns related to water use, treatment and infrastructure projects pursued to alleviate existing challenges and build sector resiliency

Details on the survey of social media platforms, focus group, key informant interviews and water user survey are described in the following sections.

3.1.1 Survey of Social Media Platforms

The social media platforms of Facebook and Twitter were surveyed for general population views and perceptions on the quality of services provided to the public by the BWA. Key phrases like #barbadoswater, #barbadoswaterauthority and #barbadoswatercrisis were trending on these platforms. Upon inspection of the posts associated with these phrases, the news articles and/or exchange of comments provided context on the issues related to water provision and opportunities for improvement of this service. In this review two parishes – St. John and St. Joseph were highlighted as areas of special concern due to extended and frequent water interruptions. Section 3.1.4 summarizes key gender concerns identified in these two areas.

3.1.2 Focus Groups

Semi-structured focus groups were conducted with management level project team members and groups of individuals listed in Table 1. For the BWA focus group an effort was made to maintain a 50:50 gender representation. Questions posed to the group solicited feedback on strategies that could be taken to increase climate resiliency of the utility, clarify knowledge gaps on the rationale for incorporation of gender perspectives/considerations in development of water infrastructure projects, and identify opportunities to improve the gender equity in distribution of benefits of proposed activities.

Each focus group was facilitated by the researchers in a convenient, non-threatening location (i.e. public community centers, business places). The researchers encouraged open and free discussion relevant to the themes, but also allowed the conversations to organically evolve in an effort to glean nuanced perspectives from the group. Finally, notes were taken during the process and summarized by the consultants to contribute to the context of the assessment and to add to recommendations for the utility.

Table 1. List of organizations, departments and representative sectors for the focus groups

Representative Sector & # People	Organization's Name and Department
Public Utility (12)	Barbados Water Authority <ul style="list-style-type: none"> ➤ Pipes Replacement Project Manager ➤ Water Quality Technician ➤ Safety and Health Officer ➤ Financial Controller ➤ General Manager of Utility ➤ Customer Service Supervisor ➤ Administrative Assistant ➤ Utility Board Members
Academia (4)	University of the West Indies <ul style="list-style-type: none"> ➤ Institute for Gender & Development Studies

3.1.3 Interviews

Interviews were held during the period October 20 – November 7, 2016 with representatives from key water and gender related agencies, and business sectors to discuss issues related to management of water, and wastewater resources across the island. Interviews ranged between 30 minutes and 2 hours. The interviews were anonymized and used to provide baseline data to broadly categorize the perspectives of the range of stakeholders.

Interviewees listed in Table 2 were identified based on their real or perceived (expert knowledge on feasible and priority water sector projects) and or roles as major influencers in the implementation of development projects that build climate resiliency. Lastly perspectives on existence of gender issues/considerations for the implementation of the EWN-SCI and other proposed activities were explored. The information gathered was used to provide sector and context-specific recommendations about the portfolio of climate resilient projects the BWA can pursue, as well as potential partnerships that should be forged for successful project implementation.

3.1.4 Water User Survey

The survey tool was developed to gather primary data at the resident level from all eleven parishes in Barbados. Budgetary and time constraints rendered an island-wide survey to be unfeasible resulting in the selection of a representative cross-section that would provide for a meaningful survey. The total number of respondents surveyed was 229. A minimum of 205 respondents were needed to allow for reporting of statistics at a 95% confidence interval and a +/- 7 confidence level. A stratified population sample was gathered from each parish using the 2010 Population and Housing Census statistics as the population reference (BSS, 2010). Efforts were made to maintain a 50:50 gender representation in the sample.

Permission for this study was granted by Institutional Review Board (IRB) at the University of South Florida under study #Pro00027337. The IRB approval process ensures that the survey and study protocols are ethically developed and it requires the research team to inform potential

participants of the purpose and use of the information, explains the questions in a non-coercive way, and enrolls only willing individuals.

Table 2. Organizational affiliations, titles, and representative sectors of stakeholder interviews

Organizational Affiliation	Title	Representative Sector
Altman Realty	Executive Director	➤ Private ➤ Business, Housing Infrastructure
Barbados Water Authority	Customer Service Director	➤ Public Utility
Barbados Water Authority	Financial Controller	➤ Public Utility
Barbados Water Authority	Health and Safety Officer, Human Resource Manager	➤ Public Utility
Barbados Water Authority	Mechanical Engineer for Pumping/Reservoirs	➤ Public Utility
Caribbean Development Bank	Senior Operations Officer	➤ Development Agency
Caribbean Hotel Energy Efficiency Action Program	Director	➤ Tourism ➤ Energy
Caribbean Water and Wastewater Association	Utility CEOs, Government Ministers, Engineers and Technicians	➤ Public Utility ➤ Private Companies
Innotech	Facilities Manager for BWA Building	➤ Business Infrastructure
Environmental Protection Department	Director	➤ Regulation
RENTech	Executive Director	➤ Private ➤ Energy
Retired	Farm Owner	➤ Entrepreneur ➤ Agriculture
SIR Water Management Limited	Managing Director	➤ Entrepreneur ➤ Wastewater
Stantec Engineering Consulting Firm	Senior Engineering Consultant	➤ Private ➤ Wastewater ➤ Business, Infrastructure
Torque Engineering Procurement and Construction Management	Managing Director and Mechanical Engineer	➤ Entrepreneur
University of the West Indies- Chemistry Department	Faculty	➤ Education
University of the West Indies- Management Studies Department	Faculty and BWA Board Member	➤ Education ➤ Public Utility

The survey tool was developed in collaboration with the core team to formulate and validate the questions and potential responses. The instrument captured baseline gendered differences in survey responses on questions addressing issues of satisfaction with quality of water services received, as well as perceptions of power and agency in decision-making related to water sector projects. This sex disaggregated data provides a simultaneous picture of what information is available and indicators to be monitored, as well as the gaps which should be filled by statistics

and further research. This data can be used to predict negative or positive impacts of proposed interventions on specific populations, and used to provide recommendations for projects aimed at improving access, storage, treatment and addressing health considerations in projects implemented.

Random and referral sampling techniques were used to obtain study participants, and only Barbadians 18 years of age and older were surveyed. A list of locations where surveys were administered is available in Table 3. The survey was an anonymized 27 multiple choice or multi-select questionnaire, and responses were based on respondent experiences as such they required no special knowledge to answer survey questions. A copy of the survey form is provided in the Appendix of this report.

Table 3. List of locations where surveys were administered

Survey Locations	
Cheapside Market	Bus stop in Bridgetown (North)
Temple Yard	Bus stop in Bridgetown (South)
BWA Building	Restaurant in Holetown
UWI Gender Studies Department	Boardwalk on South Coast
UWI Management Studies Department	Grocery store in St. Andrew
UWI Chemistry Department	Restaurant in St. Andrew
UWI Campus	Shopping malls along the South Coast
Neighborhood pharmacy	Open air plaza in St. Peter
Restaurant in Dover	Grocery store in St. Lucy
Restaurant in St. Joseph	Fish market in St. Michael
Caribbean Water and Wastewater Association Conference (Oct 24-28, 2016)	

All surveys were administered by a member of the consultant team so there was an opportunity to capture other qualitative data that contextualized the survey responses provided. In addition to the survey question responses, respondents volunteered or were asked for general comments on strategies to improve the management of water and wastewater resources in the country. This data was collected and summarized during data processing, and integrated into relevant response categories. A Pearson Chi-Square Test of Independence was performed to determine statistical significant differences in responses by gender within the sample population using Statistical software package IBM SPSS (version 23).

4. Results

4.1 Literature Review

4.1.1 Population, Demographics and Gender Profile

Barbados is classified as a developing country and has achieved a high human development index with a score of 0.75 (on a scale of 0 to 1) (UNDP 2015). This high ranking reflects long life

expectancy, high levels of school enrolment and length of education, and high income per capita, all of which improved from 1980. Despite these rankings, prominent features of a 2010 Barbados Country Assessment of Living Conditions (SALISES 2012) include “the poor being associated with larger household sizes, more children 15 years and under, overcrowding in households, low human capital, low paying jobs and unemployment, female-headed, concentrated in both urban and rural areas and engagement in informal sector activity. Poorer households have few material assets with insecure tenure of property and, although there is universal secondary level education, few children are able to take advantage of such education because of their economic circumstances.” Table 4 summarizes key population and gender statistics for Barbados.

Table 4. Key Population and Gender Statistical Indicators for Barbados

Indicator	Male	Female	Total	Year	Source
Population	136,424	147,791	284,215	2015	WB 2017
Human Development Index (HDI)			Rank 38 of 187 countries. 0.75	2015	UNDP 2015
Gender Development Index (GDI)			Rank 28 of 144 countries, 0.739	2016	World Economic Forum 2016
Life Expectancy	73 years	78 years		2015	WHO 2015
Literacy Rate	99.7%	99.7%		2012	BSS 2010
Participation rate (labor force as percentage of total adult population)	67.7	60.4	63.9	2014	BSS 2010
Wage Gap (average male wage 18.9% higher than average female wage)		71.1%		2004	World Economic Forum 2016
% poor households headed by females		62.2%			SALISES 2012
% non-poor households headed by females		47%			SALISES 2012

Although there is evidence of considerable human development in Barbados this has not translated into an associated high level of gender equality. The gender gap index developed by the World Economic Forum is a measure of gender equality. On this index out of 136 countries Barbados ranks 29, with a score of 0.730 (0 = inequality, 1 = equality). According to the Barbados Country Gender Assessment (Allen and Maughan, 2016) the measure shows near equality with respect to educational attainment and health and survival with female achievement surpassing male achievement in education. In terms of economic opportunity, the attainment of women is assessed to be 80% that of men (0.791 in 2013), while in terms of political participation it is 15% that of men (0.150 in 2013). The country assessment shows that the positions of women and men have hardly changed since 2006.

Water and wastewater treatment usually fall under the field of Civil and Environmental Engineering. In the Caribbean, the main training institutions with this program are the University of the West Indies St. Augustine Campus in Trinidad and Tobago, the University of Technology in Jamaica, and the University of Guyana. Figure 1 shows total enrollment data for the overall

engineering program at UWI. Based on numbers provided in the UWI Vice Chancellor's Annual Reports 2006-2014, the percentages of females has remained constant over nearly a decade with ~30% and ~45% enrollment between 2006 and 2014 for undergraduate and graduate engineering programs. This is significantly different from the overall UWI enrollment where the proportion of females to males was 68.5% to 31.5% for total University enrolment, with the St Augustine campus having 63% female enrollment for 2013/2014. Faculties of Science & Technology exist at all three campuses, including Cavehill, and their average total female enrollment between 2006 and 2014 was 53% compared with 36% for the Faculty of Engineering. The Faculty of Science Technology includes disciplines and research relevant to the EWN-SCI proposal like chemistry for water quality testing.

As of June 28, 2016 the Barbados Water Authority had in its employment 779 persons inclusive of 219 women (28.1%) and 560 men (71.9%). The workforce age ranged from 20–67 years with a mean age of 39 years. Approximately half of the BWA employees (61 %) are aged 40-59 years, with the majority of men being 50-59 years (23%) and women 40-49 years (9.9%). The BWA staff are almost equally employed in technical (48.5%) and non-technical roles (51.5%), with technical being defined as all job titles related to project management, engineering, science, vocational, heavy equipment operation and field work activities of the utility, and non-technical referring to all other capacities. Men and women are almost evenly represented in non-technical roles (26.8% and 24.6% respectively), while there is a significantly greater proportion of the BWA staff that are men (45%) versus women (3.5%) employed in technical roles.

Employees with the requisite technical skills will be the most eligible, and first to benefit from potential jobs created by the EWN-SCI projects. From technical fields identified, the greatest disparity in employment is in the vocational area, 26.8% men to 0.8% women (Figure 1). Artisan electricians, fitters, masons, plumbers, welders, heavy equipment operators, sewage inspectors and workshop employees dominate the vocational category. The Barbados Vocational Training Board (BVTB) is one of the main vocational training institutions in the island, and data available for 2013 reported the male-female ratio of graduates as 62.7 to 37.3, very similar to 2003 ratios. These national statistics can explain the BWA vocational category gender distribution, whose available labor pool is skewed in favor of men. A small category (3%), Scientists was the only group in which women outnumbered men (2% to 1% respectively). This is not surprising, as the UWI statistics presented next show greater enrollment of women in the Faculty of Science and Technology than men. Also similar to UWI Faculty of Engineering statistics, there were more male (1.9%) than female (0.5%) engineers at the BWA.

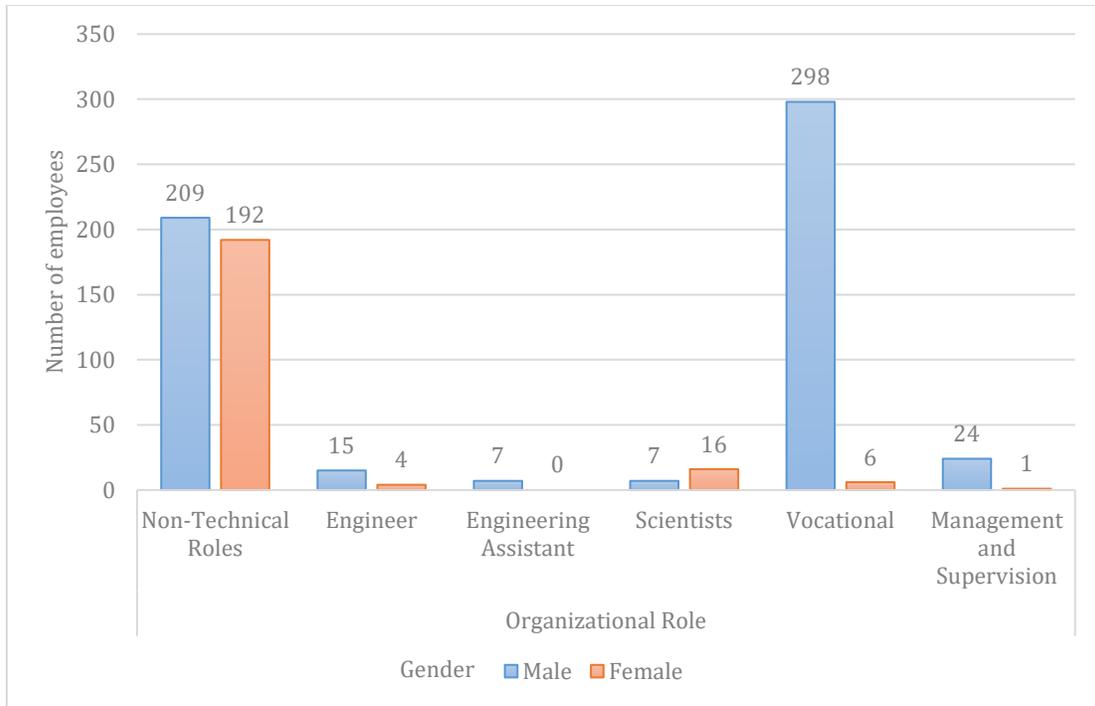


Figure 1. Gender disaggregation of technical and non-technical Barbados Water Authority employees as of 6/28/16

Similar to the technical roles, there was greater occupation by men than women in leadership and non-leadership roles. For the 101 leadership jobs identified (13% total jobs), 70.3% of them are occupied by men and 29.7% by women. Technical and leadership staff will make the greatest contribution to the design and management of projects pursued by the utility. The current gender distribution biases participation and benefit distribution which will accrue to those already present. Technical and leadership roles at the BWA place power and agency in decision making collectively with men. In spite of this, with the majority of persons in these roles aged > 40 years, and thus in the middle or nearing the end of their careers, there is an opportunity to recruit, train and promote new or existing employees to fill these roles.

Recruitment, training and promotion to fill more technical and leadership roles is just one step that can increase the diversity of opinions available to balance stakeholder views on priorities for project design and management.

4.1.2 Climate Change and Gender Policy

The Government of Barbados approved a National Climate Change Policy in 2012. The country's Intended Nationally Determined Contribution (now known as NDC) as communicated to the United Nations Framework Convention on Climate Change in 2015, lists 6 national plans and strategies for which climate change adaptation would be incorporated. These include:

- Medium Term Growth and Development Strategy 2013 – 2020;
- Physical Development Plan;

- White Paper on the Development of Tourism in Barbados and National Adaptation Strategy to Address Climate Change in the Tourism Sector in Barbados;
- Coastal Zone Management Plan;
- Storm Water Management Plan;
- Other sectoral plans including for agriculture, fisheries, water and health.

For these policies it was also noted that efforts would be taken to incorporate gender and or inclusion of perspectives of vulnerable groups. While gender issues are referred to in places in the documents relating to these developments, no strategies are articulated by which gender equity can be integrated beyond stating that vulnerable groups, variously listed to include women and young men, should be targeted and participate in action to address environmental threats and damage.

The Barbados Bureau of Gender Affairs is responsible for the integration of gender in all national development policies and programs to achieve gender equity and equality. A Draft National Policy on Gender has been formulated and is presently before parliament for consideration, however, this was unavailable for review for this report.

4.1.3 Gender, Climate Change and Water Infrastructure Projects

Gender, a socially constructed concept, refers to the roles assigned and opportunities ascribed to men and women, within a specific cultural context, and at a particular point in time on the basis of their sex (Hannan 2001, Dunn 2012). Climate change and its associated impacts on water resources are not gender neutral (Dunn 2012, Schalatek 2013). The differences in men and women’s power in decision making, access to resources and extent of participation in economic activities will determine the way people are impacted by, and their ability to respond to climate change.

With the exception of renewable energy projects, limited literature exists on creation of gender-responsive infrastructure projects. The “Resource Guide – Mainstreaming Gender in Water Management”, and “Guide on Gender Mainstreaming – Energy and Climate Change Projects,” published by the United Nations Development Program (UNDP) and United Nations Industrial Development Organization (UNIDO) respectively, provide the most comprehensive case study list of gender mainstreaming in climate change projects (Khosla 2006, UNIDO 2014). Notably missing from these publications are case studies from Small Island Developing States (SIDS), and particularly Caribbean nations. Literature and tools for categorization of the gender dimension of water and wastewater infrastructure projects to determine the scope, and types of gender mainstreaming activities required are unpublished or absent.

In the Caribbean, literature on the topic of Gender, Climate Change and Disaster Risk Management with a focus on water and sanitation issues exists. Expertise in this area exists in Jamaica at the University of the West Indies (UWI) Institute of Gender and Development Studies (IGDS), Mona Unit and the Friedrich Ebert Stiftung Foundation (Dunn 2013). Studies by McGill University for the Caribbean Water Initiative (CARIWIN) have also addressed gender differences

in water use and impacts of service interruption in Barbados (Suchorski 2009). The Center for Resource Management and Environmental Studies at UWI Cavehill also has expertise on gender and climate, with a soon to be published master's thesis on gender and disaster risk management in the Caribbean. The UWI IGDS, Cave Hill Unit has the opportunity to build capacity in this area by leveraging expertise from the Mona Unit and similar climate and gender sector experts in the Caribbean region. Building this capacity in the Caribbean is crucial to development of programs that support sustainable development goals and integrate with policies of the nation and various funding organizations like the 5Cs and the GCF.

4.1.4 Survey of Social Media Commentary

For the past year many communities in Barbados particularly in the parishes of St. Joseph and St. John have experienced extended water interruptions. As reported in different online and print media some persons have not received running water in their taps for almost a year. These stories have been shared widely on social media and the term #BarbadosWaterCrisis has been used to describe this occurrence. These posts highlight the gendered impacts of these interruptions and generate the discourse on potential long term solutions that build community and sector climate resiliency.

Barbados has a 97% potable water coverage and so these interruptions are unprecedented, and many persons in the population were not prepared to respond to this situation. Groups such as Pledge Water Barbados and Weekend Water Warriors have emerged in the wake of this crisis and have taken the lead in providing relief to these communities in the form of bottled water delivery. The situation is exacerbated as persons lament the fact that they continue to receive a bill although they have not received water. There are many reports of women's inability to cook and subsequent diet substitution with dry foods, inability to wash and clean their households and rash development on babies and young children. Reduced productivity at work due to stress from waking up at infrequent hours to gather water from standpipes when possible was another concern. Current BWA relief efforts including provision of community tanks and water trucks are viewed as inadequate particularly for the elderly who may not have someone to collect water in receptacles for them. Businesses such as hair salons and food places have also experienced economic burden as these sectors are highly water reliant.

Many persons criticize the BWA for their lack of communication which prevents adequate planning of water related household duties by individuals, particularly women. Individuals also question the criteria used by the BWA to determine priority areas for mains replacement and other infrastructure maintenance projects, as it is perceived that relief is provided to richer before poorer areas. Some persons propose that the BWA provide subsidies, or facilitate the expansion of rainwater harvesting at the household throughout the nation as part of a long term solution to water interruptions and climate variability. These issues provided additional context for the focus groups questions.

4.2 Focus Groups

4.2.1 Barbados Water Authority

The Barbados Water Authority Focus Group was held on November 1, 2016 to discuss strategies to build utility climate resiliency, assess institutional capacity for gender mainstreaming and identify opportunities to incorporate gender considerations in institutional operations and project development.

A summary of key projects or activities that can build utility climate resiliency and for which direct or indirect gender dimensions could be considered include:

a. Mains Replacement

For the proposed mains replacement the group discussed potential deficiencies in the criteria for selection of priority mains for replacement. Currently the number and frequency of bursts are the criteria used. It was suggested that social factors such as number of persons impacted, presence of schools, clinics and elderly care facilities as well as demographics of affected customer homes e.g. gender and age should also factor into the criteria for mains replacement. The Customer Service department indicated that upgrade of their management information system will allow them to capture such demographics, and share this information with other departments. This discussion expanded the focus groups traditional considerations of gender dimensions as quota requirements, to the larger scope of responsibility of the utility to its customers and gendered impacts of service provision.

b. Renewable Energy Integration

Integration of more renewable energy capacity at pump stations has the potential to create additional jobs for individuals with the requisite technical skillsets. Proposed strategies to increase the participation of the underrepresented gender in any new jobs as a result of the project included job advertisements encouraging specific applicants, and targeted recruitment of desired individuals. Internal rotation of employees was also discussed to broaden participation in jobs created, however, no consensus was reached on strategies to address concerns of the physical suitability of women for specific roles.

c. Pilot Wastewater Resource Recovery Systems

Similarly for the pilot wastewater resource recovery system, the main gender concern was the proportion of males to females currently employed with the BWA with the requisite technical skills to perform the anticipated tasks required for operation and maintenance of the system. The project was originally developed by a six-member student team from the University of South Florida's Civil and Environmental Engineering department and UWI's Student Entrepreneurial Empowerment Development (SEED) Project. The team comprised of five females, one of whom is an entrepreneur whose start up business would potentially add value (via cosmetics) to the plants grown in the pilot system. Agricultural training programs encouraging youth and women in Barbados to become agripreneurs are currently being sponsored by the agricultural sector and these participants could be targeted for interest in reuse projects.

d. Research Projects

Focus group participants believed that a research arm of the utility would greatly improve the efficiency of operations and delivery of services. Two specific projects of interest with clear gender dimensions were i) health studies that assessed the impacts of water quality and water interruptions, and ii) economic studies that assessed the feasibility of a stratified tariff increase based on customers' willingness and ability to pay for water services. A financial case for a tariff increase was particularly supported since present cost of water does not reflect true production costs, and there was the recognition that such an increase would economically disadvantage some customers/homes more than others. There was an overall recognition of the need for better communication with its stakeholders particularly at the community level. Greater stewardship of the resource at all levels of power is needed to facilitate sustainable community growth and assist in poverty reduction.

e. Internal Revolving Fund to support Household Rainwater Harvesting and Household Residential Recharge

The current water crisis in Barbados due to the prolonged periods of no rainfall raised the many challenges faced by the BWA and country, and opportunities for innovative and sustainable solutions that would require decentralized approaches. Since 1996, buildings over a certain size have been required to install rainwater tanks, however, there is no requirement that the tanks are used. Given the high cost of electricity in Barbados many people do not install pumps required to access the rainwater and some argue that the tanks end up breeding mosquitoes. Architectural designs do not take advantage of gravity fed systems and plumbing for uses like flushing toilets is not popular and some believe it is illegal. Given the potential for rainwater harvesting to offset water needs from the BWA and therefore its pumping costs, this was seen as a useful thing to encourage households to do. Similarly, with the increase of impervious areas in built environments, options to encourage rainwater recharge (e.g. rain gardens) were discussed, especially for households with little space for rainwater tanks/cisterns. The team agreed that demonstration sites for public education need to be located on BWA properties, however, they recognized the importance of showcasing existing champions throughout Barbados. Partnering with the engineers and plumbers to create manuals etc. and publicize the options was recommended by the group.

Institutional Knowledge Gaps & Other Comments – The concept of gender mainstreaming was particularly new to many of the focus group members. Organizational members could benefit from gender training that includes roles of focal points, gender sensitive budgeting and gender competency. Institutional commitments to affirmative action can also ensure increased participation of the underrepresented group in projects. Steps should also be taken to improve the current unequal employment of men and women overall (72% vs 28% respectively) and participation in supervisory roles (70% vs 30% respectively) at the BWA. Targeted interventions in this regard will significantly reduce existing gender biases in decision-making on water and wastewater management in Barbados. Sustained education and outreach initiatives by the BWA are also needed to provide opportunities for continuous community participation in planning and design of context specific solutions.

4.2.2 University of the West Indies Institute of Gender and Development Studies (UWI IGDS)

The UWI IGDS Cave Hill Unit has staff with expertise in the areas of gender, sexuality, human rights, gender-based violence, Caribbean men and masculinities, and Caribbean feminism. The areas of gender and climate change are lesser explored topics by this department. In 2015, they included a 3 hour workshop called “Women and Water for the first time in their Caribbean Institute for Gender and Development (CIGAD) biennial summer program. An environmental engineering professor from the University of South Florida taught this workshop. Faculty at the UWI IGDS sister Unit at the Mona Campus in Jamaica have already delivered gender, climate change and disaster risk reduction training to 92 undergraduates in the region and are available to guide and mentor to increase competency in Barbados. Proposed activities to integrate the Cavehill campus IGDS program with EWN-SCI include expansion of CIGAD to include additional seminars on women and water that are open to non CIGAD program participants, production of educational materials on the rationale and context for recognizing and incorporating gender perspectives in development projects, and recruitment of M.S. and Ph.D. students to pursue research that directly support EWN-SCI project goals. The group also recommended targeting its CIGAD graduates (11 institutes have been held to date) to train them on EWN-SCI topics that would be applicable to the communities where they live, and for which they can become champions for sustainable water infrastructure.

4.3 Interviews

4.3.1 Financial Institution (CDB)

The Caribbean Development (CDB) Bank has been recently accredited as a regional implementing entity for the Green Climate Fund. It has funded BWA projects in the past, some with similar components included in EWN-SCI, though not from the holistic framework for building ecosystem for sustainability driven initiatives. The Senior Operations Officer interviewed suggested that the organizations involved with EWN-SCI should work closely with the CDB to avoid duplication of efforts and build on each other’s findings. The need to build capacity at the UWI IGDWS Cave Hill Unit in development of water sector projects was identified, and strategies to do this included requests in project Terms of Reference issued for consultants to utilize the department for some sub-contracts. The CDB recently completed a gender analysis of Barbados, however, there was little emphasis on engineering and infrastructure. The organization has a gender policy that its borrowers must follow and recently hired a gender equality specialist.

4.3.2 Caribbean Water and Wastewater Association

The research team used the Caribbean Water and Wastewater Association (CWWA) Conference in Trinidad and Tobago from October 24-28, 2016 to interview utility CEOs, engineers and other water sector professionals from Barbados and the wider Caribbean.

Some participants, primarily male, were actively opposed to developing actions based on gender considerations. They believed the gender analyses were looking for problems that did not exist. There was the sentiment that there was no reason to establish procedures benefitting one or other sex because everyone is considered equal. Concepts of gender neutrality often lead to a lack of information and quantitative data through which differences can be identified. On the other hand, there was a fixation by some persons on the thought that gender equality = women equality, and for water infrastructure projects gender mainstreaming meant a narrow focus on filling job quotas. There is a lack of recognition of the skewed nature of opinions thought of as reality, due to their domination of discourses by one sex in the engineering field. There also exists an intolerance/insensitivity towards the need for maternity leave as stated by one interviewee “women enter baby making mode.”

4.3.3 Environment Protection Department

The Environment Protection Department (EPD) has recently completed a Policy Paper on Wastewater (WW) Reuse. Presently WW reuse is limited to slow drip irrigation. The EDP supports pilot projects that will demonstrate that WW reuse for agriculture is safe (subsurface irrigation) and a viable option, as well as an analysis of perceptions of WW reuse for agriculture to assess potential stigma. If a business case can be made for WW reuse, the potential to significantly expand to other systems like packaged treatment plants, septic systems, and suck wells (unlined hole in ground) can be explored to allow for distribution of these reuse benefits to all individuals. Pilot systems that also serve as demonstration sites are critical for educating the public, getting their buy-in, and building the reuse market.

4.3.4 Health Sector

“In Barbados, the solution to pollution is dilution”. These were the sentiments of a Pan-American Health Organization (PAHO) employee. There was concern with improper nutrient management from wastewater, including the BWA’s sewage treatment plants, the packaged plants of hotels and businesses, or household septic systems and suck wells. High groundwater nitrate levels are of concern for drinking water in certain parts of Barbados and the impact of nutrient loadings to the sea are of a concern for impacts on corals and marine environment. Contaminants from wastewater discharge and stormwater runoff can potentially result in increased ear, nose and throat diseases from swimming in the sea, especially just after a storm. To reduce these nutrient loads, resource recovery projects should be pursued with the incentive for people being the added value that one would get in the form of water and nutrients for potential food or an income generating agricultural product.

4.3.5 Tourism

A representative from the Caribbean Hotel Energy Efficiency and Renewable Energy Action Program (CHENACT) surmised that up to 50% of the water and energy bills of some larger hotel can be attributed to on-site leakages. Rather than reduce the water and energy consumption by pursuing efficiency measures, the hotels sometimes choose to absorb the costs or lay off staff to recoup the difference. Since 70-80% of the hospitality sector are women, women are most likely laid off as a direct result of water wastage. The BWA can recommend that hotels conduct a water audit which will identify opportunities to reduce water consumption. Additionally, the project pursued in 2010 by the BWA where they distributed 10,000 water efficiency devices should be revisited to determine number of systems installed.

4.3.6 Business

The Altman Real Estate Group was interested in reuse of the treated effluent from their Limegrove Shopping Mall for agricultural production. The group has land available for the pilot site and would ultimately like to use the produce for resale to restaurants at their mall and to the Hometown community. The Altman Real Estate Group represents one of many companies in Barbados that have decentralized wastewater treatment systems and believe that discharge of the effluent to the sea is a waste of the resource. Similar sentiments were expressed by SIR Water Management Limited, a packaged wastewater plant supplier in Barbados. At one of the SIR sites, cut flowers are grown and some areas are believed to benefit from treated effluent. A female employee was pointed out as being the reason for the inclusion of edible produce on a small part of the land which is for her personal use. Innotech manages the BWA headquarters building, including a packaged wastewater treatment plant located there. The possibility of reuse of the effluent for agriculture was seen as a positive for piloting at this facility also.

4.4 Water User Survey

The survey data broadly characterizes a representative sample of the population within each of Barbados' 11 parishes. 48% % of survey respondents were male and 52% of respondents were female. The average age of the survey respondents was 39.7 years old with a range from 18 to 84 years. The number of individuals holding a bachelor's degree— 32% is the highest percentage from the entire sample. Following this, 25% and 16% of survey respondents have finished secondary school and have an associate's degree, respectively. The top three educational levels of the respondents (i.e. bachelor's degree, secondary school, and associate's degree) have more female representation than male. Such is also the case for vocational training and primary school education. Broadly speaking, this is consistent with national statistics that show females, on average, attend school for longer than their male counterparts, 17 years for females as compared to 14 years for males (BSS 2010). However, when considering the two highest educational levels, doctoral and master's degrees, there are almost double the number of men represented (i.e. 20 males and 11 females). This is consistent with UWI demographic data for engineering, and could reflect the referrals approach used for surveys, given that the survey team and partners had high university faculty representation.

The survey data was sex disaggregated and using a Pearson Chi-Square analysis, statistical significant associations ($p < 0.05$) were only obtained between gender and parish, types of water storage containers used and presence of mosquitoes in the storage containers. This would indicate that for each of these questions, the count of men or women who selected a particular response was either more or less than would be expected for this size study population.

The primary source of drinking water for the majority of the respondents is the tap in their house (90.8%). This observation is consistent with the national statistic of 98% potable water coverage. The second most common source of primary drinking water, bottled water (7.4%) was also the most cited supplementary source (48%). The heavy reliance on piped infrastructure for the source of potable water (indicative of 43% respondents citing they have no supplementary source of drinking water) demonstrates the cultural expectation of and need for limited interruptions in supply from the water utility. There was no association between gender and any of the survey responses to source of primary drinking water and use of a supplemental source of drinking water. With reference to the use of a supplemental source by parish there was also no association observed between gender response and primary source of drinking water used.

64.6% of the survey respondents indicated that they agreed or strongly agreed that their household is satisfied with the BWA water supply system. Smaller percentages of respondents disagreed or strongly disagreed (22.7%) or were indifferent or neutral (8.7%) to this statement. In spite of access to piped infrastructure, many respondents (78.6%) stored water at the household level. Of this group, more women (43.7%) than men (34.9%) reported that they stored water. The three (3) most common responses to type of storage receptacle were buckets (25.8%), multiple containers (22.3% comprising mainly buckets, plastic bottles, and plastic tanks, and barrels in order of decreasing frequency), and plastic tanks (15.3%). The Chi-Square test ($N=180$, $p=0.024$) revealed a significant association between gender and choice of storage container used. Women were more likely to use small receptacles (buckets and plastic bottles), while men would cite larger receptacles (plastic tanks and barrels) as storage containers. Disaggregation of types of storage containers used by parish revealed no significant association.

With a projected drier climate in the Caribbean (UNEP 2010), expansion of rainwater harvesting (RWH) at the household level is a potential solution to build community resilience and safeguard from water interruptions from the BWA. The preference for use of plastic tanks and barrels by men could indicate an easier adoption and maintenance of RWH systems that use these larger receptacles. Assistance of some kind (extension officers, grants, subsidies) to install these systems, or for redesign of the RWH system to include preferences by women and ensure its affordability may be specifically needed to ensure both groups benefit equally from such an intervention. Affordability of design is very important as some households rely on their relatives in Diaspora to provide monetary support that will cover costs for household infrastructure upgrades. For example one custodian from the parish of St. Lucy indicated that her family who lived overseas paid for a water storage system for her that is on a platform with a pump. The initial installation of this system was at a cost of approximately \$2,000, she incurs a recurring cost for purchase of filters. She does not mind this additional cost as she grew up going to a plantation property to go to a well to get water, and is thankful for the BWA piped water today. The

Government of Barbados distributed inflatable water storage containers that are smaller than the plastic tanks and barrels, and can be considered in the approach of increasing storage capacity at the household level.

The two (2) main reasons reported for water storage at the household level were “Multiple Concerns” (32.8%) and “as a back-up during interruption from BWA” (28.4%). In order of decreasing frequency, the category Multiple Concerns (32.8%) included “as a back-up during interruption from BWA”, “for household convenience”, “in case of natural disaster” and “as water source in dry season”. One respondent from Bathsheba in the parish of St. John indicated that she stores 37 buckets of water at home since water coming through her tap has been infrequent in previous months.

Reuse of water at the household level for different purposes and from varied sources was not a common practice by the survey respondents (71.6%). Although most survey respondents did not reuse, many were not opposed to the concept of wastewater reuse for irrigation. For example one woman from the market who sells produce, but does not own land indicated that she would love to have access to land for planting, and has no problem using treated wastewater for irrigation. She watches television and sees there is technology available to clean the wastewater so persons won't get sick. She believes it is done in China, and thinks the food that they import from China would likely have been irrigated with wastewater.

Roughly half of the survey respondents (51.5%) reported that they administered treatment of some form to their primary drinking water source. Use of a household filter (21.4%) and boiling (17.9%) were the most common water treatment practices observed. In instances where water treatment was observed respondents indicated the water was being used for children.

The majority of respondents (66.4%) either agreed or strongly agreed that they were satisfied with the water quality provided by the BWA. A much smaller number of respondents (18.3% and 10.9%) either disagreed or strongly disagreed, and were indifferent or neutral, respectively about their satisfaction with the BWA water quality. Most Barbadians are satisfied with the BWA's water quality. Qualitative information obtained during data collection indicates that persons primarily treat the water by boiling for use in tea and for use by babies. The use of softeners was to correct for taste, which was often attributed to the limestone in the water. A small number of respondents reported an infrequent need to purge the pipe due to increased sediment loads observed after a repair in the pipe distribution network. The majority of respondents (61.6%) disagreed or strongly disagreed with the statement that BWA water negatively impacted their health.

Knowledge gaps on the type of wastewater management services used were highlighted in the question – “How do you maintain your septic system?” 49.8% of respondents reported that they did not use a septic tank but instead used a suckwell. Further disaggregation of this information by parish revealed that 46.9% of the suckwell responses were for the parishes of St. Michael and Christ Church. In Barbados only these 2 parishes are connected to the sewer, and it is possible that some of these responses are incorrectly attributed to use of a suckwell as it is mainly the

tourist locations connected to the centralized wastewater treatment plants. An additional 17.9% of the respondents indicated that they did not know how their septic tank was maintained. Of those respondents indicating a connection to the sewer (9.2%), 3.9% or 9 responses incorrectly indicated this choice, given the parishes where they lived. Of those who reported having a septic tank, 15 % indicated that their septic tank was pumped regularly (5-7 years).

Most persons reported that they used the BWA Hotline (38.3%). A Multiple Methods approach (15.3%) was the second most cited response and this was usually a combination of the BWA Hotline, a visit to the BWA Office and/or a Call to a BWA Employee. A large number of the study population indicated that they Never Contact the BWA (34.1%). Qualitative information received for this question usually cited a perception that their concerns will not be addressed, or that they had no problems and thus never contacted the utility. Radio Ads were the common method cited (21.4%). A close second response was Multiple Approaches (21%), which comprised mostly radio ads, word-of-mouth and newspapers. The largest individual response category (34.5%) to this question was that many persons were Never Informed by the BWA on new projects or changes in service. In general, women were more likely to cite that they received some form of information from the utility, and this may be due to a greater interest and need to know about interruptions or changes in the service which directly impact their water-related domestic activities.

There is a bottleneck in the flow of information or communication between the BWA and its stakeholders, with persons feeling that their concerns may not be addressed if they contact the utility, and/or that the utility does not do enough to engage with all sections of the population. The social media analysis revealed a missed opportunity for the BWA to engage with stakeholders online, and these further reiterate and highlight the isolation of some persons from communicating with the utility. Clear communication policies that leverage most of these used and received methods of communication are needed. In spite of these bottlenecks, the majority of survey respondents (34%) either agree or strongly agree that their concerns are addressed. 24.8% of the respondents either disagree or strongly disagree that when they contact the BWA their concerns are addressed. A smaller section of the study population (8.3%) reported indifference or neutrality to the question.

Most respondents (78.2%) agree or strongly agree that their opinions should be considered in decisions made about water management in Barbados. Few responses of indifference or neutrality (11.8%) and disagree or strongly disagree (2.2%) were recorded. Average monthly expenditure for 81.7 % of the study population ranged from BDS \$25-\$600 with a mean and median of BDS \$83.97 and BDS \$60 respectively. The most cited (36.6%) expenditure range was BDS \$25-\$50 and this was populated by mostly women (58.3%). The minimum possible monthly expenditure on water from the BWA is \$32 comprising the connection fee and up to 8 m³ of water. Some respondents (9 or 3.9%) quoted expenditures under BDS \$32, which likely reflects a credit or subsidy. Another 14.8% of the study population reported that they didn't know the cost of the water because it was included in their rent. Eight respondents (3.5%) did not provide a response and in most instances, it was because they did not know. One individual reported that

they hadn't received a water bill in months since their water meter had been broken and attempts to get it fixed had been unsuccessful.

Responses to questions on the average monthly expenditure on wastewater revealed a lack of knowledge on this area. Only the parishes of St. Michael and Christ Church (which make up 46 % of the study population) have some sewage coverage. Of this population, 39% indicated that they were not connected to the sewer. Only 4.8 % of the respondents were able to provide expenditure values that ranged from BDS \$0.50-\$66 with a mean and median value of BDS \$32.7 and \$35 respectively. It should be noted that some of the prices quoted that were less than BDS \$6 seemed unreasonable and are most likely inaccurate. Limited data points made statistical tests for gender association with responses recorded not possible. While 60.3% of respondents indicated that they purchased water, but only 42.8% of them could provide expenditure amounts. The expenditure ranged from BDS \$2-\$500 with a mean of BDS \$56.5 and median of BDS \$27.

5. Summary & Recommendations

Gender mainstreaming entails setting gender outcomes, outputs and indicators to track the project's progress in changing conditions of men and women in terms of power, agency, participation and access to resources. The following recommendations have been developed to incorporate gender findings throughout the project, or to assist in further understanding issues that need to be addressed:

- Create a gender-responsive budget that allocates resources for a gender focal point to coordinate integration of gender analysis findings, and reflect commitments to gender objectives.
- Develop and provide routine gender training to recognize and raise awareness of the disparity in stakeholder representation and take corrective action to balance stakeholder views.
- Formulate institutional gender policy & partner with UWI IGDS to build capacity on gender and infrastructure in Barbados.
- Ensure institutional commitments to gender integration in organizational policies. - In-depth gender analysis and impact assessment is conducted
- Set reasonable targets for increased participation of underrepresented groups in instances of job creation that goes above baselines and that are supported by appropriate recruitment efforts.
- Set measurable gender outcomes for project in terms of persons trained and livelihoods improved.
- Develop clear communication policies (inclusive of a social media presence) on information dissemination and follow-up to address stakeholder concerns.
- Include social factors such as gender impacts and presence of vulnerable groups in criteria for prioritizing operation and maintenance activities like pipe replacement.

- Produce educational materials on the rationale for inclusion of gender perspectives as smart economics in water sector development projects, and recruit M.S. and Ph.D. students for the UWI IGDS to pursue research that directly support EWN-SCI project goals.
- Ensure equal voice among women and men in the decision-making processes of the project & as water champions in communities.
- Explore the potential of decentralized projects like rainwater harvesting in increasing customer resiliency during water supply shortages and natural emergency situations.
- Monitor with sex disaggregated data the impacts of project components and use to evaluate progress towards gender targets.
- Current skillsets for technical jobs bias allotment to men, there will be need for targeted training, recruitment and promotion of women to fill these roles. Potentially partnering with the technical training institute should be explored.

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7. Appendix

Water, Sanitation, and Economics Survey—Fall 2016	
1. Age (write in):	9. If you store water, have you ever noticed mosquitos in any of your tanks? (Select one.)
2. Gender (circle): MALE / FEMALE	(a) YES (b) NO
3. Parish, Community (write in):	(c) unable to check storage container
4. Your highest level of education is? (select one)	10. Do you take any of these measures to reuse water from your home? (Select all that apply.)
(a) primary school (b) secondary school (c) associate's degree (d) vocational certificate (e) bachelor's degree (f) master's degree (g) doctoral level	(a) reuse kitchen sink water for other household purposes (b) reuse laundry water for other household purposes (c) other, please write in:
5. What is your primary source of drinking water? (Select only one.)	11. What does your household do to clean your primary drinking water source? (Select all that apply.)
(a) tap in house (b) household stand pipe (c) community stand pipe (d) bottled water/drink (e) household rainwater barrel (f) community rainwater barrel (g) other, please write in below:	(a) boil (b) clean storage tank (c) add chlorine tablets (d) use household filter (e) add chlorine liquid/bleach (f) installed mesh on tank (g) add layer of oil to storage tank (h) add guppies to storage tank (i) no measure to clean water source (j) other, please write in:
6. What are your supplemental sources for drinking water? (Select all that apply.)	12. If applicable, who performs these tasks? (Select one.)
(a) tap in house (b) household stand pipe (c) community stand pipe (d) bottled water/drink (e) household rainwater barrel (f) community rainwater barrel (g) no supplemental source	(a) head of household (b) child (c) neighbor (d) relative or renter (e) paid worker
7. If you store water at your household, what type of container do you use? (Select all that apply.)	13. What is their gender? M F
(a) plastic barrel (b) plastic tank (c) bucket(s) (d) reservoir (e) do not store water	14. How do you maintain your septic system? (Select all that apply.)
8. If you store water at your household, what are your reasons? (Select all that apply.)	(a) have septic pumped regularly (every 5-7 years) (b) do not flush toilet paper or similar products

<ul style="list-style-type: none"> (a) as back up during interruption of BWA services (b) as independence from BWA network (c) as a source of non-contaminated water (d) for household convenience (e) as a water source in dry season (f) as a water source in wet season (g) as a source in case of natural disaster (h) to reduce the cost of water bill from BWA 	<ul style="list-style-type: none"> (c) install toilets with low-flow water usage (d) add chemicals to help breakdown in septic system (e) i do not use septic, I am connected to the BWA system (f) i do not use septic, I treat my wastewater by (write in):
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15. How do you contact BWA? (Select all that apply)	16. How does BWA inform you of new projects, changes, or issues to your water and sewage services? (Select all that apply.)
<ul style="list-style-type: none"> (a) call BWA Hotline (b) post on social media (c) email customer care (d) post letter to BWA (e) fill out form on BWA website (f) visit a BWA office (g) attend public meetings (h) never contact BWA directly (i) other, please write in: 	<ul style="list-style-type: none"> (a) flyer at payment stations (b) social media updates (c) emails (d) posted mail (e) door-to-door fliers (f) TV ads (g) radio ads (h) billboard (i) community meetings (j) word-of-mouth (k) surveys (l) never been informed (m) other, please specify

17. For the past three months, what is your household's average monthly expenditure on a) water services? BDS\$_____ b) wastewater services? BDS\$_____
18. If you buy water (outside of BWA), how much do you spend on purchased water per month? BDS\$_____.
19. Given your current monthly consumption, what is the maximum your household would be ABLE to pay per month for water services? BDS\$_____.
20. Given your current monthly consumption, what is the maximum your household would be WILLING to pay per month for water services? BDS\$_____.

Using a scale of 1 to 5 please indicate the level of satisfaction with items listed below. The numbers indicate
1 – I strongly agree 2 – I agree 3 – I am indifferent 4 – I disagree 5 – I strongly disagree
6 – This question does not apply to me

ITEMS	1	2	3	4	5	6
21. When I contact BWA, my concerns are addressed?						
22. I should you be able to contribute to decisions made about water projects?						
23. The current cost for the water service offered is reasonable						
24. The current cost for the wastewater service offered is reasonable						

25. Overall, my household is satisfied with BWA's water supply system						
26. Overall my household is satisfied with BWA's water quality						
27. I am concerned that BWA's water quality negatively affects the health of my household. Some of my concerns are:						

Gender documents for FP061

III. GENDER ANALYSIS



Project Title: *Enhancing direct access in the public, private, and civil society sectors of Antigua and Barbuda, Dominica, and Grenada*
Gender Analysis

Gender and the GCF

The Green Climate Fund governing body adopted its Gender Policy and Action Plan⁴ in 2015. Through this plan, the GCF commits to:

- Gender equality and equity;
- Inclusiveness in all activities;
- Accountability for gender and climate change results and impacts;
- Country ownership—through alignment with national policies and priorities, and broad stakeholder engagement, including women’s organizations;
- Gender-sensitive competencies throughout GCF’s institutional framework—skills, knowledge and behaviours acquired from training and experience that enable implementers to apply a gender-lens throughout their work; and
- Equitable resource allocation—so that women and men benefit equitably from GCF’s adaptation and mitigation activities.

A Gender analysis/assessment refers to methods used to understand relationships between men and women, their access to resources, their activities, and the constraints they face relative to each other. *A comprehensive gender analysis/assessment entails the examination of the different roles, rights, needs, and opportunities of women and men, boys and girls in a given project/program context.* It is a tool that helps to promote gender – relevant entry points, policies and identify opportunities for enhancing gender equality in a particular project/program. In the case of climate change projects/programs, a well-done gender analysis/assessment helps to identify multiple causes of vulnerability, including gender inequality. It also helps to identify and build on the diverse knowledge and capacities within communities/households that can be used to make them more resilient to climate related shocks and risks⁵.

Gender considerations in the EDA Request for Proposals

⁴ GCF Gender Policy, adopted in 2015 http://www.greenclimate.fund/documents/20182/818273/1.8_-_Gender_Policy_and_Action_Plan.pdf/f47842bd-b044-4500-b7ef-099bcf9a6bbe

⁵ Green Climate Fund Gender and Social Inclusion Action Plan Template, available via http://www.greenclimate.fund/documents/20182/574712/Form_09_-_Gender_Assessment_and_Action_Plan_Template.pdf/3f4b8173-fbb2-4bc7-9bff-92f82dadd5c0

In addition to the overall GCF gender policy guidance, the EDA Request for Proposals underscores the importance of a gender-sensitive approach in developing the activities of the EDA pilots, in particular in oversight functions and decision-making bodies:

The decision-making body should include civil society, the private sector and other relevant stakeholders, and should be sensitive to gender considerations.

The oversight function should include the NDA or focal point and representatives of relevant stakeholders, such as government, the private sector, academia, civil society organizations, and women’s organizations.

Gender Analysis

Gender plays an important role in determining the adaptive capacities of individuals and as such, if gender is tracked by M&E systems it can support greater learning on how we are learning to adapt in the context of gender. For instance, women can be more vulnerable than men to climate related hazards, and women have an important role to play in supporting climate change adaptation and mitigation given their high levels of awareness of risks, knowledge of the community and the fact that they have a pertinent role in the management of natural resources (UNFCCC, 2014). Therefore, gender considerations need to be taken on board from two dimensions – what characteristics, attributable to gender, increases an individual’s vulnerability (their weaknesses) and what roles and responsibilities individuals undertake in the household and community, as a result of their gender, makes them useful in adapting to climate related risks (their strengths).

The objective of the proposed EDA project in the Eastern Caribbean is to increase the resilience of at least 5% of the population in the Eastern Caribbean pilot countries to climate variability and change, of which 50% are women, through adaptation in infrastructure, strengthened buildings, and enhanced ecosystem services.

To achieve this goal, the gender analysis seeks to understand the situation of women, men, boys and girls from communities in the participating countries of Antigua and Barbuda, Dominica and Grenada.

Case Study: Post-hurricane delivery of “dignity kits” to women and girls of childbearing age

After Hurricane Irma struck Antigua & Barbuda in September 2017, the population of Barbuda was evacuated to Antigua and the Directorate of Gender Affairs and the UN distributed “dignity kits”, containing basic health and hygiene products such as soap, sanitary napkins and underwear – critical items for women and girls that can be easily overlooked in a disaster response. There were 650 pregnant women at the time of the hurricane.



Displaced women receive dignity kits. © Nneka Nicholas/Volunteer DoGA

Source: <https://www.unfpa.org/news/unfpa-responds-entire-population-barbuda-evacuated-following-hurricane-irma>

Comparative Summary of Key Gender Equality Indicators

Table 7. Key Gender Equality Indicators for EDA pilot countries (Source: adapted from Rawwida Baksh and Associates, 2016. Country Gender Assessment (CGA) Synthesis Report)

Country	Total pop.	Population 0-14 years old	Population 15-24 years old	Population 64 years and over	Life Expectancy at Birth	%/Number of male or female-headed households	Maternal Mortality Rate	Labour Force Participation	Unemployment Rate	Enrolment in Primary Schools	Enrolment in Secondary Schools	Enrolment in Tertiary Education	No. of males/females in Parliament	Gender-based Violence (GBV)
Antigua & Barbuda	M-40,007 (48%) F-43,271 (52%) T-83,278 (100%) (GOAB, Census, 20011)	M-11,333 (51%) F-10,979 (49%) T-22,312 or 24% of total pop. (CIA, 2013)	M-7,465 (49.5%) F-7,622 (50.5%) T-15,087 or 16.7% of total population (CIA, 2013)	M-2,771 (43%) F-3,659 (57%) T-6,430 or 7.1% of total population (CIA, 2013)	M-73.9 years F-78.1 years T-75.9 years	M-56.5% (2001) F-43.5% (2001) (GOAB Census, 2001)	0.81 (CARICOM, 2010)	M-18,602 (47%) F-21,341 (53%) T-39,943 (Kairi, CPA 2005/2006)	T-12% (estimate) GOAB, 2012	M-100% F-88.1% T-94.0% (GOAB, Ministry of Education, 2009-2010)	M-78.9% F-82.1% T-80.5% (CEPAL, 2011)	M-689 (34.8%) F-1291 (65.2%) T-1980 (100%) (OECS, 2010-2011)	H.O.R/ Lower House M-16 (89.9%) F-2 (11.1%) T-18 (100%) Senate/Upper House M-10 (58.8%) F-7 (41.2%) T-17 (100%) (IPU 2014)	T-216 victims (DOGA, 2011)
Dominica	M-34,973 (51%) (2011) F-33,940 (49%) (2011) T-68,913 (100%) (2011) (GOCD, 2014)	M-8,787 (51%) (2011) F-8,511 (49%) (2011) T-17,298 or 25.1% of total pop. (2011) (GOCD, 2014)	M-5,928 (51%) (2011) F-5,627 (49%) (2011) T-11,555 or 16.8% of total population (2011) (GOCD, 2014)	M-4,755 (2011) F-5,444 (2011) T-10,199 or 14.8% of total population (2011) (GOCD, 2014)	M-73.4 years F-79.5 years T-76.4 years (CIA, 2013)	M-60.8% (2011) F-39.2% (2011) T-25,073 or 100% (2011); (GOCD, 2014)	0.32 (222.3 in 2010) (CIA, 2010; CARICOM 2010)	M-17,646 (58.4%) F-12,558 (41.6%) T-2011: 30,204; (GOCD, 2014)	M-2,164 (12.3%) (2011); F-1,238 (9.9%) (2011) T-3,402 (11.3%) (2011) (GOCD, 2014)	M-4,186 (51.4%) F-3,958 (48.6%) T-8,144 (Edu. Planning Unit, GOCD, 2013)	M-50.7% F-49.3% T-100% (MoE, Gov't of Dominica, 2011/12)	M-868 (37.5%) F-1,449 (62.5%) T-2,317 (100%) (MoE, Gov't of Dominica 2011/12)	M-25 (78.1%) F-7 (21.9%) T-32 (100%) (IPU, 2014)	T- Reported cases- 391 (National GBV Registry, BGA, 2011-2013)
Grenada	M-53,008 (50.23%) (2011) F-52,531 (49.77%) (2011) T-105,539 (100%) (2011) (GOGR, 2011 Census)	M-13,962 (52%) F-13,101 (48%) T-27,063 or 24.7% of total population (CIA, 2013)	M-9,310 (49.5%) F-9,474 (50.5%) T-18,784 or 17.1% of total population (CIA, 2013)	M-4,601 (45%) F-5,520 (55%) T-10,121 or 9.2% of total population (CIA, 2013)	M-71.0 years F-76.35 years T-73.68 years (Health Sector Situational Analysis (2013), Ministry of Health, GOGR)	-	0.4 (Health Sector Situational Analysis (2013), Ministry of Health, GOGR)	M- 67.4% (2011) F-53.5%; (2011) T-60.5%; (2011) (GOGR, 2011 Census)	M-17.9% of labour force F-31.8% of labour force T-24.9% of labour force (CDB (2008c)	-	T- 10,375 (MoE, 2012)	-	H.O.R/ Lower House M- 10 (66.7%) F-5 (33.3%) T-15 (100%) Senate/ Upper House M-11 (84.6%) F-2 (15.4%) T-13 (100%) (IPU 2013)	M- 4 Reported Cases (10.8%) F- 33 Reported Cases (89.2%) (Community Relations, Grenada Police Force, 25 Feb – 30 Jun 2013)

Gender issues relevant to the proposed project

Table 8. Gender analysis for project preparation stage (Source: Green Climate Fund Gender Analysis/Assessment and Gender and Social Inclusion Action Plan Templates⁶)

	Questions	Data/Information Collected
What is the Context? Context of the Eastern Caribbean pilot countries	1. Demographic and socioeconomic data, disaggregated by sex and income	- Socio-demographic groups in the target countries that are vulnerable to poverty and unemployment include: youth, adolescent mothers, working class men, the homeless, the disabled, older men and women.
	2. % of households that are headed by women/men	- Approximately 40% female headed homes across the three SIDS - The differential declaration of head of household status by women and men may be attributed to the country's patriarchal social organization. Men have been and continue to be considered heads of the home, premised on conservative interpretations of religious texts found commonly in Christian societies. - Women's burden of care is greater in these instances, as many women heads are solely responsible for care, with no partner or robust family safety net. Combined with limited and unequal labour market opportunities, women's vulnerability to poverty is significantly advanced by their propensity as single parent heads of households (UN Women, 2014).
	3. What are the main sources of income for households in the vulnerable areas (disaggregated by sex)?	- The largest occupational category continues to be the service and sales sector followed by clerical support work. Elementary occupations are the largest followed by professional and technical and associate professionals. - Men typically dominate the following sectors: Construction, Agriculture, forestry and fishing, Transportation - Women typically dominate the following sectors: Services (accommodation, tourism), Education, Social work, Financial and insurance activities - Young men are more likely to be unemployed than any other group
	4. What are the uses/needs of women and men when it comes to water, farming, energy, or other project-relevant sectors?	- Women usually have primary care responsibilities for household activities (Undifferentiated production of goods and services for household use); therefore women depend heavily on reliable water

⁶ Green Climate Fund Gender and Social Inclusion Action Plan Template, available via http://www.greenclimate.fund/documents/20182/574712/Form_09_-_Gender_Assessment_and_Action_Plan_Template.pdf/3f4b8173-fbb2-4bc7-9bff-92f82dadd5c0

		<p>and energy access at the household level otherwise they spend a lot of time trying to compensate for unreliable services</p> <ul style="list-style-type: none"> - The needs are: They need water for basic way of living to include cooking, cleaning and drinking and overall taking care of their health and their household - Water is also needed to feed their livestock and their farming products - Farming: This is another source of income to provide for their family and it is another means of sustainable living. It is food security. - Cost of electricity is quite high in the target countries and therefore energy plays a part in reducing the costs
	5. How do the current climate risks affect men and women?	<ul style="list-style-type: none"> - It depends on their role and occupations. Women who work in the tourism/services sector will be out of work if a hurricane damages this sector; women in the supply chain such as cleaning fish will be affected when the hurricane destroys boats. Women heading households will have their problems compounded with additional duties - Drought has affected the supply of water to household which is essential for sustainable living. - Not enough water to feed their livestock and plants which affects their livelihoods (farming etc) - Unavailability of drinking water: some individuals cannot afford to purchase water in the supermarkets and therefore it becomes difficult to have access to water. - The climate is getting hotter which can cause severe health impacts such as heat strokes on men and women - Individuals are susceptible to vector-borne diseases
	6. Are there any legal barriers to women in the project-relevant sectors – property ownership, buildings, farming?	<ul style="list-style-type: none"> - No legal barriers have been identified at this stage
	7. Describe any community beliefs about the specific roles of women and men.	<ul style="list-style-type: none"> - Heavy labor task assigned to men, food preparation, child care and domestic duties assigned to women - Men are the head of the household and are the bread winners. They are involved in farming, fishing, and heavy duty labour. However, the world is now evolving where women are now leaders, farmers, fishers, vendors etc. and still taking care of their family.
Who has what? Ownership and access	1. Who owns the land and other product assets?	<ul style="list-style-type: none"> - Both men and women - Some communities (e.g. Barbuda, the Kalinago community in Dominica) have a communal land ownership system
	2. Describe household energy access and sources.	<ul style="list-style-type: none"> - It is an essential service provided through a utility company with a monopoly in the OECS countries

	3. How much do households spend on water and energy?	- Utilities account for approximately 20% of disposable income
	4. Do men and women have bank accounts and can they access finance to scale up their farming / business activities?	- Men and women, especially lower-income, save through box hand and have accounts at the credit union where there are less rigid eligibility criteria as oppose to other traditional banks. The credit union also provides low interest loans compared to other banking institution. on average women save more than men
	5. Do men and women benefit from construction sector, extension services (or other project-relevant services)?	- Extension services provided by Min of Agriculture which is more teaching and providing technical assistance than services such as ploughing marketing, supportive services for loan funds for water catchments, fencing etc. - Women are underrepresented in construction sector businesses, which is traditionally a male dominated industry
	6. How do men and women access information? Do they have access to different technologies?	- People can see and observe what is happening on other farms, in the homes; they share at meetings and word of mouth goes along way. - Different groups regularly host community consultations, media sensitization etc. - In some communities, they do not have access to computers and the web so the most effective means of access to communication is word of mouth, door to door and community consultations
	7. What are the levels of training / education?	- Practical knowledge and skills built up over many years of working
Who does what? Roles and responsibilities	1. How are men and women connected to markets / how do they participate in the economy?	- As producers, they sell and market their products but it is the women who are at the market and roadsides selling their products
	2. What would be the implications of the proposed intervention, given primary tasks and responsibilities by gender?	- Families innovate and juggle work and activities to get things done
	3. Who is responsible for child/elderly care and household tasks?	- Family members take on this responsibility
	4. What would be the best times to hold trainings for women and men on the new systems/technologies or skills to be delivered through the project?	- For community members, after normal working hours, and on Sundays after church - When hosting consultations, we also take into consideration the time it is being held. The most appropriate time is around 5PM and lasts no later than 7PM. The consultations are regularly held in well-lit and central areas to ensure women/men feel safe traveling to and from the consultations.
Who decides?	1. Who are the community leaders? Are there any women leaders?	- Many women are in our communities, bringing people together to find solutions to problems. We do not have designated community leaders

Participation in decision-making		but various individuals within the community takes on the responsibility in an effort to ensure the other community members are involved
	2. Are there women's organizations that are active in the targeted area targeted project can partner with?	- The solutions are multi-dimensional so the outreach, networking and building partnerships has to be done
	3. Do women and men participate (equally) in associations, management relevant to the project sector, and any other producer/user groups? Which ones?	- Women and men participate in community meetings where they know each other well
	4. Who manages / makes decisions in the household, notably around how money and time are spent?	- The women are the better spender-get more value for their
	Will both women and men be able to equally participate in using and learning about the new interventions in the proposed project?	- Yes, both men and woman will be able to equally participate - Women attend the meetings while men "lime, play street games". At the community level, the project will need to provide targeted outreach to all groups
Who benefits? Impacts	1. Will the services from the project interventions be freely available to men and women? Are there any risks/restrictions on movement (security or cultural)? Are there any discriminations/risks to certain community members in terms of accessing the project benefits?	- Meetings held late at night are a risk; there must be adequate lighting for women and men to attend meetings - The services will be freely available to both men and women. As stated above, it is mandated by law that NGOs, Civil society organizations, governments, private sector whether women/men must be involved in decision making as it relates to environmental projects. It is mandated by Law and is also stated within the Department of Environment environmental and social safe guards that the Department of Environment is mandated to ensure that all environmental projects being executed within the OECS must conform and adhere to ESS and reduce the impacts of risks. Thus, we do not foresee any significant risks/restrictions as it relates to gender involvement.
	2. How will men and women benefit from the project interventions?	- Women in particular will benefit from the interventions at the household level - Men could benefit more from the construction sector jobs - Both men and women will have access to funding to develop their projects that will sustain their livelihoods - Flooding will be reduced in low line areas once the waterways are cleared - Since the community members are the ones being affected, then various consultations will be made to ensure we capture their thoughts, recommendations and identify risks to mitigate. - Awareness will be strengthened

	3. What will be the impact of the project interventions on women's workload and income?	- It is likely that women will take on more work, taking on more responsibilities
	4. Are there specific project impacts or benefits for women?	- Leadership opportunities; financial empowerment; skills building
	5. Will the project help create a better balance between women's productive and household tasks (e.g. childcare, domestic work)?	- More time will be spent out of the home but once women are committed, child care and other household tasks and activities will fit in. Women should be able to bring their children to meetings
	6. Will the project contribute to strengthening women's participation in decision-making? How?	- Allow them to start by sharing their interest and their experiences and overtime, courage and strength will be built up

Recommendations for gender responsive Enhanced Direct Access

Recommendations from key literature on promoting gender in the Caribbean context, which the project can draw, will provide safeguards to ensure the different needs and priorities for gender are met⁷. Socio-demographic groups in the target countries that are vulnerable to poverty, unemployment and as such are exceptionally vulnerable to climate impacts include: youth, adolescent mothers, working class men, the homeless, the disabled, older men and women.

Specific interventions will promote equal participation and benefits by both women, men, boys, girls, and vulnerable groups:

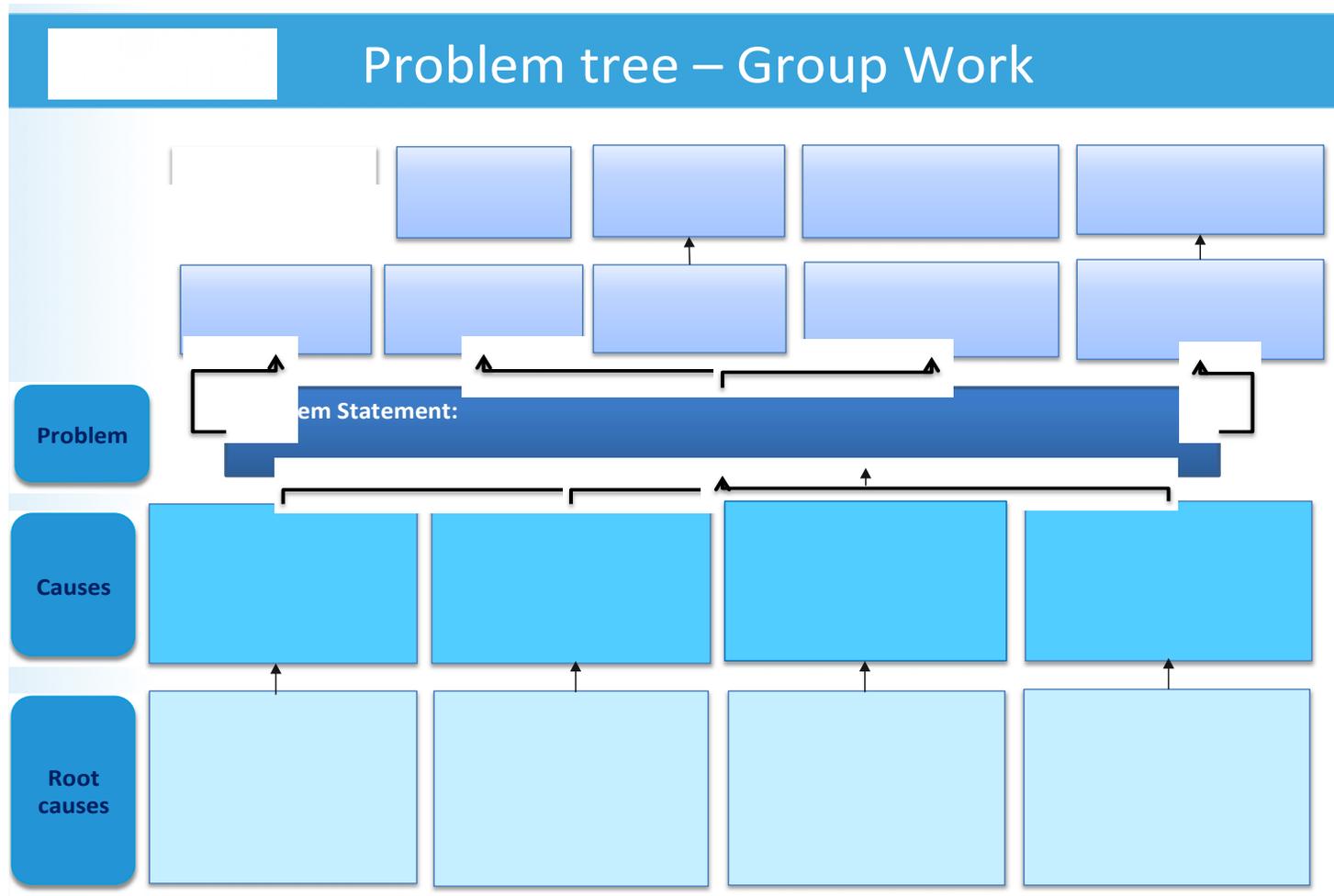
- Identify opportunities to involve women in the construction sector: greater recruitment, training, certification and employment of women in all areas of infrastructural development
- Encourage workshops and trainings to be children-friendly, such as with on-site nursery or day care to enable mothers with young children to fully participate
- Provide gender sensitization/training to policy-makers, planners and analysts in the economic and social development sectors, in order to strengthen the linkages between economic growth, poverty reduction, and climate change impacts, to better respond to the specific needs of poor women, men, youth, the elderly and the disabled
- Ensure that adaptation sub-projects supported by the EDA are evidence-based in order to promote gender equity, and respond to the specific needs of poor women, youth, the elderly and disabled
- Poverty reduction strategies should target female-headed households, given the high prevalence of poverty among them. To enable them to engage in income-earning activities, women and teenage mothers need access to facilities or support for the care of their dependents as well as flexible working arrangements.
- Ensure that equitable provisions for elderly men and women are determined not only by their contribution to the formal wage sector, but an understanding of their contribution to the care economy (reproductive work in the home and community), contribution to subsistence agriculture, and participation in the informal economy
- Establish/strengthen systems/protocols/guidelines for collecting, collating and analysing sex-disaggregated data in ministries, departments, statutory bodies and other agencies
- Create an enabling environment for gender-responsive private sector development so as to facilitate women's full participation in growth, expansion and regional cooperation and trade

A Gender Action Plan for the Enhancing Direct Access project is in *Section IV*.

⁷ Baksh, Rawwida and Associates, 2016. Country Gender Assessment (CGA) Synthesis. Prepared for the Caribbean Development Bank.

Annex 3. Tool to facilitate consultations and gender responsive EDA sub-project design

The following template tools have been developed by UN Women as best practice guidelines, and these tools will be adapted to country-specific circumstances and utilized by the Executing Entities to assist stakeholders to design and implement gender-responsive projects.



Gender documents for FP062

PROEZA Project Poverty, Reforestation, Energy and Climate Change

Annex K. Gender Analysis/Assessment and Gender Action Plan

Part I: Gender Analysis/Assessment

General information

Maternal mortality rate	95 per 1,000 (2014)
Infant mortality rate	8.5 per 1,000 (2014)
Educational status of girls and boys	0 – 4 years: 77.2% (2012) Basic: 63% (53% of them are women) (2012) High school: 33% graduated (more women than men) (2012)
Adult literacy rate (disaggregated by sex)	15 - 24 years: 98% (same rate men and women) (2012) > 15 year: 95% (very similar rate between women and men) (2012)
Poverty rate	Total: 28.86% (2016) Rural: 39.72% (2016)
Labour force participation rate (disaggregated by sex)	40% women
Employment rate (disaggregated by sex)	47.2% women 50.9% men
Unemployment rate (disaggregated by sex)	8.3% (10.1% women and 6.6% men) (2016))
Political participation rate (disaggregated by sex)	Women as Party President: 9 from 27 parties (2014) Decision level on parties: 35% women (2014) Women as Senator candidate: 40.61% (election 2013) Registered in parties: 47% women; 52% men (2015) Women elected as parliamentarian: 17% (2013) By law as candidates: at least 20% should be women
Life expectancy (disaggregated by sex)	Women: 75,25 (2015) Men: 70,91 (2015)

Country of intervention

<p>What is the legal status of women?</p>	<p>The new Law 5446 on Public Policies for Rural Women, enacted on July 20th, 2015, seeks to reverse these and other gaps. Its general objective is: "to promote and guarantee the economic, social, political and cultural rights of rural women; fundamental for their empowerment and development". This Law is framed in the legal norms of Paraguay, which establish equality and non-discrimination for women and men (Articles 46, 47 and 48); As well as the responsibility of the State to remove obstacles to achieve equality and prevent factors that maintain or promote them "(Article 46, National Constitution of Paraguay). The governing body for compliance with this Law is the Ministry of Women in coordination with the Ministry of Agriculture and Livestock (MAG) and other responsible ministries and institutions.</p> <p>This law is also aligned with international treaties and conventions, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), ratified by Law 1215 of 1986. The CEDAW is the most important international instrument, of a broad and legally-binding nature with the laws of Paraguay, as it explicitly recognizes that "women continue to be subject to significant discrimination". Article 14 of this instrument and General Comment No. 34 (of 2016) specify the need to enforce the rights of rural women and the responsibility of the State to do so.</p>
<p>What are commonly held beliefs, perceptions, and stereotypes related to gender?</p>	<p>The Paraguayan peasant shows characteristics from the "Guaraní mestiza" culture, which has had little cultural relationship with other peoples and has experienced a geographical dispersion. The mix between the Guarani and the Spanish colonial and a past of wars against its neighbours are expressed in the identity of the communities that speak only Guarani, and live in an austere way, and in paternalistic relations.</p> <p>To be managed even in very precarious conditions and with very artisanal productive technologies, this peasant that has not reached modernism constitutes the most numerous social group and an essential part of Paraguayan identity, with traditional and conservative cultural patterns, as well as solidarity practices of reciprocity.</p> <p>The participation of women as a food producer is unavoidable, since their relationship with family production is integrally articulated to reproduction. In the family farm, women do not separate their productive role from reproductive, because the family unit is an</p>

	<p>integrated whole. The lack of understanding of this reality is what leads to erroneous perceptions of the "inactivity" of rural women. To understand this issue is fundamental, not only to discriminate productive activities of the reproductive that rural women carry out in an extremely dynamic way, but also to give real value to their social and economic contribution.</p>
<p>What is the division of labour among women and men?</p>	<p>They are responsible for 99% of domestic activities, including the reproduction of the workforce and the transmission of traditional values. On the other hand, they are also part of the agricultural workforce on the farm, a role shared with men and other family members.</p> <p>This allocation of traditional roles in rural society has had a major negative impact on women, as any behaviour that does not conform to the culturally established is seen as "threat". Exercised social control becomes an impediment to the development of its capacities. The cultural patterns of gender that shape people's lives have established the position of men and women in rural society. Children exercise their freedom in the field outside their homes more easily than girls, who have more restricted their exit from home. In this way, social control determines the conduct considered appropriate. In practical terms, children are training naturally for the public and women, for the private or domestic. This social scenario, however, has been slowly changed over the years, allowing women to be more independent to participate in the community.</p>
<p>What is the participation between women and men in the formal/informal economy?</p>	<p>Women's participation in the country's development process has always been important, either for their remunerated and unpaid activities. Over the last few decades, the need for income due to economic crises and the increase in employment opportunities for women have made them massively mainstream into remunerated work by directly and importantly influencing economic growth. The contribution of women became "visible" and was concretized in macroeconomic indicators however much of the feminine contribution to the economy and development remained and remains forgotten.</p>

Project footprint area

<p>What is the situation of women and men?</p>	<p>The model of peasant production, based on mini and small land production and with little technological incorporation, the patterns of sexual division of labour and the greater opportunities of work for women outside the rural sector, would seem to be the factors that motivated women to leave their place of origin to go to the cities. In the urban sector, there were always more women than men, while in the rural sector there is greater male representation. Studies show that there would be a feminization of the migratory phenomenon in Paraguay, since more than half of migrants are women.</p> <p>On the other hand, the almost null technological preparation of the women has a negative impact on the family farm when the man emigrates and leaves in their hands the crops, because their lack of knowledge about productive problems solutions causes that the family farm is in danger of crops loss.</p>
<p>In terms of the proposed project/program, will there be any anticipated differences in men's and women's vulnerability and adaptive capacity to climate change? If so, what are these?</p>	<p>Yes</p> <p>In principle the affectation is to the family nucleus as a whole, but it could be expected, given the simultaneous productive and reproductive role of the women, that in a situation of crisis or economic disaster due to the impact of climate change on family productive activity, the impact could be greater on the responsibilities of women: i) in the absence of income or availability of physical access to food, the woman might prefer to feed her children in sacrifice of her own food, affecting her health; (ii) the lack of direct physical access to their own food at the farm level would force women to use a greater proportion of their time to achieve them, reducing their time for possible personal or laser development activities; and, iii) the young woman migrates to the cities in search of remunerated work and assume a greater effort for family income generation and entering into a remunerative scheme, which itself being legal, is low remuneration for low qualification.</p>
<p>Are there existing gender inequalities that may be exacerbated by climate change impacts?</p>	<p>Yes</p> <p>Due to the impact of climate change on income from affectation to family agro-productive systems, in the medium term, the tendency to supply basic food and health needs is to begin to sell their assets even losing their property and land, or abandoning it. In this case, the woman could run out of sustenance and also, unlike man, with few occupational skills in productive issues, so his vulnerability would be greater.</p>
<p>What are some of the inequalities that exist between different social groups? How do these inequalities affect</p>	<p>The beneficiaries of the project are a relatively homogeneous population of households in a situation of poverty and extreme poverty. Within the family nucleus, the pose and ownership of productive goods and others, is in the domain of man. On the other</p>

people's capacity to adapt to climate change?	hand, the few incomes generally are administered by the man, who defines the priorities in much cases different than the women. The two are factors of inequality that affect mainly the adaptive capacity of women.
What roles women and men are anticipated to play in the context of the project/program? What will these entail in terms of time commitment and need for mobility?	The project will promote that men and women make decisions in the family, on the productive activities that must be developed within the framework of the benefits of the project. In addition, women are expected to manage adequately the resources of conditional transfers, make the decision in relation to technological change to improve stoves, and the man on his side should take care of the main productive tasks. In terms of time demand, it will not be a greater commitment to the current one.
What resources (economic, financial, physical, natural, other assets) do women and men have access to? Who manages or controls access to these resources?	Man has the main access to land and productive goods, he also has access to the state's institutional services (productive inputs and credit programs). Under the conditional transfer program, resources are administered mainly by women, and both men and women receive social technical assistance.
Do women and men from vulnerable communities have equal access to information and opportunities necessary to participate and benefit fully from the anticipated outcomes of the project/program?	The project will promote equal access for both men and women to information and opportunities for personal development through training opportunities. A special effort will be made for women to be a direct beneficiary on equal terms. PROEZA will support poor, female – headed/adolescent – headed/widowed - headed households/women farmers/landless farmers by building their human capital through education, skill – based training in various non – farm trades and strengthen their access to financial capital by increasing access to easy credit.
Do women have equal access to education, technical knowledge, and/or skill upgradation?	Yes Both men and women have equal access to formal education, but it is the men who have greater opportunities to improve their know-how. Due to the role assigned to women, their limited availability of time is reflected in less access to opportunities to improve their personal capacities, which are scarce because of the lack of technical assistance provided by the government.
Will services and technologies provided by the project/program be available and accessible to both women and men?	Yes Technical assistance will be available for both men and women, and will seek to encourage the participation of women in the training processes at the field. The technical assistance will be provided at the farm level, to ensure their participation.
To what extent do women and men from vulnerable communities participate in decision – making processes? What type of decisions are	The decisions on the types of productive models to be implemented in the farms will be taken by the man and the woman in the family nucleus. Women, in addition to these decisions will be responsible for the decision to implement or not the improved stoves in their home. It will not force to a technological change in case the woman

<p>made by women? What are the constrains (social, cultural, economic, political) that restrict women’s active participation in household and community level decision – making processes?</p>	<p>does not decide. The restrictions are mainly linked to the availability of time and in many cases, of financial resources to mobilize to the spaces in which the decisions are being discussed and taken. In this sense the barrier is mainly physical rather than social or cultural.</p>
<p>Are there any opportunities to promote the leadership of women in local governance/political systems and formal/informal institutions? If not, what are some of the constrains that hinder women from assuming leadership roles?</p>	<p>Yes. The strengthening of the Farmers ' association of the project beneficiaries will be promoted so that they can improve their opportunities for the access to forest products market. Women's leadership will be promoted in decision-making and governance spaces.</p>
<p>What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?</p>	<p>Los hombres requieren principalmente insumos productivos y asistencia técnica para desarrollar sus actividades agrícolas, en cuanto las mujeres, en el núcleo familiar requieren recursos para garantizar la seguridad alimentaria y nutricional de la familia. En el marco del proyecto se otorgará asistencia técnica para establecer los sistemas agro-productivos, y hasta que estos comiencen a generar ingresos, se realizarán transferencias condicionadas a las mujeres para que puedan desarrollar las funciones reproductivas. Al mismo tiempo, se buscará mejorar las capacidades técnicas de las mujeres relacionadas con las actividades agropecuarias, de manera que estén mejor preparadas para desarrollar acciones agroproductivas en otra escala si es necesario, reduciendo su vulnerabilidad y mejorando su capacidad de adaptación.</p>
<p>Have the needs of specific (and vulnerable) sub-groups been taken into account by the project/program (e.g. children, girls, women and men with disabilities, the elderly, windows)?</p>	<p>Men mainly require productive inputs and technical assistance to develop their agricultural activities, as soon as women, in the family nucleus require resources to ensure the food and nutritional security of the family. In the framework of the project, technical assistance will be provided to establish the agro-productive systems, and until they begin to generate income, conditional transfers will be made to the women so that they can develop the reproductive functions. At the same time, it will seek to improve the technical capacities of women related to agricultural activities, so that they are better prepared to develop the productive actions on another scale if necessary, reducing their vulnerability and improving their capacity to adapt. In the long term is expected the technical assistance of the government to strengthen their capacity in other areas of development.</p>
<p>Has the project/program recognized the distinct</p>	<p>Yes.</p>

<p>vulnerabilities of women and men and developed specific response strategies for each target group?</p>	<p>In the development of the productive models to be implemented in the farms, it has been considered not only the necessities of the family nucleus in terms of economic income, but also the need on woman to have direct access to food at the level of the family farm. This is why agroforestry systems have been considered, which include benefits and access to food in the short and medium term. In addition, it has been considered that women need to improve the traditional technology used to cook, which demand higher quantity of firewood, consuming time of woman, and that usually emits more coal than needed, which affects their health.</p>
<p>Are the specific knowledge and skills of women and men, especially from vulnerable groups, being utilised to contribute to project/program outcomes and solutions?</p>	<p>Yes. On the one hand, the administrative and strategic capacity of rural women is considered to define the priority for the use of financial resources, for which the conditional transfers are given to it. On the other hand, it recognizes the technical productive knowledge of man for the implementation process of the productive models. Both men and women should complement their skills to decide and plan on productive models to be implemented at the farm level with the Support of PROEZA.</p>
<p>Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations through equitable actions? If so, what are these opportunities and actions?</p>	<p>Yes. As mentioned, one of the stereotypes of rural women in Paraguay is “inaction”, by the lack of visibility of their work, and not being a public part of the decisions of a productive issues. This is changing. The project will support this process of change, seeking to provide technical assistance to the men and women of the family, and to promote that the productive decisions are taken in an agreed manner between the both, man and woman. On the other hand, environmental conditional transfers will be given to women for their administration at family level.</p>

Part II: Gender Action Plan

Activities	Indicators and targets	Timeline ¹	Responsibilities
<p>Impact Statement:</p> <p>PROEZA promote incentives to mitigate climate change through planting fast growing trees in mixtures with valuable native species in an environmental friendly and socially responsible way at the same time that rural poverty and extremely poverty is reduced as a path to increase resilience and adaptation to climate change. On the other hand, PROEZA’s adaptation strategy consists of supporting poor and extremely poor rural vulnerable households to increase their resilience to climate change through the diversification of production and options to increase family income through intensive social and technical assistance for the establishment of climate-smart agroforestry production systems and/or multifunctional “Close-to-Nature” planted forests (CTNPF) generating mitigation.</p> <p>Outcome Statement:</p> <p>As PROEZA’s adaptation strategy consists of supporting poor and extremely poor rural vulnerable households to increase their resilience to climate change, the beneficiaries are 87,210 people living in poverty and extreme poverty in the project area affected by climate change, of which 43,600 are women and 14,800 are indigenous. The indirect beneficiaries are the 141,306 poor and extremely poor households (720,000 people/360,000 women) registered in Tekoporã (social protection programme) that could also be benefited from the transformational change to be promoted by PROEZA. Also, 7,500 household will introduce improved cooking stoves benefiting the family and mainly the women by reducing their exposure to high level of emissions by cooking with traditional stoves.</p>			
<p>1. Climate-smart agroforestry production systems and multifunctional “Close-to-Nature” planted forests (CTNPF) established 17,100 poor and extreme poor households in the project area.</p>			

¹ See C.8 Funding proposal.

1.1. Select, hire and audit the Project Management Agent (PMA) and the Environmental Cash Transfer Agent (ECTA)	PMA an ECTA operative and supporting PROEZA implementation with gender focus.	By Q2, year 1 until end Year 5	FAO/EC
1.2. Provide support to improve governance and coordination and support the EC in leading the programme.	Executing committee acting with at least 50% of women representation and also integrated by the Ministry of Women.	By Q1, year 1 until end year 1	FAO/PMA
1.3. Provide assistance to vulnerable households through the Social Protection Programme	Beneficiary's households receiving social technical assistance with at least 50% of women participation.	By Q1, year 1 until end year 5	Social Action Secretary (SAS)
1.4. Make social conditional cash transfer(CCT) Tekoporã / SAS	Women of beneficiary's households receiving financial support from the social Tekopora programme.	By Q2, year 1 until end year 5	Social Action Secretary (SAS)
1.5. Provide technical assistance to beneficiaries	Beneficiary's households receiving agro-productive technical and access to market assistance with at least 50% of women participation ² .		INFONA/SEAM/MAG/FAO
1.6. Make investments and wage payments to beneficiaries for the establishment of CTNPF, agroforestry and restoration models	13,942 ha Proeza's plantation models implement under a 100% agreed decision among men and women at 17,100 household level ³ .	By Q1, year 1 until end year 5	Social Action Secretary (SAS)
1.7. Make environmental conditional cash transfer (E - CCTs) to beneficiaries	Women from 17,100 households receive financial support by the ECTA	By Q4, year 1 until end year 5	STP/FAO/ECTA

² PROEZA will support poor, female – headed/adolescent – headed/widowed - headed households/women farmers/landless farmers by building their human capital through education, skill – based training in various non – farm trades and strengthen their access to financial capital by increasing access to easy credit.

³ PROEZA will ensure the women's involvement in following watershed management activities regarding the agroforestry models: 1) preparation of watershed plan with an understanding of gender needs and gender – responsive implementation strategies; 2) developing watershed plans on the basis of existing use and dependence pattern; 3) reformulation of watershed guidelines to specify mechanisms for institutional arrangements for involvement of the poor and women; 4) development of micro-credit /women's self - help groups; 5) shifting the focus from watersheds to a community – led (and more holistic) livelihood development plan; and 6) and organizing gender sensitization programs.

1.8. Operate forest administration, supervision and control in the project area (INFONA)	to ensure food security until agroforestry models begin to generate incomes. 10% project field interventions audited	By Q1, year 1 until end year 5	EC/INFONA/SEAM/FAO
2. More efficient and sustainable technology for domestic firewood consumption.			
2.1 Introduce improved cooking stoves	7,500 improved cooking stoves implemented under 100% agreement of household women	By Q7, year 2 until Q16, year 4	VMME/STP/PMA/FAO
3. Certified “New Generation Forest Plantations” (NGFPs) through which high yield forest plantations will be combined with natural forests in biodiversity reserves and watershed protection strips established by medium sized land owners			
3.1. Offer incentives, credit and promote establishment of NGFPs to the private sector	About 24,000 ha of HGFP implemented with private sector	By Q1, year 1 until end year 5	BNF/AGD
3.2. Make environmental audits (INFONA/SEAM)	At least 10% project field interventions audited	By Q1, year 1 until end year 5	INFONA/SEAM
4. Normative adjustments and institutional changes needed to improve the business climate for afforestation approved			
4.1. Support institutional capacity of INFONA, SEAM, SAS and VMME.	At least 10% project field interventions audited	By Q1, year 1 until Q6, year 2	EC/STP/FAO
4.2 Review and strengthening the legal framework and promote certification systems	Payment for environmental services and incentives for afforestation, in place at the end of PROEZA, with focus in rural women as beneficiaries.	By Q1, year 1 until Q8, year 2	EC/INFONA/SEAM

Gender documents for FP063

GENDER ASSESMENT

1. COUNTRY ASSESSMENT PARAGUAY

1. General Analysis¹

1. Historically and to this day, women were linked to domestic chores and care (of children, the sick, or the elderly) and men to paid work. This cultural tradition represents one of the greatest obstacles to women's labor insertion. On the one hand, it limits its labor supply and reduces its economic opportunities due to the need to reconcile domestic and care for paid work. On the other hand, it defines in the collective imagination social representations about the roles and capacities of women, which in turn influence the labor supply and demand, both in their salaries and in the occupations socially assigned to women.
2. Hence, women are concentrated in activities that can be considered as extension of their traditional roles within the family, such as paid domestic work, teaching or nursing, which also present Levels of remuneration lower than other occupations that require levels of education and accountability.

Inactivity and inequality in labor opportunities

3. Of the total number of women of working age (10 years and over), 48.1% are inactive (PEI), that is, they do not work or seek employment, compared to 26.2% of men. Of all the inactive, 65.6% are women. Gaps in inactivity are exacerbated by the area of residence. In the rural sector, 52.8% of women are inactive compared to 21.7% of men; While in the urban sector it affects 45.4% of women and 29.4% of men (UN Women, 2015).
4. The smallest gaps in the urban area are likely to be more flexible gender division of labor towards male responsibility in the care of children, along with the combination of better educational levels, greater opportunities for work, greater possibilities to transfer to the market certain needs such as buying food, washing of clothing, for certain women the possibility of contracting external help, the smallest distance between home and workplaces and increased availability of public transportation, among others.
5. The reasons for inactivity show differences that could be attributable to gender considerations; 41.5% of the women reported that they were inactive due to "housework" and "family reasons", compared to only 2.3% of men.
6. There are also inequalities in terms of opportunities and labor conditions. 51.9% of women offered their labor to the market, compared to 73.8% of men, reporting a significant gap in this regard. Of this group, 95% work and the remaining 5% are unemployed, affecting this situation to a greater extent to women with an unemployment rate of 5.7%, compared to men with 4.5% study is the main reason for inactivity for both sexes, in men it had a greater weight than in women. Female youth unemployment increases to 10.7%, showing a double inequality, that derived from sex and age.

¹ Source: ONU Mujeres, 2015. *Igualdad de género y principales brechas en Paraguay*.

Land Tenure

7. The information from the national agricultural censuses of 1991 and 2008 shows advances in the ownership of land by women. According to the latest census (2008), 22% of farms are headed by a woman, compared to 9% in 1991. The smaller the farm size, the greater the probability of being headed by a woman. Twenty-six percent of small farms (up to 5 ha) are headed by a woman, while on larger farms (over 50 ha) this proportion is reduced to 15%.

Women participation in Industrial Sectors in Paraguay

8. There is anecdotal evidence, in consultations with several actors in the project's focus industries (brickmaking, grain drying and sugar industry), that follows the patterns of economic participation and land tenure in Paraguay. According to several people interviewed, there is minimum participation of women as firm owners in the grain drying industry, sugarcane industry and brickmaking. Within non-metal industry, there might be an industry segment that may have a higher participation of women, which is ceramics. There, and upon confirmation, there might be women that are owners/co-owners of ceramic facilities.
9. It is worth noting that some of the challenges in terms of available data of credits directed to women in the focus sectors, are:
 - Lack of gender data on credit lines to industrial sectors. Currently, there is no statistical significant information to establish a baseline of credit in the industrial sectors focus of this study. That is, at the moment, there is not enough information to establish a baseline. At the same time, and explained in the financial context of Paraguay, there are few credit lines in those sectors, which exacerbates the situation of data reliability to establish a baseline.
 - Business ownership. Even if there is information of credit lines where there is a differentiation between men and women, the main problem is that firms are usually registered (in most cases) under the husband's name, and not the wife's name. That is the case, even if the women is the one doing the work on the firm/business. That may present challenges in setting up targets/goals of directing credit lines to groups of women.
10. The project will set up a Gender Action Plan to reduce those data challenges, as it will incorporate a system to identify women in the credit lines, as well as target women in the selected industries to incentivize the use of the financial and non-financial products by those women business owners.
11. This Gender Action Plan will be aligned with the Inter-American Development Bank's (IDB) Operational Policy on Gender Equality in Development.

GENDER ACTION PLAN

ACTIVITIES

The activities included in the present Gender Action Plan are focus on achieving one objective: Ensure women have equally benefits to financial products offered by the Program.

1. Technical assistance

The project will provide technical assistance to AFD to ensure that in the design and development of the Strategy:

- The needs and realities of women and men are addressed during project consultations
- Women and men equally benefit from the trainings and services
- The needs and realities of women and men are addressed during project consultations
- The needs and realities of women and men are addressed during project consultations
- The needs to collect gender disaggregated data to track the real gender and a sex-disaggregated analysis for actively assisting women-owned and women-led SMEs to gain access to zero or flexible collateral credit to undertake EE projects impacts of the project
- Address any gender inequalities real or potential in the project
- The needs and realities of women and men are addressed during project consultations
- That the electronic registry system collect sex–disaggregated data and qualitative information to track the real gender impacts of the project

The IDB will draw on its experience giving microcredits to women in similar types of projects in the Women’s Entrepreneurship Banking initiative. <https://www.fomin.org/Home/Projects/WomensEmpowerment.aspx>

There are enough SMEs that are women held or managed that are interested in taking up loans on EE investments to have a share of loans for investments channeled to SMEs managed by women.

2. Capacity building

The objective of this activity is to ensure women and men have equal access to capacity building, project resources and services.

The capacity building will ensure:

- women and men equally benefit from the trainings and services
- The needs and realities of women and men are addressed in project activities
- Collect and analyze sex–disaggregated data and qualitative information to track the real gender impacts of the project

Capacity building will include workshops and Training of :

- AFD staff, with at least at least 20% women participating, on Project mechanisms and methodologies
- Workshops and seminars to inform and train five (5) LFIs and its staff (2 per LFI) on financing EE projects

- Two (2) local technical validators (total of 6 staff) informed and trained (at least 20% women) about Project methodology.
- Training thirty (30) technology solution providers (at least 20% women) about Program mechanisms
- Training of SMEs on Program mechanisms
- Development of six (6) products/publications, knowledge sharing events, country market reports published, and webinars
- Development of 15 pilot demonstration projects
- Support of 160 SMEs to have access to credit from the Project's financing to invest in EE projects

The capacity building on finance and women empowerment will be provided through AFD .

<i>Impact: women have equally benefit to financial products offered by the Program.</i>				
Indicator	Baseline	Target	Timeline	Source of Verification
Result 1: Women access to financial products offered by LFIs				
Percentage share of loans for investments channeled to SMEs managed by women	0	20	By the end of the program	Source: Executing Agencies six-month reports and survey
Analysis of disaggregated data on women-owned and women-led SMEs to gain access to credit	0	1	By the end of the program	Source : Tracking Registry-recollection, surveys
Result 2: Women trained in strengthen their capacity for EE project development				
% of women trained, out of the total women who participate.	0	20	By the end of the program	Source: Executing Agencies six-month reports and survey
Result 3: Tracking registry of gender impact				
One registry that includes a report of real gender impact of the project (collect and analyze sex-disaggregated data)	0	1	By the end of the program	Source: Executing Agencies six-month reports and survey

Table X.1. Gender Considerations by Project Component and Activity².

Project Component	Activity	Sub-Activity	Gender Considerations
1. Improved access to financial and non-financial instruments and operational mechanisms to deploy them for financing EE investments by SMEs	1.1. Develop financial and non-financial instruments, including standard performance contract, insurance policy covering energy savings and validation methodologies to account energy savings	1.1.1. Development of a standard performance contract for risk sharing between SMEs and ESTPs	Ensure the needs and realities of women and men are addressed during project consultations
		1.1.2. Development of insurance policy covering energy savings	
		1.1.3. Develop methodologies accounting for technology / project level energy savings	Ensure women and men equally benefit from the trainings and services Ensure the needs and realities of women and men are addressed during project consultations
		1.1.4. Development of a Business Plan for the Project promotion and execution	Ensure the needs and realities of women and men are addressed during project consultations
		1.1.5. Hiring and operationalization of two (2) validators	Address any gender inequalities real or potential in the project
		1.1.6. Establishment at AFD of a business unit dedicated for EE financing and Project and pipeline development	Ensure the needs and realities of women and men are addressed during project consultations
		1.1.7. Establishment of electronic registry system for monitoring and evaluation of projects and program's results	Ensure that the electronic registry system collect sex-disaggregated data and qualitative information to track the real gender impacts of the project
	1.2. Strengthen capacity of LFIs,	1.2.1. Training of AFD staff (at least 20% women) on Project mechanisms and methodologies.	Ensure women and men have equal access to project resources, services, capacity building

² Budget details in Annex V. Project has allocated resources for one consultant to develop analysis in disaggregated sex data

	ESTPs and validators for EE project development	1.2.2. Training activities (workshops, seminars, etc.) to inform and train five (5) LFIs and its staff (2 per LFI) on financing EE projects	Ensure women and men equally benefit from the trainings and services Ensure the needs and realities of women and men are addressed in project activities
		1.2.3. Two (2) local technical validators (total of 6 staff) informed and trained (at least 20% women) about Project methodology.	
		1.2.4. Training thirty (30) technology solution providers (at least 20% women) about Program mechanisms	
		1.2.5. Training of SMEs on Program mechanisms	
		1.2.6. Development of six (6) products/publications, knowledge sharing events, country market reports published, and webinars	Collect and analyze sex-disaggregated data and qualitative information to track the real gender impacts of the project
2. Increased annual dollar amount of medium and long-term loans granted to EE projects in SMEs using the ESI strategy	2.1 Increase second tier medium and long term credit line for EE projects provided to SMEs in key industrial sectors	2.1.2. Support of 160 SMEs to have access to credit from the Project's financing to invest in EE projects	Ensure the needs and realities of women and men are addressed in project activities Collect and analyze sex-disaggregated data and qualitative information to track the real gender impacts of the project

General background: Gender in Energy and Financing

1. The 2012 World Development Report (WDR): Gender Equality and Development argues that “gender equality is a core development objective in its own right”. But greater gender equality can also enhance productivity¹, improve development outcomes for the next generation (via a positive influence on children’s education and opportunities from their educated and working mothers), and make institutions more representative.
2. A better understanding of differences in the ways men and women use energy in SMEs can help to identify the different impacts, contribute to greater gender equity and empowerment of women in the energy sector, as well as enhance the effectiveness of sector-driven programmes and overall sustainable development activities.
3. The effects of energy transitions on gender equality can be numerous but they are very difficult to demonstrate and interpret. There are multiple ways in which energy and associated technologies can make a difference on gender relations and equality, but views on the impacts are varied. Improving women’s welfare through energy projects can be attained without fundamentally changing their role in society but achieving women’s empowerment requires a transformation in gender roles. Since transformation of gender roles is rarely the objective of energy projects, gender equality or women’s empowerment are not necessarily delivered through energy projects.
4. Nonetheless, promoting productive and efficient use of electricity to increase entrepreneurial activity, income opportunities and employment for women can be an added value of these programmes. Capacity building is needed to strengthen involvement of women at all levels of energy policymaking, planning, and project development. Training and networking can play a valuable role in increasing women’s acquisition of technical skills or learning about new RE and EE technologies and how to run them, the benefits they bring and also their limitations. It also contributes to the sensitization towards gender issues of the various stakeholders involved in the Project and may help increase women’s participation in the energy sector.
5. From the perspective of financing and credit, women often are more restricted in their access to the credit facilities needed to enter into income-generating activities or to expand their existing business opportunities. Women usually have limited productive assets (for example, land which can be used as collateral for taking loans), which makes it difficult for them to obtain credit and hence, access new technologies, limiting their capacity to benefit from productive uses of energy. Programmes related to the financial sector can look into encouraging mechanisms to specifically target, or at least be accessible to, women and women’s firms.²

Inactivity and inequality in labor opportunities

6. When looking at some specific indicators, Argentina performs relatively well in gender equality, compared to other developing economies in the region. Argentina had already achieved gender equality in primary school enrolment by the end of the nineteenth century.
7. Argentina has advanced in addressing discrimination in labor markets. According to the WDR 2012, evidence indicates that active labor market policies implemented in Argentina, Colombia and Peru (training, placement, and other support to enable women to enter or reenter the workforce) increased

¹ Some estimates consider that correcting segregation in employment, for example, would reduce the productivity gap between men and women by 30% to 50% (World Bank, 2011).

² See also Narain (2009) [Gender and access to finance](#); Bardasi et al. (2007) [Gender, Entrepreneurship, and Competitiveness in Africa, Worldbank Group](#); Ellis et al. (2007) [Gender and Economic Growth in Kenya, Worldbank Group](#); and Demirguc-Kunt et al. (2013) [Financial Inclusion and Legal Discrimination Against Women: Evidence from Developing Countries](#); DiCaprio (2016) [Trade Finance Gaps, Growth, and Jobs Survey](#). Furthermore, Fundera (2016) [The State of Online Small Business Lending – Focus on Women Entrepreneurs](#) establishes the rejection rate of women entrepreneur in the United States with 3 percentage points higher (68%) for women relative to men. In addition the average loan volumen for loans to women is smaller relative to men’s loans.

women's employment in the formal sector by "allowing participants to better communicate their abilities to employers".

8. Removing discriminatory treatment in labor laws and regulations can also promote women's economic opportunities. In Argentina, both female labor force participation and employment in the formal sector increased by removing the ban on part-time contracts. Because women tend to be disproportionately responsible for housework, such restrictions end up limiting work options for women much more than for men. The limited or non-availability of reduced-hour employment diminishes women's ability to participate in the formal sector and increases the probability that they work in the informal sector. However, part-time and flexible work usually penalize wages, and result in fewer promotions, and a lower probability of full-time employment in the future. So, while part-time alternatives would give women more opportunities for paid employment, it could also reinforce segregation in other ways. Additionally, women in Argentina receive 90 days of paid maternity leave and there are a number of laws in place to protect women in employment.
9. Argentina has established quotas for participation of women at the sub-national level. According to the OECD SIGI³, at the provincial level, women account for 27% of legislators, in average. But this share varies greatly between provinces, ranging from 4% to a 48%. As of December 2008, women were in charge of only 15% of ministries and 26% of the secretariats in Argentine provinces. As of 2010, all local municipality heads were male, and women accounted for 11.3% of local secretaries and roughly 29% of local legislative councils.
10. Although women in the country have increased their labor market participation, they continue to face unequal access to economic opportunities. Even with higher education levels, women in Argentina earn 12% less than men. Women farmers tend to farm smaller plots and less profitable crops than men, or work in smaller firms in less-profitable sectors (World Bank, 2011).
11. Argentina ranks 35 out of 145 countries in the World Economic Forum. Global Gender Gap Report 2015. Gender indicators are, on average, better than expected for a country with the income level of Argentina, according to the Country Development Challenges document developed in 2016 by the IDB. It only shows much lower than expected indicators in the areas of adolescent fertility rate and percentage of NEET young women. It also has a negative indicator in the area of female participation in the workforce. Instead, indicators are much higher than expected for the overall gender gap index, female high school completion rate, ratio of girls to boys enrolled in primary and secondary education, and percentage of parliamentary seats held by women (32%). Female's labor participation in Argentina is 55% vs 82% for men. This participation is lower than in Latin America, where the regional average is 58 vs 84.1%⁴. Women represented 40% of the total labor force in the country.

³ The OECD Development Centre's Social Institutions and Gender Index (SIGI) is a cross-country measure of discrimination against women in social institutions (formal and informal laws, social norms, and practices) across 160 countries. Argentina's profile information acknowledges that the situation described for Argentina has improved in recent years (<http://www.genderindex.org/country/argentina>).

⁴ World Bank. Data Bank. Gender Statistic .

Table 1. Registered female workers by industry.

FEMALE RATES – REGISTERED WORKERS BY INDUSTRY					
INDUSTRY	2005	2007	2009	2010	2012
AGRICULTURE AND LIVESTOCK	10.5	11.0	11.7	11.9	11.6
FISHING	15.4	16.5	15.5	14.8	12.7
MINING	7.8	8.2	8.6	8.7	9.1
MANUFACTURING	18.7	18.7	19.0	19.1	18.7
ENERGY, GAS, AND WATER	16.2	16.4	16.8	17.0	17.0
CONSTRUCTION	4.5	4.1	5.1	5.2	5.4
TRADE (WHOLESALE AND RETAIL)	31.9	33.5	34.8	35.1	35.4
HOSPITALITY	40.0	41.4	43.7	43.7	44.1
TRANSPORT	14.4	15.0	15.3	15.1	14.5
FINANCIAL SERVICES	44.9	46.8	47.0	46.4	47.3
REAL ESTATE	31.3	32.1	33.9	34.1	34.3
EDUCATION	73.8	73.7	73.5	73.5	73.8
HEALTH AND SOCIAL SERVICES	70.9	70.9	71.3	71.4	71.3
COMMUNITY, PERSONAL, AND SOCIAL SERVICES	42.6	43.8	44.8	44.7	45.3
TOTAL	29.9	30.0	31.1	31.4	31.5

Source: Bulletin of Gender and Job Market Statistics. Employment and Business Dynamics Observatory. Ministry of Labor, Employment, and Social Security. Argentina

12. Women tend to represent between 40% and 72% of employment in the fields of education, health, hospitality and social services (see table 1). However, women are under-represented in sectors that hold important potential for the development of the country. For example, women working on the Industry of Energy, Gas and Water represent 17% of the workers.
13. Moreover, the gender pay gap persists, particularly in the private sector. Although salaries in this domain are higher, women on average earn less than men. The 2012 Argentina Country Report, however, informs that the pay gap has been decreasing over the last decade, having reached its height in 2004-2005, when women on average earned 34% less than men. In 2011 the gap was 25%.⁵

Land Tenure and other rights

14. Under the Argentine Constitution, women have equal rights to access to land. In practice, however, land continues to be owned by men: according to the FAO, women in Argentina head only 18% of agricultural holding (available data from 2010).
15. Also under the Constitution, women have equal rights to access property other than land, including housing. However, women are more negatively affected by the existing housing deficit in Argentina as they constitute a higher percentage of the low-income segments of the population.
16. Women also have equal rights to access credit and loans, but the percentage of women receiving loans from private lenders in Argentina is lower than that of men (0.7% of women compared to 1.1% of men in 2012-2013)⁶. Their inability to access loans in turn affects women's ability to own property, especially housing.

Women participation in the energy sector

17. The energy sector continues to be dominated by men, especially at decision making levels. Responsibility of household chores, gender inequality in higher education, and stereotypes in labour market restrict women's access to training, education and employment prospects.
18. Overall, there is considerable need for more mainstream acceptance of women in technical roles. Training programmes for engineers, educators, scientists, government officials, and development agencies can highlight some of the constraints affecting women and promote greater attention to

⁵ UNESCO Regional Chair Women, Science and Technology in Latin American. National Assessments in Gender and STI. Argentina Report.

⁶ World Bank Global Financial Inclusion Database.

institutional prejudices and discriminatory practices. Furthermore, increased participation of women in the energy sector and improvement of their status relative to men can help to incorporate gender as an integral part of energy policies and practices in the future.

19. The liberalisation of energy markets is opening up new opportunities also for the provision of energy services (such as Energy Service Companies, ESCOs). Women's potential to participate and benefit from these opportunities in the same way as men must be recognized.
20. Energy-related programmes can provide options to offset the high upfront cost of energy technologies for women (affordable financing and credit facilities) and promote women as service providers in the energy sector, providing additional support and creating enabling conditions for their businesses to develop (training in areas of technology, business planning and marketing). They can also promote energy technologies that reduce women's vulnerability, such as street lighting to improve women's mobility and safety. Programmes must ensure that energy service delivery and information services reach women and men equally. At the same time, programmes should support a gender-equal human resources strategy in energy sector institutions, including elements such as setting a target for increasing the percentage of women employees⁷.

Gender Action Plan (GAP)

21. The information gathered from the gender analysis will be considered in all stages of detailed project formulation, implementation, and monitoring and evaluation. The GAP foresees gender-sensitive activities on data gathering, awareness raising, and capacity building for SMEs and technology service providers, as well as information sessions for LFIs to promote gender equality and avoid gender biases.
22. Work undertaken to address gender issues in the project/program includes:
 - A sex-disaggregated baseline setting study for financial services for women-led SMEs, and for the presence of women in project specific technologies to identify a set of adequate financial and non-financial gender-sensitive indicators and definitions to facilitate the female participation in project activities
 - Data monitoring at sub-project level, as well as the development and implementation of indicators and activities in the project.
 - The stakeholder engagement plan foresees to work with local public and private actors. In particular, the Centre of the Economic Development of Women (CEDEM - Centro de Desarrollo Económico de la Mujer CEDEM), created by the Ministry of Production's Secretariat of SME Entrepreneurs in March 2017, and the National Women's Council (Consejo Nacional de la Mujer) will engage relevant local actors to foster the economic development and participation of women entrepreneurs with the support of the proposed project. This sub-activity (1.1.1) is planned to take place at the beginning of the project, as part of the gender analysis.
23. Gender activities proposed for LFIs:
 - Capacity building. Carry out information sessions to promote gender equality within LFIs and avoid gender biases in customer service.
 - Internships. Foster internships, promoting the participation of women.
24. Gender activities proposed to SMEs and TSPs. The activities proposed will be implemented considering the different type of SMEs and the type of sub-project financed. There are SMEs and TSPs where none of these activities could be implemented:
 - Capacity building. Awareness raising, training and capacity building campaigns that are gender-sensitive and promote the participation of women in pre-construction, construction and operation of sub-projects for different skill-levels when applicable. Awareness raising

⁷ Gender Briefing Notes Supporting active inclusion of women in energy and development projects. European Union Energy Initiative (EUEI), 2013.

and capacity building will increase transparency about remuneration ranges in the sector facilitating the achievement of equal pay.

- Internships. Foster internships promoting the participation of female engineers and engineering students in sub-projects financed by the Project, when applicable.
- Working environment. Create gender-sensitive conditions such as the presence of sanitary facilities and an environment free of harassment on construction and work places when applicable.

25. Other activities undertaken under the program:

- Knowledge platform module to share experiences with financing women-led projects, SMEs, and technology providers to encourage female participation in the sector.
- Events organized to further develop the project will ensure the promotion of female participation.

26. Gender - sensitive monitoring and evaluation indicators.

- Based on the recommendations of the baseline study, the Project will promote the monitoring and evaluation of the adequate indicators proposed.

27. Based on this, the GAP aims considering the following:

- The different needs of women and men are understood in Project activities.
- Women and men have equal access to Project funding and technical assistance activities conscious of tailored needs for women such as networking possibilities and other non-financial assistance.
- Men and women have equal access to Project management arrangements, as well as equal voice in the associated decision-making processes.
- Beneficiaries, partners and key stakeholders of the Project involve and promote the participation of women.
- Coordination among key development actors to further enhance gender mainstreaming and promote gender equality and/or the empowerment of women is ensured.

28. The GAP will be aligned with the Inter-American Development Bank's (IDB) Operational Policy on Gender Equality in Development and the Gender Policy for the Green Climate Fund.

29. In order to achieve these goals, Table X.1 outlines specific targets.

Activities	Indicators and Targets	Timeline	Responsibilities
Impact: Improved working conditions and opportunities for women in the biomass, biogas and energy efficiency industry			
Output: SME or TSPs implementing at least one activity improving conditions and opportunities for women			
(1) Gender baseline study on financing women-led SMEs and participation of women in relevant engineering and construction activities of eligible projects in Argentina	Number of Studies: 1	Q4 2018	IDB & BICE
(2) Proposed gender activities are presented to SMEs being considered for GCF financing and TSPs	% of companies considered for GCF financing that receive information about the gender activities (internship, capacity building, working environment): 100% of SMEs and TSPs	Q1 2020	Beneficiary companies and TSPs
(3) Gender activities are agreed and planned for (scope, budget, timeline, etc.) with companies interested in implementing them; technical support, funding/incentive plan, and milestones/deliverables are contractually defined.	% of companies receiving GCF financial support that contractually agree and plan for implementation of at least one gender activity: 30% of SMEs and TSPs of financed projects	Q1 2020	IDB and Beneficiary companies and TSPs
(4) Gender activities initiate implementation	% of companies that initiate implementation of agreed activities: 40% of SMEs and TSPs	Q3 2020	IDB and Beneficiary companies and TSPs
(5) Women participate in capacity building activities	At least 20% of women participate in capacity building activities in the program	Q3 2020	IDB and Beneficiary companies and TSPs

(6) One knowledge platform module to share experiences with financing women-led projects, SMEs, and technology providers to encourage female participation in the sector	Number of knowledge platform: 1	Q3 2020	IDB & BICE
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Table X.1. Gender-sensitive indicators

These program level indicators will be complemented by qualitative information about the gender activities that were implemented (this cannot be done in advance as we do not know at this points which firms will agree to implement activities, and which activities will be selected in each case). For every project with a gender activity, specific indicators that will be defined during project preparation, as the gender activity is designed, will be included in such project's results framework.

30. Gender budget. The estimated budget for the gender activities described will be up to 27% of the GCF Technical Assistance Funding requested for Sub-activities 1.1.1 and 1.2.1.

Gender documents for FP065

ANNEX 10: Brazil: Financial Instruments for Brazil Energy Efficient Cities - FinBRAZEEC (P162455)

Gender Action Plan

I. 1. Gender Action Plan's Objective

The Gender Action Plan (GAP) aims to identify potential entry points and opportunities to mainstream gender issues within the FinBRAZEEC project, based on the gender analysis. The GAP, including M&E indicators, are described in last section of this document.

II. 2. Project Background

The *Financial Instruments for Brazil Energy Efficient Cities* (FinBRAZEEC) project aims at overcoming investment challenges for urban energy efficiency (EE) projects by (i) unlocking private financing through the reduction of the credit risk of LED street lighting and industrial efficiency projects and (ii) providing technical assistance to enhance the quality of the projects. In order to achieve these goals, FinBRAZEEC proposes the creation of an EE facility that will offer financing to EE projects in the urban industrial and street lighting sectors. The objective of this facility is to create a new asset class for energy efficiency that can attract the interest of a wide range of investors and bondholders. The EE facility will be managed by national public bank Caixa Economica Federal (CEF).

the FinBRAZEEC project will be divided into two main components: (i) CEF Energy Efficiency Financing Facility, to support street lighting projects and urban industrial energy efficiency projects; and (ii) Technical Assistance. The street lighting EE investments is expected to benefit Brazilian citizens through the provision of better quality lighting services, which should also result in an enhanced perception of safety and improved mobility, especially for women, and increased local economic activity and wellbeing of the population at large. The industrial EE is expected to allow urban industries to become more competitive and improve their ability to preserve existing jobs. Both components will have significant environmental co-benefits, such as cleaner air and water resulting from less industrial pollution.

III. 3. Gender Analysis

This section provides an analysis of how gender has been integrated into the Brazilian institutional and legal frameworks, highlights advances and remaining gaps on gender equality, examines the different roles and needs of women in Brazil, and discusses additional vulnerabilities faced by women.

A. Legal and Institutional Frameworks

Over the past two decades, Brazil has made significant strides to mainstream a gender approach into policy making, promote gender equality and combat violence against women. In 2003, the Federal Government created the *Secretariat for Policies for Women* (SPM) under the Presidency. Throughout the following years, similar institutions were put in place at the state and municipal levels. The national Secretary was in charge of leading the design, implementation and enforcement of *National Plans of Policies for Women*, which were developed through highly participatory processes (World Bank 2016). Similar efforts were also seen at the sub-national level, with several states and some municipal governments designing their own plans or strategies to mainstream gender issues across different sectoral policies.

One of the National Secretary's initiatives was the creation of the "Pro-Gender Equity Seal of Approval", and Caixa Economica Federal, FinBRAZEEC's EE financing facility, was one of its winners in two consequent editions. This program aimed at raising awareness and sensitizing leaders, employers and workers to promote gender equality and stimulate management practices that promote equal opportunities for men and women within organizations that volunteer to adhere to the program. After presenting a basic diagnosis, the organizations develop an Action Plan, which is then agreed with the SPM Program Committee. The evaluation is based on the fulfillment of the plan, which occurs at the end of each year from the date of signature of the Term of Commitment. The "Pro-Gender Equity Seal of Approval" is then granted to organizations that have reached the agreed targets. CEF received the Gender Equality Seal in the first two editions based on its actions to increase the number of women and afro-descendants in managerial positions and the recognition of regional units with better gender indicators (Pinto e Midlej 2012).

To address domestic violence, in 2006, the country enacted the groundbreaking legislation *Maria da Penha Law*, which made the country a world reference in this front. A *National Pact for Combating Violence Against Women* and the program *Brazilian Women - Living Free of Violence* were also launched, and included the creation of one-stop-shop centers for women (*Brazilian Women's Houses*) in all 26 states of the country, integrating public security, justice, health, social welfare, counseling, shelter, employment, and income generation services. In 2015, the government also passed new legislation recognizing femicide as the act of murdering women because they are women.¹ That same year, a new protocol was established for treating sexual assault survivors, eliminating the need for victims to be examined by both health professionals and law enforcement agents.

In 2009, a *Special Prosecutor's Office for Women* was also created in Brazil's lower chamber of Congress, with the main objective of promoting more gender equitable legislation and policy. The *National Policy for Comprehensive Attention to Women's Health* and the *Third National Plan of Policies for Women* provided a comprehensive approach to women's health, covering all stages of the lifecycle (World Bank 2016).

Despite the above-mentioned achievements, institutional setbacks and implementation challenges demonstrate that more needs to be done to ensure the effectiveness and sustainability of such policies, laws and programs. In 2015, amid political turmoil and fiscal constraints, SPM lost its ministerial status and was merged with the Ministry of Human Rights

¹ "Brazil Femicide Law Signed by President Rousseff." BBC News: Latin American & Caribbean. Published March 9, 2015. <http://www.bbc.com/news/world-latin-america-31810284>.

and Racial Equality. Capacity and political capital of similar entities at the state and municipal bodies varied significantly, affecting their overall ability to operationalize policies. The Maria da Penha Law, for instance, is a federal legislation, but states and municipalities are responsible for its implementation, which has had limited success. Service points created to protect women often don't have the adequate resources, this includes in few states Women's Police Stations and police battalions tasked with the protection of women who are under "protective measures", courts and health centers.

B. Gender Inequality & Gender Roles

Advances in the legal and institutional/political spheres have been accompanied by significant improvement in education and health. Women in Brazil have surpassed men in some education indicators. The female youth's literacy rate (15 to 24 years old), for instance, increased from reached 99 percent in 2014, up from 84 percent in 2004, compared with the 98 percent male rate. Maternal mortality, commonly used as a proxy for women's access to quality healthcare, fell from 120 deaths per 100,000 live births in 1990 to 69 in 2013 (World Bank 2016).

Nevertheless, progress in other dimensions that are key to ensure sustainable achievements in gender equality are still lagging behind. According to the World Development Report on Gender Equality and Development (World Bank 2012), gender equality can be achieved as a result of gains in three dimensions: endowments (e.g. education, health, assets), agency (e.g. voice and decision making power), and economic opportunities. While in the former Brazil has made great progress, as previously described, on the latter two fronts there are still several gaps to overcome.

Gains in the labor market have been significantly slow, falling short of bridging the gender gap. Female labor force participation rose only five percentage points in the last two decades, from 54 percent in 1995 to 59 percent in 2014, while the share of women employed went from 50 percent to 54 percent over the same period. The unemployment rate for women is almost two times higher than for men (8.2 percent versus 4.8 percent in 2013).

Occupational segregation is another concern, with 45 percent of women's jobs being concentrated in sectors traditionally related to female roles, such as accommodation and food, education, health, social services and domestic services, while 48 percent of the employed men were in the agricultural, industrial and constructions sectors (World Bank 2016, Brasil 2014). The labor market in Brazil is also characterized by high levels of informality, with the proportion of women in that condition being slightly higher than men. In 2014, 42.7 percent of the women and 41.5 percent of the men in the labor force were in the informal market (IBGE 2014). Moreover, sectors traditionally associated with female work tend to have lower growth potential and higher levels of informality, further limiting their economic opportunities.

In the energy sector, women represented between 20 to 25 percent of the total labor force in 20XX worldwide² Although the rate is still low, women have been gaining space in this field. In 2006, the share of female workers in the electricity sector in Brazil, for example, was 16.7 percent (Dieese 2006). The renewable energy sector, specifically, where women account for approximately 35 percent of the labor force globally³, seems to be a key driver of female participation in the energy sector.

Gender occupational segregation patterns are reflected on and reinforced by the vocational training courses offered in Brazil. While women comprise the majority of students in areas such as education (80.4 percent) and health (82 percent), men are focused on industrial processes (80.6 percent), information and communication (62.3 percent), natural resources (60.7 percent) and infrastructure (59.7 percent) (World Bank 2016, Brasil 2014).

Gender gaps in wages are also persistent even in female-dominated occupations, and women tend to spend more hours working. In 20XX, women professionals in Brazil made on average 40 percent less than men. In the -male-dominated “managerial positions”, the gap widens to almost 90 percent (ILO 2016). Overall, female workers make R\$ 10.2 per hour, versus R\$ 12.2 earned by men.⁴ Brazilian women also tend to spend four times the number of weekly hours that men do on domestic tasks. When added to their paid work, they spend on average 41.5 hours per week working, in contrast to 37.3 hours of work carried out by men (World Bank 2016).

Women in Brazil also receive fewer benefits than men. Female workers have on average 84.5 percent of the pension levels received by their male counterparts (ILO 2016). This is usually a consequence of “the lower wages earned by women during their working life, shorter periods of contribution and career breaks, higher incidence of part-time work, higher proportion of women receiving benefits from survivors’ pensions and from non-contributory old-age pensions (...)” (ILO 2016, 33).

C. Additional Vulnerabilities and Social Norms

Gender inequality in Brazil is also heavily based on and exacerbated by race and ethnicity. For all the disadvantages and inequities mentioned in this document, the gender gaps are significantly wider when looking specifically at afro-descendant and indigenous women, as well as their geographic location. For that reason, race and gender issues were both included in the previously mentioned 2012-2015 National Plans for Women, and in 2014 a national law was created to establish a race-based affirmative action program for federal civil servant positions countrywide (World Bank 2016b).

Women in Brazil are also extremely vulnerable to violence. Despite the 10 years of Maria da Penha Law, data shows that Brazil is ranked fifth in Violence Against Women (VAW) global rates, according to the 2015 Violence Map of the United Nations. Between 1980 and 2013, more than

²AES. Published July 13, 2017.

<http://www.aesbrasil sustentabilidade.com.br/pt/noticias/item/mulheres-no-mercado-de-energia-renovaveis>.

³ *Ibid.*

⁴ Currency exchange rate on October 6th, 2017: 1 US\$ = 3.16.

106,000 women were victims of homicide in the country, and the number of femicides per year increased from 1,353 to 4,762 – an increment of 252 percent. In 2013, 33 percent were victims of their own or former partners or another relative. The majority of them also came from vulnerable areas, and 66.7% of the victims were afro-descendants (Waiselfisz 2015).

Victimization in public spaces is also a major concern. A recent national survey showed that 74 percent of women under 24 years old have been victimized at least once in public spaces. Almost 25 percent of all women interviewed that suffered an aggression within the past year and, among those, 39 percent had been victimized on the streets. Finally, 40 percent also declared to have suffered some type of harassment, 78 of which had happened on the streets (FBSP 2017).

Women victimization and perception of insecurity may hinder their overall mobility. Consequently, victimization or fear of victimization can influence their work choices and options, their ability to take on extra work activities, or simply their right for a better quality of life. This issue is so relevant that in the capital city, Brasília, the government adopted a measure to improve women’s safety on public transport in 2014 by allowing women to request to get off buses anywhere along a route after 10pm - including areas where there are no traditional bus stops.⁵ Other cities were considering similar options.

Cultural and social norms reflect and partially explain gender inequalities discussed in the previous section, and also result in a context of permissiveness to violence against women. In Brazil’s patriarchal culture, which favors traditional and dominant male gender roles, a national survey showed that one in three citizens believes that a woman is to blame for a rape. The survey also showed that 42 percent of the interviewed men think that women that “don’t deserve respect” should be raped. It is thus not surprising that 85 of the women are afraid of being victims of sexual violence (FBSP 2016).

IV. 4. Project Beneficiaries & the Potential Gender Role of EE

The FinBRAZEEC project provides entry points and opportunities to impact some of the main gender issues faced by Brazil today. The country has made significant achievements to overcome gender inequality in areas such as education and health, but a lot still needs to be done to bridge the gaps in the labor market and the provision of economic opportunities. Violence against women and racial disparities are also great concerns, and further exacerbate gender disparities as they impact a whole range of outcomes. Women’s safety can be increased through improved street lighting, female employment can be encouraged and adoption of gender-sensitive policies can be promoted amid implementing entities and beneficiary businesses.

Evidence shows that interventions that focus on improving street lighting tend to reduce crime and perception of insecurity. Such outcomes are a result of a modification of the environment that reduces the opportunities for offenders. The theory behind these types of

⁵ “Brasília, Brazil now lets women choose where to get off the bus at night”. November 23, 2014. Available at <http://thecityfix.com/blog/brasil-brazil-women-bus-stop-night-safety-sexual-assault-luisa-zottis/>.

interventions is based on two main ideas. First, they are part of what criminology defines as “situational crime prevention”, which focuses on reducing the opportunities for crime while also increasing an offender’s perception of the risks of being caught (Jacobs 1961). Second, installing or improving street lighting can foster social control and community cohesion, which can also lead to lower crime rates. In addition, as community members perceive the intervention as a positive investment in their communities, there is more interest in taking care of these areas (Clark 2008, Sampson et al. 1997).

Lack of street lighting or poor lighting quality and/or coverage can have different impacts on men and women. Even when we consider the issue of insecurity as the main adverse social impact, men and women are affected in different ways. Overall, studies indicate that lack of street lighting favors crimes and the feeling of insecurity, which may restrict access to work and education, especially in vulnerable areas where workers study at night.

The 2017 Public Security Yearbook⁶, published by the Brazilian Forum on Public Security, presents data that can reveal gender inequalities in relation to the types of crimes in which men and women are victimized. Women are more prone to rape, assault, and robbery, while men are exposed to robbery, murder, and homicide. While the homicide rate among men is 90 per 100,000 inhabitants, the rate for women is 10 per 100,000 inhabitants. Homicide victims in Brazil also have an age and racial cutoff, since the main victims are black youths between 15 and 24 years old. Men are also the main perpetrators of crime, which is demonstrated by the prison population profile, composed 93% of men.

In 2016, 49,497 women were raped in Brazil, which equates to approximately 135 women raped per day. The result was the second highest since it began to be published in the Public Security Yearbook. The data presented in the document is sourced from the Departments of Public Safety of the respective states. Data sourced from the Ministry of Health, by means of the SINAN (Information System for Notifiable Diseases), and analyzed by the IPEA study (2017)⁷ show data reported by the health services and indicate that 53% of rapes of adult women are carried out by strangers, in public roads (48.7%), usually on working days (88% of the cases). SINAN data, while pointing out that rape is a serious crime committed against women in the context of domestic violence, does not exclude the streets as a place of risk to women.

According to estimates from the Public Security Yearbook, the cost of violence in Brazil represents 5,9% of the GDP, including public and private expenditures, which corresponds to approximately R\$ 373 billion per year.

In this context, it is possible to suggest that investments in strategies to expand the coverage of public street lighting represent different impacts for men and women, mainly the security condition, guaranteeing the fundamental right to freedom of movement, as well as expanding the possibilities for work and education for both men and women, especially young persons.

Street lighting can also have a specific impact on women’s perception of safety. Safety audits conducted as part of the United Nations Women’ Safer Cities Program in several countries, from Mexico to Tanzania and India, have concluded that public lighting is a key tool to improve women’s sense of insecurity and prevent violence against women in public spaces.

⁶ http://www.forumseguranca.org.br/wp-content/uploads/2017/12/ANUARIO_11_2017.pdf

⁷ http://www.ipea.gov.br/portal/images/stories/PDFs/TDs/td_2313.pdf

Improvements in lighting near bus stops and near public toilets are some of the most common recommendations.⁸

Given that 50 percent of the investments in the CEF Energy Efficiency Financing Facility component will be targeted at street lighting projects, it is expected that the project will have a significant impact on women's and men's perception of safety and in some types of crime rates, such as assaults, property crimes, and thefts. The projects' EE facility will primarily lend to Special Purpose Vehicles (SPVs) established by the private sector, which will be granted concessions by municipalities to modernize and operate the street lighting system on a PPP basis. The project could recommend that such interventions be targeted at areas where women's victimization and perception of insecurity are higher, and in "hot spots" where crime and homicides rates are higher. Administrative police and health system data and victimization surveys, if available, can provide a baseline for the selection of target areas. Such targeted interventions are therefore expected to improve quality of life of women as well as the broader beneficiary communities. Crime indicators can be monitored to measure results.

With the promotion of street lighting and industrial energy efficiency in Brazil, the project will likely also benefit intermediary industries delivering energy efficiency-related goods and services, such as manufacturers of efficient industrial equipment, as well as LED manufacturers. Increased demand could generate more jobs in these areas, and a special focus could be made on the incentive to employ women. Although these are not outcomes that will be enforced or necessarily measured by the project, they should be taken into consideration.

Businesses and manufacturers operating in the energy efficiency sector will most likely benefit from increasing sales and activity, which could generate more jobs. Businesses selling energy efficiency-related goods and services, such as manufacturers of efficient industrial equipment, as well as LED manufacturers, may need to support increased demand with additional hiring. In such case, the FinBRAZEEC project can provide technical assistance and propose an incentive structure to participating businesses aiming to encourage female employment. Results can be monitored through sex-disaggregated employment numbers in these entities.

Finally, CEF could provide technical assistance to participating industries regarding adoption of gender-related policies, as described in the previous sections. As part of the Technical Assistance component, workshops and discussions could be organized to share lessons learned in the development and implementation of the policies that led the institution to win the "Pro-Gender Equity Seal of Approval". These efforts will help to raise awareness, disseminate good practices of non-discrimination in terms of recruitment, equal remuneration, and promotions, and highlight the benefits of gender-sensitive working conditions (including anti-harassment policies, separate sanitation facilities, etc.) on employee satisfaction and performance. To monitor results, an indicator such as "number of gender-sensitive policies adopted" could be adopted.

5. The Gender Action Plan

⁸ "Better lighting, wider pavements: steps towards preventing sexual violence in New Delhi". May 6, 2013. Available at <http://www.unwomen.org/en/news/stories/2013/5/better-lighting-wider-pavements-steps-towards-preventing-sexual-violence-in-new-delhi>.

The plan outlined in this last section describes expected outputs and outcomes that are informed by the present gender analysis, and which aim at addressing some gender gaps that are crucial for Brazil's development and which should contribute to greater gender equality in project activities.

The Gender Action Plan

#	Activities	Outputs	Timeline	Indicators	Target		Responsibilities
					Baseline	Endline	
I Outcome 1: Improved Women’s Safety and Quality of Life							
1	Improvement of street lighting in areas with high rates of victimization	Street lighting improved for poor communities, targeted at areas with high levels of women and men victimization and perception of insecurity	1 year after implementation	<ul style="list-style-type: none"> Increased perception of safety among men and women, with an age cutoff in 4 pilot targeted areas (<i>Target TBD after baseline is collected</i>) Reduced victimization of men and women (by classification of the crimes) 	TBD	TBD after baseline is defined	<ul style="list-style-type: none"> Beneficiary Municipalities and CEF (identification of areas with police and health administrative data) World Bank (survey and data analysis)
II Outcome 2: Gender policies disseminated and documented							
2	Sharing CEF good practices and lessons learnt with the implementation of gender-based policies	Workshop and trainings with awareness-raising activities organized for benefited EE industries	Before project implementation	<ul style="list-style-type: none"> # of Workshops organized # of IE winning the “Pro-Gender Equity Seal of Approval” # of gender-sensitive policies adopted by 	0	TBD after total number of IE benefited is confirmed	<ul style="list-style-type: none"> CEF

				participating businesses			
III	Outcome 3: Promote female employment in the energy efficiency sector						
3	Promote female employment through incentive structures, quotas, etc. within participating businesses	Higher female employment rates in energy the efficiency sector.	Annual	<ul style="list-style-type: none"> • Sex-disaggregated employment numbers in EE businesses 	TBD	TBD	<ul style="list-style-type: none"> • CEF & World Bank gender specialist
IV	Outcome 4: Promote gender awareness campaign						
4	Promote gender awareness campaign in participating companies	Improved perception of gender inequalities among employees, especially regarding the kinds of violence to which men and women are exposed and ways of protecting/reporting	Annual	<ul style="list-style-type: none"> • Number of employees trained (disaggregated data) • Number of campaigns carried out. 	TBD	TBD	<ul style="list-style-type: none"> • CEF & World Bank gender specialist

5	Carry out gender awareness campaigns in participating communities	Improved perception of gender inequalities among the benefitted populations, especially regarding the kinds of violence to which men and women are exposed and ways of protecting/reporting.	Annual	<ul style="list-style-type: none"> • Number of households reached by the campaigns • Number/type of campaigns carried out. 	TBD	TBD	<ul style="list-style-type: none"> • CEF & World Bank gender specialist
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Gender documents
for FP066

Gender and Social Inclusion Action Plan
Pacific Resilience Program – Phase II (RMI)

Activities	Indicators and Targets	Timeline	Responsibilities
<p>Impact Statement: To benefit women, children and other vulnerable populations by strengthening early warning systems, climate resilient investments in shoreline protection, and to provide immediate and effective response to an Eligible Crisis or Emergency</p>			
<p>Outcome Statement: Reduced risks to coastal hazards and the effects of climate change and increased coverage of hazard forecast and warning messages to 8,000 women.</p>			
<p>Output(s) Statement: Length of coast with reduced vulnerability to flooding and storm surges, which will benefit 5,000 females.</p> <p>Baseline: 0 m of shoreline protection infrastructure constructed in Ebeye Target: 1500 m of shoreline protection infrastructure constructed in Ebeye Monitoring methodology: annual survey, to be conducted by DIDA/MPW Responsibility for Delivering Output: MPW/MoF</p>			
<p>Output(s) Statement: Improved early warning system for population at risk in outer islands, benefiting 3,000 females</p> <p>Baseline: 30% of population in outer islands has access to warning messages Target: 70% of population in outer islands has access to warning messages Monitoring methodology: Bi-annual survey, to be conducted by DIDA/NDMO Responsibility for Delivering Output: MoF</p>			
<p>Output(s) Statement: Improved coverage of disaster communication network.</p>			
<p>(i) Construct shoreline protection infrastructure in Ebeye</p>	<p>Indicator: Metres of coast protected by shoreline protection infrastructure, which will benefit 5,000 females by reducing their vulnerability to flooding and storm surges</p> <p>Baseline: 0 m of shoreline protection infrastructure constructed in Ebeye Target: 1500 m of shoreline protection infrastructure constructed in Ebeye</p>	<p>Year 1: 0m Year 2: 0m Year 3: 0m Year 4: 750m Year 5: 1500m</p>	<p>Monitoring methodology: annual survey, to be conducted by DIDA/MPW Responsibility for Delivering Output: MPW/MoF</p>
<p>(ii) Install new hazard forecast and early warning communication infrastructure in outer islands</p>	<p>Indicator: Increased coverage of hazard forecast and warning</p>	<p>Year 1: 30% Year 2:</p>	<p>Monitoring methodology: Bi-</p>

	<p>messages to population at risk in outer islands (Note: increased coverage means people who can receive hazard forecast and warning messages through a improved warning system (e.g: modernization of communication system, improvement of warning messages and community awareness)</p> <p>Baseline: 30% of population in outer islands has access to warning messages, of which 50% are female Target: 70% of population in outer islands has access to warning messages, of which 50% are female</p>	<p>30% Year 3: 50% Year 4: 60% Year 5: 70%</p>	<p>annual survey, to be conducted by DIDA/NDMO Responsibility for Delivering Output: MoF</p>
<p>(iii) Prepare Standard Operating Procedures (SOPs) for early warning observation and communication stations in outer islands</p>	<p>Indicator: SOPs for early warning observation and communication stations in outer islands are prepared and in use</p> <p>Baseline: 0% of observation and communication stations operating in line with SOPs in outer islands Target: 60% of observation and communication stations operating in line with SOPs in outer islands</p>	<p>Year 1: 0% Year 2: 0% Year 3: 20% Year 4: 40% Year 5: 60%</p>	<p>Monitoring methodology: Bi-annual survey, to be conducted by DIDA/NDMO Responsibility for Delivering Output: MoF</p>

Gender Action Plan

Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan.

Impact Statement: *Increased climate resilience of vulnerable food insecure communities, including women and girls; increased resilience of health and well-being through food and water security; diversified livelihoods through income generating opportunities for vulnerable and female – headed households; reduced time and labour required by women for household tasks; increase in time saving, recreation and economic activities for women.*

Outcome Statement: *Increased generation and use of climate information in decision-making for up to 12,600 men and 18,900 women farmers respectively; strengthened adaptive capacity and reduced exposure to climate risks for 90% of the targeted households – half of which are women led; Strengthened awareness of up to 50% of targeted households – 50% of which are women-led - regarding climate threats and risk-reduction processes*

Output 1.4: *Community awareness raising on climate risk management measures and capacity building of women to address health and nutrition risks exacerbated by climate change*

Activities	Indicators and Targets	Timeline	Responsibilities	Budget (USD)
<ul style="list-style-type: none"> Local theatres to raise awareness of climate change and food security and its impact on livelihoods (agriculture, nutrition, health of children etc) Awareness raising on use of climate advisories Women’s workshops to address the importance of nutrition diversity 	<p>Gender Indicator: % of targeted people disaggregated by sex understand key messages related to health and nutrition risks resulting from climate change</p> <p>Target: 80% of targeted people (60,000 women and 56,000 men) understand key messages related to health and nutrition risks resulting from climate change</p>	Year 1 - First Quarter to Year 2 - second Quarter	Executing Entity	189,453 (98,516 for women and 90,937 for men)

Output 2.1: *Livelihood diversification to support climate adaptation*

<ul style="list-style-type: none"> Creation of women’s groups to receive trainings on drying fruits from the orchards, vegetables and herbs, processing, preservation and marketing skills. 	<p>Gender Indicator: Number of people benefitting from x hectares of orchards & agroforestry established in targeted districts;</p> <p># of women group received training on drying fruits, vegetables and herbs, processing and marketing activities</p>	Year 1 Q1 to Year 3 Q4	Executing Entity	2,167,151 (1,257,187 for women and 909,964 for men)
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	<p>Target: 12,700 women and 11,000 men benefiting from 400 ha of orchards and 200 ha of agroforestry established in targeted districts;</p> <p>40 women's groups received training on drying fruits, vegetables and herbs, processing and marketing activities</p>			
Output 2.3: Establishment of green houses, renewables and climate proofed post-harvest storage facilities to withstand long-term climate shocks				
<ul style="list-style-type: none"> • Building 344 solar/and rehabilitating underground greenhouses • Developing up to 344 storage facilities and installation of solar panels to ensure electricity supply during power cuts which are very common during cold winter months. • Bio-digesters will be provided to produce bio-fertilizers and provide bio-gas to be used for cooking and heating; 	<p>Gender indicator: Number of women engaged in income diversification strategies to reduce risks and vulnerability of food security to climate</p> <p>Target: 2,880 women (60% of target) and 1,920 men engaged in income diversification strategies to reduce risk of vulnerability of food security to climate.</p> <p>9,300 women and 8,700 men have access to renewable energy sources</p>	Year 1 Q4 to Year 4 Q4	Executing Entity	1,969,127 (1,126,990 for women and 842,137 for men)

Gender documents for
FP068

SCALING-UP MULTI-HAZARD EARLY WARNING SYSTEM AND THE USE OF CLIMATE INFORMATION IN GEORGIA

GENDER ANALYSIS AND ACTION PLAN

Introduction

1. This Gender Analysis and Action Plan has been prepared for the submission to the Green Climate Fund with the proposal “Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia”. This assessment aims to provide an overview of the gender situation in Georgia, identify gender issues that may be relevant to the project, and to examine potential gender mainstreaming opportunities. Individual needs and contexts in a disaster situation are examined through the lenses of vulnerability, visibility and voice. The analysis follows social vulnerability approach and further defines whose voice is seen as the default one, and whose is the most visible perspective. The assessment was based on available data from Statistical Department of Georgia, studies conducted by the Government of Georgia, international organizations, and NGOs.
2. The GCF project supports the commitment of the Georgian Government (GoG) to avoid losses of lives and to reduce economic and infrastructure losses caused by climate-induced hydro meteorological disasters. The project will achieve this by nation-wide scaling-up of the Multi-Hazard Early Warning System (MHEWS), setting up capacities for improved use of climate information at all level of decision making, and improving adaptive capacities of the most vulnerable communities. The existing barriers include an incomplete risk knowledge and insufficient capacities to generate, analyze, deliver and utilize climate risk information for decision making and resilient development. The project will improve resilience of up to 1.7 Million people (40% of the population) including in the most vulnerable communities in mountainous rural areas as well as densely populated urban areas. The project will scale-up successful prototypes tested under the UNDP flood risk management project in Georgia’s Rioni River Basin.
3. While it is noted that the Gender Analysis and Action Plan should specifically identify and analyze the most critical issues relevant to the project and whether the needs and priorities of an equal number of women/girls/men/boys are being assessed, this Gender Analysis and Action Plan has been prepared without in-depth on-ground consultation and is based on available published and grey literature. Further a full institutional gender analysis has not been undertaken. During project implementation, stakeholder consultation will be undertaken to assess the components in relation to gender, age and other important matters. There may be a need for the Gender Analysis and Action Plan to be modified depending on stakeholder consultation prior to and during the implementation of the project.

Climate-driven natural disasters in Georgia

4. There are four main climate-induced hazards experienced in Georgia, all of which have been observed to be intensifying and increasing in frequency over time. They are floods (due to heavy rainfall and snowmelt), hydrologically-induced geological hazards (including landslides, mudflow, debris flows), droughts and severe winds and hailstorms. Coupled with significant levels of exposure and vulnerability, these events have a substantial negative impact on the national economy and people. More than 80% of the victims, economic damage caused by disasters, and eco-migrants come from highland areas resulting in abandonment of villages. The most recent devastating flooding and landslide disaster occurred in June of 2015 affecting Georgia’s capital Tbilisi (population over 1 million) and had significant socio-economic consequences for the Georgia’s capital: 19 people killed, 3 people missing, 67 families displaced, and around 700 people directly affected overall. The economic impact was equally high: USD 24.3 million in physical damage and USD 4.37 million in financial losses mainly within the housing, transportation, water management sectors.
5. Georgia’s Third National Communication to the UNFCCC (TNC) provides an evidence of the increasing impact of climate change on the frequency and severity of hydrological and meteorological disasters. In the recent past, the drought cycle of Georgia has changed from 15-20 years to 6 years;

in 2007-2009 the frequency of strong winds increased to 6-12 times per year compared to 1 to 4 times per year in the previous decade; there was double the total number of recorded floods during the period 1992-2013 compared to 1960-1991; there was 4 times the total number of recorded landslides during the period 1992-2013 compared to 1960-1991. The TNC also forecasts future warming and changes in seasonality and intensity of rainfall across the country that will result in further increased flood and rainfall-induced landslide risks, frequency and severity of winds and hail storms, and droughts. The TNC long term climate change scenarios indicate more extremes as prolonged rainfall events, concentrated in a short period of time with the potential to generate more runoff during these short periods, thereby increasing the potential for flash flooding (due to high peak river flows), mudflows and landslides.

Existing Gender Inequality in Georgia

6. Gender equality is defined as the “stage of human social development at which rights, responsibilities and opportunities of individuals will not be determined by the fact of being male or female” (Lopez-Claros & Zahidi, 2005.p.1). According to the UNDP Gender Inequality Index, measuring inequalities in reproductive health, empowerment and economic status, in 2014 Georgia ranked as 77 among 188 countries (UNDP, 2015). Slightly worse is the position of the country according to the other composite, Gender Gap Index developed by World Economic Forum (WEF, 2015) and measuring gender gaps in regard to economic participation and opportunities, educational attainment, health and survival, and political empowerment. It ranks Georgia as 82 out of 145 countries. On the political empowerment sub index Georgia is ranked at 120. Women’s representation in legislative bodies is small. Comprising 52.3 percent of population, in 2014 women constituted only 11.4 percent of the members of the parliament. Similar is women’s representation in local councils. Women constitute only 11.8 percent in local representative bodies. Several attempts of initiative groups outside and inside the Parliament to introduce quota system for securing the membership in Parliament for women did not succeed, despite successful record of quota system in more than 130 countries around the globe. Twenty-one local councils have a position of an adviser on gender issues, although the position is not backed by the salary and instead in fact is an additional duty of one of a council employee. It can be stated that there is a gender balance among judges, 51 percent of them are women with the Chairperson of Supreme Court being female.

7. Much similar is situation in executive power: 16 percent of ministers and 15 percent of deputy ministers are women. Only three ministries have designated persons to deal with gender equality, in other ministries this task is usually assigned to a staff member as additional duty. In ministries, as can be seen from Table 1 men outnumber women. Women comprise 18.2 percent of all the staff of existing 16 Ministries and 3 offices of state Ministers’. Their distribution clearly demonstrates gender stereotypes of male and female professions, as women’s share among the staff is high in the Ministry of Education and Science (72.3 percent), Ministry of Labour, Health and Social Affairs (69.2 percent) and Ministry of Culture and Monument Protection (62.3 percent) and extremely low in the Ministry of Internal Affairs (14.3 percent), Ministry of Corrections (34.4 percent) and Ministry of Agriculture (35.5 percent). Comparable to average ratio is the ratio of women holding managerial positions in ministries, which accounts to 19.0 percent.

Table 1. Gender composition of Ministries

No	Executive Body	Number of Employees	Share of women employees %	Number of managerial Position	Share of women on managerial positions %
1	Office of State Minister for Diaspora Issues	35	51.4	6	16.7

2	Office of State Minister for Reconciliation and Civic Equality	36	58.5	7	71.4
3	Office of State Minister for European and Euro-Atlantic Integration	55	52.7	10	100
4	Ministry of Corrections	3,796	34.4	532	7.9
5	Ministry of Energy	84	51.2	20	30.0
6	Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees	255	49.0	49	28.6
7	Ministry of Culture and Monument Protection	191	62.3	42	57.1
8	Ministry of Environment and Natural Resources Protection	157	56.7	41	53.7
9	Ministry of Labour, Health and Social Affairs	315	69.2	39	51.3
10	Ministry of Internal Affairs	46,878	14.3	889	5.6
11	Ministry of Finance	308	57.5	50	17 34.0
12	Ministry of Sport and Youth Affairs	107	39.2	28	28.6
13	Ministry of Agriculture	380	35.5	121	33 27.3
14	Ministry of Foreign Affairs	276	60.5	85	43.5
15	Ministry of Regional Development and infrastructure	135	44.4	36	25.0
16	Ministry of Justice	169	58.0	56	35.7
17	Ministry of Defense	428	47.0	109	35.8
18	Ministry of Economy and Sustainable Development	205	52.7	60	48.3
19	Ministry of Education and Science	307	72.3	54	70.4
	Total	54,117	18.2	2,234	19.0%

Source: Calculations based on “Women’s rights and Gender Equality”. Ombudsmen’s Office, 2015

8. The picture of total gender composition in the staff as well as in managerial positions is skewed by disproportional size of the two male dominated ministries, of Internal Affairs and Corrections. When these ministries are excluded from the count, women constitute more than half (54.4 percent) of the staff and less than half (40.8 percent) are in managerial positions in remaining 17 entities.
9. Corresponding to official statistics is the perception of Georgia’s population on overall gender equality existing in the country. Less than one fourth of the population (25 percent of men and 21 percent of women) thinks that there is gender equality in Georgia (NDI, 2014). World Value Survey (WVS) which was carried out in Georgia in 1996, 2009 and 2014 demonstrates some progress. Disagreement to two statements concerning gender equality asked in all the three waves “On the whole men make better political leaders than women do” and “University is more important for a boy than for a girl”

clearly demonstrates a linear increase over time and hence increase of the share of those, who adhere to gender equality. Difference in subscription to equality is not confined only to historical time. Inspection of the data of 2014 WVS shows two more trends, equality is more common among women than men and among the young generation.

10. Gender stereotypes, lack of awareness of the existence of opportunities due to the upbringing in a patriarchal manner, institutional barriers, access to information, “time-poverty”, economic weakness, limited mobility, all of these can restrict the choices women make and result in inequality of opportunities that women face (Elson,1991; Sumbadze, 2008). This explains why women often are devoid of opportunities to make informed choices, escape their underprivileged condition and engage fully in public life, have a say in family.
11. Engagement of women in public life is small, and is smaller in rural than urban setting. Women rarely participate in consultations in regions held by the Ministry of Regional Development and Infrastructure in regard to planning regional development programs. That can be assumed to be the reason for so to say “male agenda” of the program, resulting in scarcity of funds allocated to pertinent for women issues such as kindergartens or supply of potable water (Ombudsmen’s office, 2015).
12. Marriage rests on assumed duties and responsibilities of the partners, which are in a great extent defined by cultural norms. Division of roles in Georgian families is consistent with the world-wide allocation of primary functions of breadwinner and decision maker to men, and family caretaker to women (Narayan, 2000), corresponding to distinction between instrumental roles related to survival assigned to men, and expressive roles related to maintenance of morale, assigned to women (Parsons, 1965).
13. Women’s decision-making power is restricted in private realm. It seems still to be backed by the norm. Only half of the population (62 percent women and 37 percent men) thinks that husband and wife should together make decisions in the family, while 48 percent (36 percent of women and 62 percent of men) considers that decision-making power should rest with men (UNWOMEN, 2013).
14. Women lack power in decisions on a number of important family issues. Women and men report having equal power on decisions over shopping for everyday needs, spending leisure and on decisions over children’s upbringing, but men’s power considerably exceeds women on decision about employment arrangements, often restricting women’s participation in work force. This does not allow women to gain power, as economic independence often determines her power in the family (Gender and Generation Survey, 2010).
15. Next to decision-making power, time poverty is one more problem that women face. Women work much more at home than men. Overall involvement of men in household duties in Georgia is rather low. Only 23.7 percent of chores are done by men only, compared to 46.3 percent performed solely by women (Gender and Generation Survey, 2010). Comparison of the number of females and males engaged in performing household tasks can serve as a demonstration of women’s work overload. Making repairs and paying bills are the only tasks where men outnumber women.

Table 2. Ranking of the engagement of women in household tasks

No	Task	Women %	Men %
1	Cleaning house No 1081	96	4
2	Washing No 1081	95	4
3	Cooking No 1081	93	5
4	Caring for children No 1009	87	4
5	Helping child with lessons No 1009	81	5
6	Caring for a sick family member No 1081	77	5

7	Taking child to school/kindergarten No 1009	66	9
8	Taking out garbage No 1081	52	19
9	Shopping No 1081	32	24
10	Paying bills No 1081	19	44
11	Making repairs in the house No 1081	7	67

16. Women are not only more than men busy in doing household tasks, but according to the survey results they are engaged in agriculture more days a year (344.2) than men do (263.9) (UNWOMEN, 2016).
17. Early marriage is one more manifestation of gender inequality, as it much more frequently occurs among girls than boys. In 2015 611 marriages were registered of persons aged 16-18, 95 percent of minors being girls. In 2015 among the parents of new-borns 1372 were under-aged mothers and 42 fathers. Early marriage very often is the reason of leaving school, resulting in the poor education outcomes for married women, negatively reflecting on their human capital. In 2015 408 pupils aged 13-17 left schools because of marriage.
18. Gender based violence is an extreme manifestation of gender inequality. Registration of cases in fact began since the adoption of law on Elimination of Domestic Violence, Support and Protection to its Victims in 2006. Country is witnessing increase of incidents. Statistics is alarming. In 2014 the Emergency and Operative Response Center registered 9,260 and in 2015 15,910 notifications related to domestic violence. 350 cases in 2014 and 728 cases in 2015 were initiated under the Criminal Code. 902 restrictive and 87 protective orders were issued in 2014 and 2,726 and 173 correspondingly in 2015. 28 cases of femicide or attempted femicide were registered in 2015. (Ombudsmen’s office, 2015; UNWOMEN, 2015). In 2015 93 percent of offenders were men, among them 61 percent aged over 45, while 87 percent of victims were women, among them 56 percent aged 25-44.
19. Georgia fares better in human capital than in empowerment, but gender gap is considerable. Life expectancy of females’ is 77.2, while males’ is 68.6. Georgia has a good record in regard to education. Girls constitute 47 percent of basic level and 49 percent of high school graduates. Girls outperform boys in National Exams in almost all subjects, including STEM (Sumbadze, 2015). Share of girls and boys is similar among VET graduates, but girls’ share is bigger among University students (54 percent).
20. It can be concluded that despite some progress, achievement of gender equality remains a serious challenge for the country.

Legal and Administrative Framework Protecting Women and Promoting Gender Equality Legislation

21. Legal framework warrants gender equality. Equal rights of men and women in Georgia are spelled out in the constitution and in the laws. In keeping with the country’s endeavour towards European integration and sharing of universal values, since 1994, Georgia has been a signatory of major international conventions and treaties based on human-rights approach to gender equality:
- The Convention on the Elimination of All Forms of Discrimination against Women” (CEDAW) (1994)
 - Five-year action plan for the advancement and empowerment of women (Beijing Platform of Action) (1995)
 - Millennium Development Goals with two goals MDG3 and MDG specifically focused on gender equality (2000)

- Council of Europe Convention on Preventing and Combating Violence Against Women (Istanbul Convention) (2014)
 - Sustainable Development Goals (SDG) agenda with Goal 5, focused on achieving Gender Equality (2015), with gender equality as a cross-cutting principle in the achievement of all goals.
22. Georgia regularly presents official and shadow country reports to CEDAW committee.
23. A number of national laws has been adopted by the Parliament of Georgia focused on achieving gender equality in the country:
- The Law on Combating Trafficking (2006)
 - The Law on the Elimination of Domestic Violence, Protection and Assistance to the Victims of Domestic Violence (2006)
 - The Law on Gender Equality (2010)
 - The law on Elimination of all forms of Discrimination (2014)
24. Implementation of the laws are supported by corresponding Action Plans. Several amendments to laws were adopted in 2015 and 2016 that were aimed at gender equality. Amendment No 4087 to “Local Self-governance Code” demands gender balance in community meetings and Civic Council membership. Community meetings are required to have equal number of women and men. Among members of Civic Council there should be no less than one-third of persons of one sex. Restrictions to early marriages was initiated by Ombudsmen’s office. Amendment allows marriage registration of persons aged 16-18 only by the permission of the court.

Gender Issues in Addressing Vulnerability to Climate and Disaster Risks in Georgia

25. The project aims at reducing vulnerability of Georgia’s communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. For achieving its objectives and targeting the GCF assistance the project employs social vulnerability approach. The various elements of this approach are discussed below in the context of gender equality and gender mainstreaming.
26. Natural disasters in most cases are sudden, unpredicted, uncontrolled and acute, rarely lasting more than few days. Impacts of a disaster is determined both by the character and severity of the event itself, as well as by individual’s assets, material and other parameters constituting vulnerability. Severity of impact of natural hazards are often measured by the degree to which functioning of individuals, groups or organizations is disrupted. The disruption can be caused by death of family member or friends, displacement, injury, separation from family and community, damage to vegetation and infrastructure, epidemics of communicable diseases, loss of land, house, crops, livestock, productive assets, and other property, loss of employment and trade, damage to infrastructure.
27. Vulnerability is defined as “the conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards” (UN internal strategy for disaster reduction). The vulnerability is determined by the material and social assets that individuals and communities possess. The effect of possessing resources to a different degree is evident at all phases of disaster cycle, i.e. protection, response, impact and recovery.
28. The vulnerability of households also depends on their composition. Gender and age of household members, number of dependents and persons with disabilities, economic status, human, social and political capital - all have an effect on protection from, response to and impact or recovery from natural disasters. Households can be nuclear, or three or four generational, men headed or women

headed, consisting of only a woman or a man. In all phases of disaster cycle it is important to consider composition of households and the ratio of dependents, these being children, seniors and persons with disabilities (PWD). Concept of vulnerability is closely linked with resilience - “the capacity of a system to maintain its basic functions and structures in time of shocks and perturbations” (Birdman, 2006,15)

29. Social vulnerability approach to disasters emphasizes the roles of social, economic and political relations, it describes social distribution of risks: as “some groups in society are more prone than others to damage, loss, and suffering in the context of differing hazards” (Blake, et al 1994,9). In dealing with disasters next to their physical impact the social conditions that underlie different outcomes should be taken into consideration. Households rather than individuals should be taken as a unit for intervention strategies.
30. Gender intersects with other characteristics such as poverty, disability, age, seniority and ethnic minority – which rarely act alone – to exacerbate inequality and vulnerability.

Gender:

31. Women are more vulnerable to natural hazards than men. Their vulnerability is especially high in women-headed and one-member households consisting of women. By January 2015 population of Georgia consisted of 3,729 500 persons, among them 47.7 percent men and 52.3 percent women. Different is the gender composition of population across the age groups. Women’s share is higher among those of productive age, and elder generation. Women constitute 47.4 percent (of total 649.100) of 0-14 years old, 51.5 percent (of total 2,651 300) of persons of productive age, i.e. 15-64 olds, and 62.2 percent (of total 519.100) of elderly, i.e. aged 65+. One third of households (33.2 percent) are headed by women, and twice that number, 66.8 percent are headed by men. The portion of women headed households is bigger in urban (36.6 percent) than rural locations (29.8 percent). (GEOSTAT).
32. Material resources: Poverty is more widely spread among women. Due to their bigger share, women constitute 64.2 percent of beneficiaries of age determined pension package. But they also outnumber men among 421,387 of state subsistence allowance beneficiaries (55.1 percent). More men (67 percent) than women (51.0 percent) are employed, moreover women earn much less, on average monthly 618 GEL, than men, who earn 980 GEL. That’s why women are more dependent on natural resources for subsistence than men. Compared to men, women own less property and productive assets. Especially vulnerable are women headed households (WB, 2016).
33. Human capital: Human capital comprises of labour power, health and nutrition status, skills and knowledge of an individual. On all these constituent parts, women fare poorer than men. Although women’s life expectancy in Georgia exceeds men’s, 77.2 years to 68.6 years in 2014, women have in general more health related problems than men. Due to higher longevity, as 62.2 percent among those over 65 are women, they more than men are expected to have problems associated with functioning. Women’s health is also under higher risk than men’s due to being victims of domestic violence. In 2014, 742 women and 87 men were registered as victims of domestic violence and 690 men and 60 women as perpetrators. Men’s health is threatened by different type of violence, as they are victims of crime more often than women.
34. Social capital: Social capital comprises of social trust, norms and networks, that can be drawn for solving problems. Social trust is rather low in the country. According to 2014 World Value Survey, only 9.8 percent of population (10.1 percent men and 7.7 percent women) believed that others can be trusted (WVS, 2014). Social support is estimated as high, but disasters increase the need for social support at the same time decreasing its availability due to the increase of demand. Low is participation of population in solving pertinent problems and the membership in voluntary organizations, with the only exception of church (CRRC, 2015 CB dataset)

35. Political capital: Political capital is defined as an ability to influence policy and processes of government. Women in the country are very poorly represented at all levels and spheres of consultations and decision-making. That means that 53.2 percent of populations' voice is hardly heard.

Poverty:

36. Georgia has been recently upgraded by the WB to an upper middle-income status, ranking 76th on the Human Development Index (UNDP, 2015). However, despite observed economic growth, a substantial part of the population is still living in poverty. According to the recent World Bank study (WB, 2016) 32 percent of population is estimated to be below the poverty line, i.e. spending 2.5 or less USD a day and only 7 percent of population is considered as being middle class, consuming 10USD or more a day. Households headed by women, big size families and families with children under 15 are particularly vulnerable to poverty. There are also regional disparities in poverty rates. Besides an individual poverty the poverty of community exacerbates the situation.

Table 3. Poverty Headcount by Regions (2.5USD a day)

No	Region	Percent
1	Shida Kartli	51.9
2	Mtsketa-Mtianeti	49.3
3	Guria	45.3
4	Kvemo Kartli	42.4
5	Samegrelo & Zemo Svaneti	36.8
6	Kakheti	35.3
7	Racha-Lechkhumi & Kvemo Svaneti	34.6
8	Imereti	34.6
9	Ajara	31.9
10	Tbilisi	18.6
11	Samtskhe-Javakheti	17.6

Source: WB, 2016

37. Rural poverty is bigger than urban. 18.8 percent of rural and 14.3 percent of urban dwellers are qualified as persistent poor (WB, 2016). Some groups of the population are particularly disadvantaged regarding access to basic services and social inclusion. For example, as a result of the wars in the 1990s in South Ossetia and Abkhazia and the 2008 Georgian-Russian conflict, Georgia currently counts 258,595 IDPs out of a total population of 3.72 million. The inadequate housing conditions and high levels of unemployment¹ comprise the most pressing issues for IPDs. Additionally, in Georgia children are at a higher risk of poverty than any other age group. Households with children are poorer than those without children, they comprise 78 percent of Households living in extreme poverty, the higher the number of children in the household, the greater the poverty risk². All these factors contribute directly to reduced adaptation and coping capacities of the vulnerable groups.

38. Poor may not lose more material property in amount, but the loss is significantly more proportionally to their assets. Poorer live in sub-standard houses, that are more prone to the effects of disaster. Poverty, exacerbated by effects of disaster pushes population abroad. As migration possibilities to Russia, where men were occupied mostly in construction works became limited, while demand for domestic labour increased in EU countries, more and more women become economic migrants.

Age, seniority and disability:

¹Economic and Social Vulnerability in Georgia, UNDP 2012

²UNICEF, Reducing child poverty 2012

39. Among the country's population 649,100 persons are aged under 15 and 519,100 over 65. That means that 1168,200 persons or 31.3 percent is dependent by age. Among elderly high is the ratio of those with functioning disabilities, such as moving, hearing, seeing, cognitive functioning and self-care.

Table 4. Age distribution of population

Age Group	Women	Men	Total
0-14			
Number	307 700	341 400	649 100
Percent	47.4	52.6	100
15-64			
Number	1,320 700	1,240 600	2,561 300
Percent	51.6	48.4	100
65+			
Number	322 600	196 500	519 100
Percent	62.2	37.8	100
Total			
Number	1,951 000		
Percent			

Table 5. Share of age groups in total population

Age Group	Total
0-14	
Number	649 100
Percent	17.40
15-64	2,561 300
Number	
Percent	68.68
65+	
Number	519 100
Percent	13.92
Total	
Number	3, 729 500
Percent	100

Source: calculated based on 2014 Census data

40. Isolated living arrangement, diminished social networks, lower access to information (e.g. use of internet, mobile applications), limited physical and cognitive capabilities restrict access and adequate perception of warnings by elderly. As a result, they often do not respond to warning. They are also reluctant to be separated from normal/accustomed surroundings and fear the unknown. Sensory impairments, mobility problems, reduced thermoregulatory capacity in the elderly make them more susceptible to the effects of extremely hot or cold temperatures. The ability to survive injury also decreases with age. These factors explain higher death rate among elderly due to disasters. At the disaster warning, there is a high chance that children be separated from parents, being at school or kinder-garden.
41. By October 2015, 123,607 (3.3 percent of total population) was registered as having disability status. The distribution of PWDs differ across regions, the biggest share is concentrated in Racha-Lechkhumi and Kvemo Svaneti, Imereti and Ajara regions.

Table 6. Ranking of PWDs by their proportion to population by regions

No	Region	% of population	Number of PWDs
1	Racha-Lechkhumi and kvemo Svaneti	4.8	1,539
2	Imereti	4.3	24,008
3	Ajara	4.3	14,412
4	Guria	4.0	4,543
5	Shida Kartli	3.9	10,263
6	Samegrelo-Zemo Svaneti	3.8	12,737
7	Kakheti	3.3	10,684
8	Samtskhe-Javakheti	2.9	4,728
9	Mtskheta-Mtianeti	2.9	2,752
10	Tbilisi	2.5	28,1905
11	Kvemo Kartli	2.3	9,746
	Total	3.3	123,607

Source: Agency for Social Services

42. People with disabilities are less likely to be employed and have University education and hence are more prone to poverty. Despite deterioration of functioning many seniors do not have a disability status, but are highly vulnerable to impacts of disasters. Most widely spread limitation among the population is poor eyesight, 0.25 percent cannot see at all. Bigger proportion of women compared to men suffer from all the measured limitations except walking. This can partially be explained by the fact that women are nearly twice the percentage of men among over 65-year-olds.

Table 7. Proportion of women and men with different types of functional limitations

Type of functional limitation	Total % No 3,713 804	Women % No 1,940 940	Men % No 1, 772 864
Seeing	16.60	19.08	13.87
Hearing	7.52	8.38	6.57
Walking	7.08	5.27	5.66
Remembering	3.79	4.18	3.36
Caring for self	3.73	4.05	3.37
Communicating	2.85	2.93	2.77

Source: Calculated based on Census 2014 data

Ethnicity:

43. Georgia's population is multi-ethnic, with Georgians comprising 83 percent. Two biggest ethnic minority groups are Azeris (7 percent) and Armenians (6 percent). Other ethnicities, such as Russians, Abkhazs, Ossetians, Greeks, Yezidis, etc together comprise 4 percent. Azeri population is concentrated in Kvemo Kartli and Armenian population in Samtskhe-Javakheti regions. Ethnicity is closely linked with faith, overwhelming majority of Georgians belong to Georgian Orthodox Church, Armenians to Armenian Apostolic Church, while Azeris are mostly Muslims.
44. Representatives of ethnic minorities, especially those living in isolated communities, do not master state language, much lower than understanding of verbal information is understanding of written materials. In planning response, it should be taken into an account that women of Muslim faith, especially of Azeri ethnicity are reluctant to leave their houses unaccompanied by male family member. Evacuation procedures need to take into account these factors. Minorities are poorly represented in national and local legislative and executive bodies, so their involvement in planning, preparation of and recovering form disaster processes is rather limited.

Gender issues related to different phases of disaster management cycle

45. The impact of the all above mentioned vulnerabilities is revealed at all phases of disaster management cycle, i.e. at prevention and protection, response, impact and coping. The purpose of the gender mainstreaming throughout various phases of disaster management is to empower women and see them as capable agents of change, who can manage crisis, deal with its aftermath, and take on leadership roles in the family and community. Women play important economic and community roles that help in reconstruction and resilience building. Women often take on leadership roles in family and community in the face of death or disability.

Summary of gender differences in vulnerability and adapting to disasters

Disparities that increase risks for women in disasters <ul style="list-style-type: none"> • Higher levels of poverty • Extensive responsibilities of caring for others • Domestic violence • Traditional women's occupations 	Disparities that increase risks for men in disasters <ul style="list-style-type: none"> • Occupational segregation • Internalized norms of masculinity • Roles in the family and in the home
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<p>Gender experiences that can increase capacities for managing disaster situations: Women</p> <ul style="list-style-type: none"> • Social networking • Caring abilities • Extensive knowledge of communities • Management of natural and environmental resources • High levels of risk awareness 	<p>Gender experiences that can increase capacities for managing disaster situations by: men</p> <ul style="list-style-type: none"> • Professional and work contacts • Technical abilities • Limited childcare responsibilities
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46. Prevention and protection: Early warning system works as a potent protection mechanism against natural hazards. But as receivers of warnings are humans, for warranting the desired response a number of human related factors should be considered. Information on hazard risk can be delivered in time, but still the problem of understanding information, believing it and acting according to provided recommendations and hence saving life, health and property remains problematic. That 's for the messages on multi-hazard risk information are to be tailored to the needs and capabilities of vulnerable groups, targeting women, children, senior citizens and persons with disabilities (PWDs). Education level, knowledge of language in which warning is communicated, problems of hearing and seeing constitute serious barriers for adequately grasping the threat.
47. Women and men differ in regard of appraisal of trustworthiness of information sources, men believe more in official and media announcements, while women rely more on personal information obtained from kin and neighbours. Effective targeting requires utilization of both sources.
48. Men are more risk tolerant than women, hence less prone to take self-protective actions. Men often label evacuation calls as panic and do not react. Besides, acting according to stereotypical gender roles men may decide not to evacuate to safeguard property. On the other hand, women are readier to respond to risk, but lack of social power deters them to mobilize family to respond, they also may be slow to react according to instructions until securing family members.
49. Children and people with low education level may encounter problems of understanding messages when they are worded in impersonal, official manner. Elderly citizens with the problems of hearing or seeing and living alone can be left out of reach in case of delivery of hazard risk messages only by printed or electronic media.
50. Response to disasters: Effectiveness of response in a great deal depends on a well-planned emergency behaviour, preparedness and social cohesion of community. Therefore, outlined below features should be reflected in emergency planning. Timely evacuation is a challenging issue for small children, seniors and persons with disabilities, especially with problems of moving and of persons with poor health. People dependent on health services for survival (dialyses, cancer treatment) are faced with life threatening circumstances in disaster.
51. Women's, children's and elderly's' vulnerability is greater due to the mobility constraints. Both car ownership and having driver's licence is less frequent among women than men. In Georgia among car owners only 13 percent are women, among driver's license holder's 29 percent.
52. Impact of disasters and coping: Psychological reaction to natural disaster can be: withdrawal, stunning, apathy, disbelief, but also increase in community bond and social cohesion. Experience of natural hazards may result in stress, anxiety, depression and other mood disturbances. Effect usually is not long lasting, only 25 percent of victims suffer psychological effects some months after disaster (Thomas, et al., 2013). Coping strategies of disaster affected population could be leaving area, over-

exploiting resources in order to survive (e.g. cutting down trees for wood), liquidation of assets (e.g. livestock), reducing food intake.

53. As women, more than men depend on natural resources for livelihood, disaster has a more severe effect on women. At the same time women play key roles in the sustainable use and management of natural resources. As among senior women considerably outnumber men, they are more likely to experience physical limitations that matter so much in emergencies. The burden of domestic work and care-giving to children, as well as to ill and disabled family members mainly falls on women, so caring in aftermaths of disasters becomes more challenging for women. As men can decide to migrate due to property or employment loss, family burden increases for women. But also, more and more women decide to migrate for providing for the family, as the demand for domestic labour increases in EU countries. The migration of family member also effects senior citizens as they have to look after grandchildren.
54. Lesser political and professional representation, low involvement in consulting process of key stakeholders make women more vulnerable as their perceptions and needs are not reflected in planning of recovery process. Gender stereotypes negatively reflect on men. Men often are overwhelmed with emotions after disaster, but are constrained to express them, which has health related consequences and often stimulates substance abuse, domestic violence, gambling, and engagement in risky behaviours.

Recommendations

55. The analysis above shows that in order to set up effective national and community based early warning systems, climate-informed planning and improved resilience, gender consideration need to be integrated into the project implementation. The existing gender inequality factors (e.g. limited engagement of women in planning and decision making) and traditional distribution of gender roles in families and communities call for tailoring and targeting of the project solutions to outreach beneficiaries of both genders equally. Based on the analysis of the gender aspects of vulnerability to climate-induced natural disasters a number of recommendations for the proposed GCF project have been elaborated. These recommendations and the following Gender Action Plan are aimed at ensuring that the GCF project:
- narrows gender inequality;
 - addresses the needs and constraints of women, girls, men, and boys;
 - avoid any risks of adverse gender impacts;
 - ensure women's participation, promotes their leadership qualities; and
 - ensure women are included as planners, co-implementers and agents of change.
56. As a result of the project implementation more lives, property and productive assets will be secured from the impacts of climate induced disasters. Beneficiary of this outcome will be all the population, but gender gap will decrease as women's benefits will be bigger as for the livelihood women more than men depend on natural resources. They also are poorer than men and hence proportionally loose more.
57. The recommendations and the Gender Action Plan as summarized below have been designed to ensure that both men and women have full and equitable access to the Project's resources and benefits, with specific actions and responsibilities aimed at ensuring the full participation of women in Project activities.
58. At Project inception, additional gender analysis will be undertaken to ensure that the baseline data set is sex- and age-disaggregated and adequate for assessment of the gender impacts of the Project. At this time, the Gender Action Plan will be presented to the Project Implementation Team, including Government staff and consultants. In particular, the Project team leaders will ensure that all

specialists are briefed on their responsibilities in relation to the Gender Action Plan upon mobilization. Progress reports will provide periodic updates on the effect of the Project on women, and regular UNDP review missions and the midterm review mission will review and monitor the gender impacts.

Carry out gender sensitive vulnerability assessment

- Subjecting 2014 Census data to additional analyses, providing sex- and age- disaggregated data on social vulnerability across regions, assessing employment, education, health problems connecting with adequate functioning, disability, physical abilities (to swim, climb and run), ownership of house and productive assets and farming opportunities, ratio of dependent persons in households, household composition-single member male and female, women headed households, livelihoods, unpaid care and domestic work responsibilities.
- Mapping households receiving state subsistence allowance assistance by analysing social assistance database across regions.
- Carrying out group discussions and in-depth interviews with key stakeholders, ensuring an equal representation of women, persons over 65, disabled or family members of disabled, community leaders and government officials for mapping hazards and risks, collection of existing community coping strategies, identifying local businesses and institutions able to contribute to DRM activities. To identify priority needs, responses to, separate coping mechanisms of women and men, elderly, disabled and poor.

Ensure collection of sex- and age-disaggregated data for project indicators

- Gender disaggregated reporting will be further introduced beyond the project level at the national level through the multi-hazard disaster risk information and knowledge system to be designed by the project (activity 1.4. of the project)

Enhance gender considerations in disaster preparedness activities

- Disaster preparedness and response plans should be based on gender analysis and include gender considerations
- Men and women of different age groups, as well as those from vulnerable communities, should be involved in planning and implementation. Community consultancy groups with at least 30 percent representation of women should be established.
- Ensure that information on hazards, their character, probability of occurrence, threats to life, possible impact on livelihood, houses, crops and livestock and on protecting measures is reaching both women and men through appropriately tailored channels.
- Increase preparedness of educational institutions. Provide information to teachers, pupils and students, academic and other staff on different types of disasters and on effective immediate response to them. Create emergency plans for kinder-gardens, schools, vocational institutions and Universities. Ensure they are practicing periodically. Provide the staff with first aid training.

Warrant universal access to disaster warnings

- Tailor warning to the gender-differentiated needs and capabilities of specific population groups, such as children, senior citizens, the sick and persons with disabilities.
- Set up community based early warning systems and make sure that they are tailored to effectively serve both women and men.
- Use multiple methods for targeting messages for reaching broadest group of people, including TV, radio, Internet, sirens, flashing lights, registration-based alert systems sending messages to cell phones with information clearly stated orally and graphically.
- Include pregnant women and the elderly and disabled in emergency planning.

Mainstream gender considerations and engagement of women in resilience building activities

- Target 30 percent representation of women in capacity building and training activities supported by the project.
- Make sure that women have equal access to livelihood generating activities facilitated by the project.
- Disseminate information and stimulate involvement of population of the hazard prone regions in insurance schemes, among them insurance of crops.
- Disseminate information on risk zones with recommendations for construction of dwellings, agricultural activities and livestock husbandry.
- Support creation of employment opportunities for women and poor; ensure that women are part of employment-guarantee schemes planned in the framework of the community-based disaster risk management activities; provide social care services to redistribute burden of unpaid care work that falls on women. Provision of social care infrastructure can also generate jobs for women and men as part of disaster recovery.
- Strengthen social capital through creating community groups for planning for, safeguarding from and mitigating adverse effects of natural disasters with at least 30 percent women participations.
- Make sure that all representatives of ethnic minorities have the equal access to project benefits.

Conduct gender mainstreaming trainings and build capacity of national stakeholders targeted by project and responsible for various disaster risk reduction functions

- In 2016 UNDP Istanbul Regional Hub (IRH) developed and piloted a three-module training manual on Gender mainstreaming in disaster preparedness and response. The tool is designed for UNDP staff and government officers working in disaster preparedness and disaster response in the Europe and CIS region. In 2017 the tool was piloted with the DRR project practitioners in the Western Balkans countries. A series of training and capacity building workshop on gender mainstreaming will be conducted in the course of the GCF project based on the UNDP training manual targeting various stakeholders and practitioners (government, NGOs, community leaders, youth groups, women's groups, farmers' groups) at the national and local levels.

In some regions of Georgia to be targeted by the project there are compact settlements of ethnic minorities, e.g. Armenian and Azeri communities in Kvemo Kartli and Samtskhe-Javakheti, who do not master Georgian language. Therefore, the project will ensure equal participation of such groups in trainings and capacity building activities. Moreover, it will produce training/knowledge/public information materials in languages of large ethnic groups and will distribute them among target beneficiaries. In addition, the project will ensure English-Russian-Georgian interpreting during the trainings, where representatives of ethnic minorities will participate.

Engage women in decision-making

- Ensure at least 30 percent representation of women and their active participation in project stakeholder consultations, local and national decision-making bodies set up and/or facilitated by the project, including project TAWGs.
- Secure participation of the Gender Advisor in all project TAWGs.

Requirements to the project staff

- Gender-responsive social vulnerability approach can be realized only by the gender and social vulnerability sensitive staff of the project. Therefore, project staff should be composed of women by at least 30 percent, evenly represented at all levels of decision-making. Staff members should have a record of participation in trainings on gender mainstreaming and on social vulnerability approach.

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Gender Action Plan

Project Outputs and activities	Gender mainstreaming actions	Indicators and targets	Timeline	Responsibilities
Output 1. Expanded hydro-meteorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks				
Activity 1.1: Rehabilitation of the hydrometric network	If installation of the new observation equipment at the vicinity of local settlements requires community consultations, make sure that women are adequately represented in the consultations, including women of ethnic minorities and other vulnerable groups	Community members (both men and women) raise no concerns neither complains due to installation of observation equipment. Verified through the independent evaluations.	Year 2 and 3	NEA Project Management Unit (PMU)
Activity 1.2: Floodplain zoning integrating hazard and risk maps for all basins in Georgia and for key climate-induced hazards	Stakeholder consultations for the design and communication of the risk zones engage both men and women, including ethnic minorities and other vulnerable groups	Ratio of women in stakeholder consultations on floodplain zoning At least 30% participants of consultations are women	Year 2,3 and 4	NEA, PMU
Activity 1.3: Introduction and implementation of methods and tools for the systematic gender-sensitive socio-economic vulnerability assessment for decision making for prioritisation of resilience investments.	Gender disaggregated indicators introduced in the socio-economic vulnerability assessment Gender-sensitive socio-economic vulnerability assessment carried out	Baseline, progress and final report on social and gender vulnerability	Year 2 and 3	NEA, PMU
Activity 1.4: A centralized multi-hazard disaster risk information and knowledge system	Ensure that the data collection and information systems support gender-disaggregated data for decision-making	Data is sex and age-disaggregated	Years 2 and 3	NEA, MIA, SCMC, PMU
Output 2: Multi-hazard early warning system and new climate information products supported with				

effective national regulations, coordination mechanism and institutional capacities				
<p>Activity 2.1: Institutional and legal frameworks and institutional capacity building for the MHEWS and for the enhanced use of climate information:</p> <ul style="list-style-type: none"> - Policy, regulatory framework and technical guidance for MHEWS; - Institutional strengthening, coordination, communication and enhanced use of climate information; - Training and capacity building of relevant stakeholders at all levels 	<p>A series of training workshops on gender mainstreaming for DRR practitioners and policy makers (based on the UNDP training manual on gender mainstreaming in disaster preparedness and response)</p> <p>Review of the new policies and guidance documents by the gender advisor to identify gender gaps and mainstreaming opportunities</p>	<p>Gender considerations are reflected in policy documents and technical guidance (review by gender advisor)</p> <p>Decision makers and practitioners are trained on gender mainstreaming in DRR based on UNDP training manual (number of women and men disaggregated)</p> <p>Number of women in planning teams and consultation groups (at least 30%)</p>	<p>Year 1-7 (continuously)</p>	<p>MoEPA, PMU</p>
<p>Activity 2.2: Development and implementation of the MHEWS covering all Georgia</p>	<p>Tailor warnings and multi-hazard risk information to the needs and capabilities of vulnerable groups, targeting women, children, senior citizens, persons with disabilities and ethnic minorities</p> <p>Use multiple methods for targeting messages to outreach all vulnerable groups, including TV, radio, Internet, sirens, flashing lights, registration-based alert systems sending messages to cell phones with information clearly stated orally and graphically.</p>	<p>Warnings are tailored to the needs of vulnerable groups</p> <p>Information on hazards delivered through multiple methods. Information is clear and not complex. Information is issued in understandable for the population languages.</p>	<p>Year 3,4,5, 6</p>	<p>NEA, PMU</p>

	Use multiple languages and signals/tools for warning messages to reach ethnic minority groups and disabled persons			
Activity 2.3: Enhancing access and the use of weather and climate information and agrometeorological information services by farmers and agricultural enterprises	<p>Conduct gender analysis of the client sectors/groups</p> <p>Include gender mainstreaming in the training and capacity building courses addressing agricultural sector stakeholders and consultation centres, including farmers representing ethnic minorities</p> <p>Make sure that men and women, including those from vulnerable groups (e.g. ethnic minorities, IDPs, etc.) have equal access to new climate information products and agrometeorological advisory services</p>	Design of weather/climate advisories integrate needs of men and women and tailored delivery and communication methods are utilized	Year 3-7	MoEPA, NFA, PMU
Activity 2.4: Climate-informed planning platforms: - multi hazard basin risk management plans - Municipal-level climate-induced multi-hazard response and preparedness plans	<p>Mainstream gender considerations in the planning process</p> <p>Secure adequate representation of women within the planning teams and consultation groups, including women representing vulnerable groups (e.g. elderly, bread-makers, ethnic minorities,</p>	<p>Gender considerations are reflected in planning (review by gender advisor)</p> <p>Number of women in planning teams and consultation groups (at least 30%)</p>	Year 1-7	MoEPA, PMU

	disabled persons, IDPs)			
	Output 3: Improved adaptive capacities and resilience of vulnerable communities through the implementation of community-based EWS and DRM			
Activity 3.1: Implementation of community-based early warning schemes and other CBDRM practices	<p>Involve vulnerable groups in planning and realization of CBEWS and CBDRM through creating community consultancy groups with at least 30% representation of women,</p> <p>Ensure that women and vulnerable group members (elderly, bread-maker women, people living under poverty line, ethnic minorities, IDPs, etc.) can equally benefit from livelihoods and employment opportunities facilitated by the project. e.g. engage women in local employment guarantee schemes, including women representing disadvantaged groups (elderly, bread-makers, ethnic minorities, IDPs, etc.)</p>	<p>Community consultation groups with at least 30% representation of women</p> <p>Ratio of women employed in CBDRM employment guarantee schemes</p>	Year 2-7	PMU
Activity 3.2: Public awareness and capacity building programme at all levels to effectively deliver climate risk information and training to communities and local first-responders	<p>Increase preparedness of educational institutions. Provide information to teachers, pupils and students and staff, on different disasters and effective immediate response to them. Create emergency plans and ensure practicing its</p>	<p>Emergency plans for educational institutions, Staff informed on nature and effects of hazards. Record of emergency drills practiced. Number of staff with the knowledge of first aid.</p>	Year 2-7	EIEC PMU

	<p>implementation periodically. Provide the staff with first aid training. Ensure equal access of all vulnerable groups to the benefits of education and capacity building activities, including ethnic minorities</p> <p>Achieve 30 percent representation of women in training courses, including women representing vulnerable groups (elderly, bread-makers, ethnic minorities, IDPs, etc.)</p> <p>Tailor information and awareness campaigns for the needs of men, women, boys and girls, vulnerable groups (elderly, bread-maker women, ethnic minorities, IDPs, disabled persons, etc.)</p>	<p>Women comprise 30% of trainees</p> <p>Information tailored to the needs of men, women, boys and girls</p>		
Activity 3.3: Implementation of risk reduction intervention measures	<p>Make sure that women and vulnerable groups are adequately represented in the stakeholder consultations,</p> <p>Ensure that women have equal access to grievance reporting mechanism.</p>	Ratio of women in stakeholder consultations	Year 1-7	Road Department/MRDI PMU
	Effective project management			
Staffing	Ensure that staff of the project composed of at least 30% of women	30% percent of women in the staff	Year 1-7	UNDP, NIM Partner, PMU

Capacity building and training	Training of staff members of the project on gender mainstreaming and social vulnerability approach	Staff members completed training in gender mainstreaming and social vulnerability approach	Year 1	UNDP, NIM Partner, PMU
Stakeholder consultations and participatory decision making	Make sure that women are adequately represented in the project TAWGs. Secure participation of the project Gender Advisor in all TAWGs.	Gender Advisor is a member of all TAWGs. Gender mainstreamed in the TAWGs discussions. Balanced representation of women and men in TAWGs.	Years 1-7	UNDP, NIM Partner, PMU

Gender Assessment and Action Plan Budget

Type of Supply	Category	US\$	Activity	Description of procurement	First year % of disbursement
Individual Consultant	IC	103,400	1.3.	International consultant to assist stakeholders in gender sensitive socio-economic vulnerability analysis.	0%
Goods and works	Training, workshops and conferences	5,000	2.1.	Training of SSCMC and other relevant agencies on gender sensitive socio-economic vulnerability analysis, with 1-or two sessions fully dedicated to gender aspects of the analysis.	0%
Goods and works	Training, workshops and conferences	5,000	2.1.3	1 training of national decision-makers on multi-hazard early warning systems and CRM, with special sessions to be dedicated to gender mainstreaming in climate and disaster risk management and EWS.	0%

International consultant	International consultants	25,800	2.1.3	International consultant to conduct training of key decision-makers on multi-hazard early warning systems and CRM, with special sessions to be dedicated to gender mainstreaming in climate and disaster risk management and EWS	0%
Services	Contractual services companies - Nat.	66,000	3.1.2	Gender sensitive community impact evaluation programme	33.33%
Individual contract	IC	41,600	3.2.1	Contract with international consultant to assist EIEC develop and implement gender sensitive awareness programme, guidance documents and education programs as well as training modules on gender sensitive CRM/DRR, MHEWS, CBMHRM, etc.	100%
Services	Contractual services companies - Nat.	850,000	3.2	Subcontracts under the Letter of Agreement with EIEC: mainstreaming of gender considerations into capacity building and public awareness activities, including gender sensitive community awareness, youth education programmes at preschool, school and universities; nation-wide gender sensitive media campaign, including video footages, booklets, video clips TV and radio programmes, Facebook campaigns, etc.	14.30%
Individual Consultant	IC	95200	3.1.2	Gender advisor	7.70%
Goods and works	Trainings, workshops, conferences	42,000	4.1.1	Annual workshops/reviews, with one or two complete sessions to be dedicated to gender integration into project as well as to the progress towards implementation of a gender action plan. 1 specific event out of all, will be a staff and contractors/partners training in gender mainstreaming in project implementation	14.30%

Goods and works	Audio-visual and printing and production costs	25,000	3.1	One documentary on the project, its successes, lessons learned with a specific focus on gender issues	0%
Goods and works	Audio-visual and printing and production costs	10,000	3.1	2 publications, one brochure/case study on gender sensitive community based MHEWS and MHRMP and another on the gender dimension of the project	0%
TOTAL					1,269,000

International agreements relevant to gender and climate change

Year	International Agreement	Environmental Relevance	Gender Relevance
1948	UN Universal Declaration of Human Rights (UNDHR)	No specific mention of environment but acknowledges fundamental human rights that are linked to and dependent upon a healthy environment	Establishes core human rights but with a limited gender perspective
1979	Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)	Calls for governments to ensure that women participate at all levels of decision-making concerned with environmental sustainability, and that women's interests and perspectives are adequately reflected in all policies and approaches adopted	The first international treaty to recognize women's human rights
1992	Agenda 21 and the Rio Declaration on the Environment and Development	This provided the first international precedent for including the gender perspective in promoting sustainable development. It adopted a gender perspective in all development and environment policies and programmes, leading to the promotion of women's effective participation in the proper use of natural resources;	
1992	UN Convention on Biological Diversity (UNCBD)	The first global agreement focused on conservation and sustainable use of biodiversity	Explicitly addresses women's participation and „recognises the vital role that women play in conservation and sustainable use of biological diversity, emphasizing the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation'
1992	UN Framework Convention on Climate Change	Acknowledges human interference with the climate and aims to stabilise concentration of	Absence of any mention of gender

	(UNFCCC)	GHGs in the atmosphere	
1994	UN Convention to Combat Desertification (UNCCD)	The only legally binding international agreement dealing with land degradation	Promotes the equal participation of men and women and recognises „the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries, and the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought’
1995	Beijing Declaration and Platform for Action	This makes the link between gender, the environment and sustainable development. Chapter K draws attention to women's poverty and the need for women to participate in decision-making about the environment at all levels, as well as the integration of gender in all sustainable development policies and programmes.	
2000	Millennium Declaration and MDGs	Includes goal on environmental sustainability (but with no linkage to gender)	Promotes gender equality but without making linkages with environment
2005	Kyoto Framework for Action	The first internationally accepted framework on disaster risk reduction (DRR), setting out objectives and priorities for policies at national level over the next decade.	Recognises that a gender perspective should be integrated into all DRR policies, plans and decision-making processes, including those associated with existing climate variability and future climate change.
2007	UN Declaration on the Rights of Indigenous Peoples (UN DECRIPS)	Acknowledges rights to forests and community lands.	Establishes rights of minorities but with limited gender perspective.

(Adopted and Drawn from Raczek et. al. 2010)



Gender documents for FP069

Annex XIIIe: Gender Assessment and Action Plan

Bangladesh: Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity

I. Introduction

The Green Climate Fund recognizes the central importance of gender considerations in terms of both impact and access to climate funding, and requires a Gender Assessment and Gender Action Plan to be submitted as part of the project-funding proposals that it assesses. The main objective of the Gender Assessment is to screen the gender aspects of the GCF project, and to subsequently strengthen the gender responsive actions within the project. Given that the current project places gendered climate vulnerability at its center, and aims to reduce this vulnerability by addressing their adaptive capacity from multiple levels, the information and design considerations in this Annex should not be considered additional, but rather part of the basis of the proposal, with gender assessment related information, including consultations, literature review and relevant data found throughout the proposal, including the Feasibility Study, Stakeholder Engagement and Environmental and Social Management Framework (ESMF) Annexes. That is, as a project “Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity” has taken a gender responsive and transformative approach to climate change vulnerability, considering gendered differences in access to resources, ability to pursue adaptive livelihoods and institutional support and capacity building, and this has fundamentally shaped all of the activities and outputs of the project. The proposed intervention aims to go beyond the categorization of women as a “vulnerable” group, or simply as beneficiaries of the project, but rather recognizes women’s essential contributions as leaders and agents of change in the face of a changing climate and resource constraints.

Gender mainstreaming in this project is both gender responsive, by embedding women’s perspectives, and the necessary safeguards and considerations to ensure that existing inequalities are not exacerbated, but also gender transformative, in the sense that it addresses root causes of vulnerability and structural barriers to climate resilience, and challenges the norms around the gendered distribution of labour and constraints in regards to land tenure and participation in community decision-making, which are central to building resilience. Furthermore the project aims to address gendered climate resilience across the household, community and institutional levels. Gender specific vulnerabilities and strengths in regards to climate change resilience have shaped the overall theory of change underlying the project, and planned capacity building activities in regards to gender-responsive climate resilience is integrated across sectoral government institutions, which often operate in silos, by putting the Ministry of Women and Children’s Affairs (MOWCA) at the helm of the intervention, with support from the Department of Public Health Engineering (DPHE), and a proportionate amount of project funds directed at coordination, knowledge sharing and institutional strengthening.

The proposed GCF funded project not only intentionally targets and benefits women, but also considers the intersectional vulnerability to changing conditions, of those beneficiaries facing additional marginalization due to poverty, and social exclusion (religious and indigenous minorities). The project design recognizes that salinization of water and soil has had immediate and profound impacts on women, increasing the significant burden on women’s time from water collection in an area with an acute shortage

of adequate water infrastructure, and the parallel need to build their adaptive capacity in regards to changing environmental conditions, by supporting climate resilient livelihoods and better integration into local value chains, in which women are already playing a growing role.

Although there is an increasing recognition on multiple fronts, both in terms of policy and the interventions of various international organizations, NGOs CSOs and the Government of Bangladesh (GoB), focused on women’s resilience and their critical role in preparedness and recovery from disasters and the necessity of shifting livelihoods towards adaptive options, efforts remain limited compared to the actual and acute needs of women. To address these needs, and get to the heart of these issues, a detailed analysis of the gendered aspects of climate change impacts and vulnerabilities of women and girls has been presented in the Feasibility Study and the current Gender Assessment. The Gender Assessment expands on the information provided throughout the proposal, by providing additional information on the national and local gender context, particularly in regards to women’s access to resources, their role in decision-making and the gendered aspects of local livelihoods, and provides the basis for, and lessons on which, the Gender Action Plan (which is reflective of the overall project design) has been built.

Overall, the project objective is to enhance the climate resilience of women (and by extension, their families and communities), who are in extreme poverty, in two of the most climate change impacted districts of south-western Bangladesh, that are constantly exposed to cyclones, storm surges, flooding and slow-onset salinity. Specifically, GCF resources will be used to enable the Ministry of Women and Children Affairs (MoWCA), with the participation of the Department of Public Health Engineering (DPHE), to implement activities in the context of a national initiative that will empower targeted vulnerable women to become leaders in the adoption of climate change resilient livelihoods and the management of a reliable drinking water supply. That is, resources will be used to effect a significant expansion of safe drinking water through a Rain Water Harvesting (RWH) scheme at the institutional, community and household levels, and will address structural barriers to resilience, by ensuring that water solutions are owned, operated and managed by women. That is, the project aims to create or reactivate Water User Groups (WUGs) and Water Management Committees (WMCs) led by women to manage the drinking water solutions, with technical and financial backstopping support from Local Government Institutions (LGIs) and the DPHE. Resources will also be used to promote climate resilient livelihood options and participation in their associated value chains, for women whose existing livelihoods are particularly vulnerable to salinity ingress. Finally resources will be used to strengthen the capacities of national institutions in regards to gender-responsive, climate-resilient solutions for both water-security and livelihoods.

The primary measurable benefits that will be realized as a result of the GCF investment includes:

- Provide assistance to 25,425 women in the two target districts of Sathkira and Khulna, to pursue climate resilient livelihoods and facilitate associated market linkages, with investment in assets, tools, and training
- Expansion of safe drinking water supply for 68,327 women and 67,783 men, by installing RWH tanks at the household, community and institutional levels (and pond based systems with filtration treatment at the community level).
- Strengthen capacity, coordination and knowledge sharing of national institutions such as MOWCA, DPHE, local government, and their partners on gender-based approaches to climate change adaptation

II. Existing Gender Inequality and Social Inclusion in Bangladesh

Bangladesh has a high level of gender inequality, particularly prevalent in rural areas, which importantly hinders overall development. The life of a woman in Bangladesh is shaped by the patriarchal, patrilineal and patrilocal nature of the social system, with heavily gendered power structures greatly limiting women's roles in the social, political and economic spheres. Although Bangladesh has made significant progress in poverty, human development and gender equality indicators over the last few decades¹, poverty and inequality remains prevalent, and the social status of Bangladeshi women remains very low, especially in rural areas². Central to the issue of gendered inequality, is that Bangladeshi women suffer under a particularly high burden of unpaid work, responsible for a range of essential household functions such as collecting water, providing childcare, and producing half of the food at the household level, yet making up only a quarter of the industrial workforce³.

The severity of gender disparity in Bangladesh persists despite a moderate level of policy formulation and integration of gender issues in social protection measures nationally. Women are disproportionately represented amongst the poor, have considerably less access to formal employment and earn less when employed, while continuing to face high levels of gender-based violence (GBV). These inequalities are further reflected in national health indicators, and although maternal mortality rates have dramatically improved in recent years, and mortality and malnutrition rates for girls are higher than those of boys⁴. The health impacts of climate change, including mortality levels during extreme weather events, and the impacts of water scarcity and exposure to saline water, also disproportionately impact women⁵. Given that Bangladesh is one of the most severely affected countries in regards to climate change, and that women often experience the impacts of climate change differently than men, facing different and often more severe vulnerabilities due to their socio-economic marginalization⁶, addressing the underlying impacts of poverty and gender inequality is both critical, and complex, within the broader challenge of building climate change resilience. The following sections further explore the gendered dimensions of inequality at the national level in regards to social aspects, health, education, decision-making, employment and livelihoods, GBV, access to resources and climate change vulnerability.

Gender Inequality Index

There are several global or international indices in existence that have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).⁷ The GII is a composite measure that shows inequality in achievement between women and men in regards to reproductive health, empowerment and the labour market, while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women, using sex disaggregated data at the national level related to health, access to knowledge

1 ADB, 2010

2 Ferdushi, 2011

3 Kabeer, 2011

4 WHO, 2015

5 Pionetti, 2016

6 Pelling, 2011

7 United Nations Development Programme, Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

and standard of living. According to the UN Gender Development Index, Bangladesh ranks 121 out of 146 countries assessed worldwide. The female Human Development Index (HDI) value for Bangladesh is 0.556 in contrast with 0.599 for males, resulting in a GDI value of 0.927. Bangladesh has a GII value of 0.520, ranking it 119 out of 159 countries in the 2015 index⁸.

While the international rankings provide a snapshot of Bangladesh's measures in gender equality as compared with other countries and show that Bangladeshi women are particularly marginalized, they do not always capture the factors which contribute to that marginalization, nor the complex and changing roles of women in a context of shifting livelihoods and increasing vulnerability to climate change impacts. Nor do they give a deep understanding of the intersections of gender inequality with a range of other dimensions of vulnerability and resilience, which are explored in more detail below.

Social Aspects

One of the root causes of gender inequality in Bangladesh is related to widely held beliefs and norms in regards to the role of women in Bangladeshi society. The mobility of women in Bangladesh varies depending on social status, religious affiliation and whether they live in urban or rural areas. Local religious practices such as 'purdah' (or sexual segregation) practiced by Muslim households (which represent 98% of the population nationally, and over 70% of the households in the target districts) have a significant influence on a women's status, limiting women's involvement and movement in the public sphere, seen as a way to preserve a women's purity, and to maintain the honor of a household⁹. Regardless of religious affiliation however, the practice exists within the broader context of the country's existing patriarchal system, and greatly determines women's roles and mobility, further limiting access to resources (water, energy, food), property, education, and income-earning opportunities, as decision-making and control of resources at the household level are generally in the hands of men¹⁰. Socio-cultural norms not only shape perceptions of the value of women, but also restrict a large proportion of women to unpaid domestic responsibilities, further reducing their productive value in the eyes of Bangladeshi society. These restrictions are felt throughout the social sphere, with limits on women's access to education and healthcare. In 2011, only 54.5% of girls were enrolled in secondary school, while 42% of women aged 15-19 were unable to attend a health center alone.¹¹ The recent local study indicates that only 12% women travel outside of their village alone, and that when they travel other family members such as children (52%) and other female members (18%) usually accompany them, which has important implications in terms of women's access to markets¹². Notably, religious and cultural justifications that lead to behavioral restrictions, are often deeply held not only by men, but also by many women, with aphorisms such as "heaven lies at the feet of the husband¹³" widely believed among Muslim rural women, often resulting in the complete allegiance to the husband's wishes and decisions without challenge. Although these social dynamics are in flux, and there have been important shifts due to economic conditions and opportunities, traditional beliefs regarding the role of women in the household and public spheres remain deeply conservative.

8 ibid

9 Bridges, 2011

10 Bangladesh MoEF, 2012

11 Bangladesh Demographic and Health Survey, 2011

12 Assaduzzaman, 2016

13 Hartman and Boyce, 1983

Rearing children and cooking for all members of the family are seen as the central roles of a woman throughout Bangladesh, particularly in rural areas, and the nature of work a woman performs is principally conducted within the premises of the household. This type of labor remains socially invisible and has little exchange value or impact on woman's decision-making power, reinforcing women's undervalued role in Bangladeshi society. The community consultations, focused on the project intervention areas, confirmed the aforementioned social norms regarding men and women's relationships. Potential project beneficiaries reported local gendered disparities in many aspects of life including education, food, and employment opportunities, with men generally enjoying greater access to resources and benefits than women. It was also reported that family members think a son can provide for them, whereas a daughter cannot, which leads to preferential treatment of the males, and daughters getting married off early¹⁴. According to the women consulted, the main impediment to women's empowerment is society's double standards. In regards to local socio-cultural conditions, participants also said that while the tradition of dowry still prevails, violence against women and child marriage is decreasing in the area because people are becoming more aware. Promisingly, another recent study carried out in the target districts, indicated a changing awareness in regards to the challenges faced by women, with women reporting that if they are financially empowered, they can do anything.⁸ Regardless, inequality remains high, and socio-economic indicators, including health, education, public participation and access to resources and employment reveal the deep disparity which exists between the opportunities and outcomes available for men and women.

Health

Women in Bangladesh face high levels of mortality, malnutrition and poor health outcomes, including particularly serious health hazards in regards to anemia, inadequate nutrition, and pregnancy. Women often experience food deprivation at the household level, prioritizing the nutrition of male household members and children, and nearly one third of women are undernourished.¹⁵ This pervasive gender differential in entitlement of food nutrition and care also leads to a higher death rate of female children over male children.¹⁶ The life expectancy of women in Bangladesh at 60.5 years is also mildly lower than that of men at 60.7 years.¹⁷ As mentioned above, women's social status, and restrictions on free and independent movement in the public sphere, translates to a lack of access to essential health care, and a high maternal mortality rate, at 176 per 100,000 live births.¹⁸

Climate change-induced impacts are already increasing the burdens on the Bangladeshi public health system. The most significant of these impacts include the increased prevalence of climate-related water-borne, vector-borne and food-borne diseases, as well as traumatic injuries and deaths from extreme weather events¹⁹. These problems are borne disproportionately by vulnerable sectors of the population, including the poor, young children, the elderly, people with disabilities and women. For example, more than 70% of the fatalities from the 2004 Asian Tsunami were women, and death among women greatly outnumbered those of men in major cyclone and flooding events in 1991 and 2007.²⁰ This is further discussed on the section below on gender and climate vulnerability.

14 See Annex XIIIc Stakeholder Consultations

15 Ahmed, 2012

16 ADB, 2001

17 Ara, 2002

18 WHO, 2015

19 UN Women, 2016

20 Rahman, 2013

The recent UN Women’s baseline study on the socio-economic conditions of women in three eco-zones in Bangladesh²¹ (conducted in the districts targeted by the project) confirmed that women in the coastal zone suffered from water stress including lack of access to safe water, and exposure to high levels of salinity and the presence of certain heavy metals, such as iron and arsenic. The study found that this lack of access to safe water forced families to drink unsafe water and suffer from a high incidence of water borne diseases including cholera, diarrhea, dysentery and typhoid. Though this lack of safe water impacts the health of all family members, women’s healthcare is at the low end of the families’ expenditure prioritization, compounding health issues.²²

Education

Major progress has been made in Bangladesh in closing the gender gap in school enrollments at both primary and secondary levels, and girls currently outnumber boys in enrollments.²³ Unfortunately, although access to education has improved, learning outcomes continue to be poor, particularly for girls, and the gender gap is significant by the end of secondary schooling. According to the 2002 population census, the male literacy rate was 37% in comparison to 33.4% for women. At higher educational levels the discrimination against women is more profound, with poverty, family beliefs that discourage women from pursuing higher education, and a lack of physical security, resulting in a female enrollment rate at Bangladeshi Universities (including private universities) as low as 22% and the representation of female teachers at 15%.²⁴ Throughout Bangladesh, but particularly in rural areas, a major impediment to participation in secondary school is early marriage and household responsibilities. Poor and ultra- poor families in Bangladesh are more likely to marry their daughters at a very young age (as young as 9) to ease the family's financial burden.²⁵ Discrepancies in education outcomes between adolescent girls and boys, perpetuates gender inequality in a vicious cycle, whereby low literacy and numeracy rates limit the employment opportunities available to women, as well as their role in climate change adaptation processes.²⁶

Political Participation and Decision-Making

The status of women in any society is the cumulative effect of their place in the family, in various social and administrative institutions and within political decision-making structures. In the case of Bangladeshi women, limitations within all these spheres have acted as contributing factors to divest women from the mainstream of political and administrative hierarchies, with women’s participation in political and national movements having been seriously limited, despite the fact that Bangladesh has had female Prime Minister’s in power since 1991. Although, women’s opportunities and public participation in Bangladesh have changed significantly in recent decades, and national leadership coupled with a system of quotas has ensured women’s representation in national and local governments (for example in the legislature 45 seats out of 345, are reserved for women), the meaningful participation of women in politics and decision-making remains low, often because of illiteracy and the limited involvement of women in public life due to

21 UN Women, 2014

22 *ibid.*

23 ADB, 2010

24 Daily Star, March 8th 2008

25 Schuler, 2006

26 CCC, 2009

aforementioned religious restriction such as purdah. Furthermore, it remains a challenge for women in politics to influence public decision making, due to lack of representation, lack of experience and continuing resistance from male family members and colleagues.

Women are poorly represented in planning and decision-making processes in climate change policies, limiting their capacity to engage in political decisions that can impact their specific needs and vulnerabilities.²⁷ There has been increasing recognition in international policy frameworks on the importance of incorporating gender in climate risk reduction efforts. In 2009, the Committee on the Elimination of Discrimination against Women (CEDAW) stated, “all stakeholders should ensure that climate change and disaster risk reduction measures are gender-responsive, sensitive to indigenous knowledge systems and respect human rights. Women’s right to participate at all levels of decision-making must be guaranteed in climate change policies and programmes” and the IPCC’s report in 2014 highlights vulnerability due to climate change due to gender.²⁸ The UNFCCC Paris agreement in 2015 also formally recognized the intersection of climate change and gender equality, but women’s participation in planning and decision-making on climate protection is still very low, even in industrialized countries, and is linked above all to the heavily technical nature and male dominance in key areas of work related to climate risk including energy, transport, and urban planning. This is certainly the case in Bangladesh, where women’s perspectives on resilience are often absent from national conversations.

In regards to women’s role in the domestic sphere, most household activities are done by women, with the highest participation in activities such as house cleaning, child care, cooking and meal preparation and lower but significant participation in household level activities such as tree plantations, dairy farming, and poultry rearing.²⁹ Despite this central role in household activities, women’s decision-making power remains limited, with a recent study indicating that only 31% of household decisions are made by women and that women’s participation rate in choice of crop to be grown, and the buying and selling of agricultural products is 19% and 34% respectively and even lower in decision regarding property at 20%.³⁰

Regardless, women’s central role in household management places them in a pivotal position for adapting livelihood strategies to changing environments. Given that women’s roles in decision-making is higher in areas such as food preparation and distribution, resolving food deficits and household work, women are central in assuring household food security as livelihood strategies shift due to slow-onset impacts such as salinity and are assigned higher responsibility in disaster preparedness particularly in storage of food and water, during rapid-onset disasters. Adding nuance, a context-specific view of women’s role in household decision-making in the vulnerable coastal districts targeted by the project is also available from the baseline assessment of socio-economic conditions carried out by UN Women, and is presented in Table 1 below. The results clearly indicate that that women’s decision-making power greatly limited in all spheres, with higher participation in regards to food distribution and household work (including collection of water).

Table 1: Role of women in decision-making

Sl No.	Type of Decision	Percent
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27 CCC, 2009

28 UN Women, 2016

29 Assaduzzaman, 2016

30 ibid.

1	Food related (Meal preparation, distribution etc.)	86.78
2	Meeting food deficit	33.58
3	Selling assets (land, house, livestock, seeds)	9.40
4	Selling agricultural production (crops, seeds)	6.88
5	Buying household assets (livestock, ornament, trees.)	11.10
6	Buying agricultural production (crops, seeds etc.)	7.35
7	Receive credit from mohajon/relatives/bank/NGO/GO	14.50
8	Agricultural work (crop cultivation, land mortgage etc.)	5.84
9	Household work (Collection of Water, Collection of natural resource etc.)	47.91
10	Household decision making (Engage in new income generating activity, Conceiving a baby, Using savings, ownership of VGD/ VG	11.59
11	Female and children healthcare decision making	16.32
12	Decision making about communication (Female going outside the homestead, going for work, education for children)	11.06
13	Decision making on disaster preparedness/coping/adaptation (Going to a shelter, Engaging in alternative livelihood activity	11.48
14	Other	14.29

Source: UN Women (2014)

Gender, Employment and Livelihoods

In Bangladesh, employment opportunities for women remain importantly limited compared to those for men, with female participation in the labour market at 43.1% compared to 81% for men.³¹ The types of professional occupations are also extremely limited, with women making up only 5.4% of the total among legislators, senior officials and managers.³² In urban areas, the rapid growth of the garment industry has provided a large number of formal sector jobs for women, who comprise of more than 90% of its labor force.³³ The income brought into households from this employment has contributed to changing family dynamics and the greater visibility of women on the daily journey to work in Dhaka, and other urban areas, has also influenced public perceptions of what is possible and appropriate for women³⁴. This demonstrates that shifting economic constraints and opportunities can act as an importance catalyst for changing social norms and attitudes regarding gender empowerment. The trends within overall migration flows also

31 (Bangladesh Human Development Report, 2016)

32 ibid.

33 ADB, 2010

34 ibid.

provides another example of social change in Bangladesh, with the proportion of women increasing among migrants, and women now predominating among migrants of ages 15–25.³⁵ In Bangladesh, a number of government poverty alleviation schemes with a work component exist, specifically targeting women, such as the Food for Work and Rural Employment Opportunities for Public Assets programmes. There are also some gender-specific social safety nets, such as a gender-sensitive old-age allowance, and unemployment benefits available for formal-sector workers. Regardless, women in these schemes, do not always enjoy decent work, as indicated by labour conditions in the textile industry, and tragically illustrated by the Rana Plaza building collapse of 2013, which resulted in the death of over 1000 garment-factory workers.³⁶

In the stakeholder consultations that were conducted, the participants said that men usually hold the power in the family, and that women are in a subordinate position, as they do not earn. It also appeared that a common scenario is that women produce goods at the household level (food, handicrafts) and then hand it over to men, who then market the products, and that women generally do not commute or have access to the earnings from their products. This demonstrates that it is essential to incorporate women into value chains linkages and not just primary production. The women consulted in the target districts confirmed this conclusion, and provided more details on the types of and areas of livelihoods support, which they felt, would be most helpful to them, outlined below:

- Training, start-up cash support, and market linkage support
- An efficient water supply and sanitation facilities
- Support for petty businesses in the market place
- Raising poultry and livestock (cow/goat)
- Tailoring training and support with sewing machines
- Vocational skills in cottage industry crafts and for the garment sector
- Supplementary food aid so that they can cover a month of food insecurity
- Support for children so that they can continue their educations

Women reported the need to gain. The consultation found that currently, women’s primary livelihood options in the target districts are rearing goats and cows, and homestead gardening. Some of the women in the target districts work as day laborers for agricultural work, as well as some tailoring work. There are very few female entrepreneurs and although many women work to supplement their husbands’ income due to poverty, the consultations confirmed that women’s mobility is still very low due to social stigma.

Gender and Aquaculture Value Chains

Women’s involvement in aquaculture around the world varies based on local, socio-economic contexts and in Bangladesh, is influenced by religion and position in family hierarchy³⁷. Shrimp and Prawn aquaculture in the southwest (coastal zones) of Bangladesh has spread rapidly within the last decade, mainly in converted rice fields known as ‘ghers’, and women are involved in various parts of this value chain, though their labour is often unacknowledged and undervalued³⁸. A recent study looking at the gendered division of power and work in aquaculture in Bangladesh, found that both men and women still believe in a traditional gender

35 *ibid.*

36 Kasperkevic, 2016

37 Das, 2016

38 Huq, 2015

division of labor, in which men are responsible for work outside the household (public space) and women for household work (private space), and that although people in the coastal zones see it as undesirable for women to work in the ghers, given that it is often impossible to meet household expenditures with one income, wives are ‘sent’ by their husbands to work in ghers regardless³⁹.

In the aquaculture context of Bangladesh, homestead pond fish culture is one of the strongest candidates for small-scale aquaculture involving women, as women find ponds easily manageable in addition to the workload of daily chores.⁴⁰ This emphasizes the importance of having small-scale, community-level aquaculture interventions as close to beneficiary homes as possible, with literature confirming that women are also involved in catching fish from ghers for family consumption, when located within 2 km.⁴¹ Women are ideal candidates for pond polyculture dissemination, particularly in conjunction with the production of vegetables, as in aquageaponics systems, given they have the primary responsibility for home garden management, already have access to homestead ponds, have mobility constraints, are more vulnerable to malnutrition than men, and play a critical role in ensuring intra-household distribution of food.⁴² Regardless, it is clear that while aquaculture innovations may be targeted at women, in practice, multi-dimensional gendered power relations determine the degree to which women can use and benefit from such interventions⁴³.

For integration of women into broader aquaculture value chains, there has been a wave of projects in Bangladesh with a focus on gender, with a recent reviews finding that projects have increasingly realized the importance of addressing social and gender norms (through awareness training and community theater) and give explicit attention to gender-based constraints, access and control over resources, and decision-making power.⁴⁴ In a review of projects and literature, it is clear that women already manage many routine operations in pond (gher) aquaculture, such as fertilization and feeding, and can even take a leading role in day-to-day gher operations when their husbands are away for other work. Women also participate in post-harvest management including sorting, grading and washing of fish, but their involvement is very limited in fish stocking, transportation and marketing.⁴⁵ It is also clear that when women are hired as labour, gher owners set unequal wages for male and female laborers and find that women do not resist this discrimination, believing it is normal for men to get higher wages than women and because women’s employment options are much more limited.⁴⁶ One review found that women doing aquaculture related work can earn as little as 40% the wage of men⁴⁷. Another study, examining human rights violations in the shrimp industry in the target districts found that female workers in shrimp farms, depots and processing plants not only endure gender discrimination in wage rates, but also that hazardous working conditions, sexual harassment, verbal and physical abuse are widespread⁴⁸. Furthermore, women

39 ibid

40 Das, 2016

41 Huq, 2015

42 Morgan, 2015

43 ibid

44 Kruijssen, 2016

45 Huq, 2015

46 ibid

47 Belton, 2014

48 Alam, 2012

can face lowered prestige in the community as a result of working in shrimp farms⁴⁹. Shrimp grown in ponds or ghers comes from fry that is caught in the wild or supplied by hatcheries, and women and children tend to work in segments of the value chain, which are more flexible and insecure such as fry catching, with women also subject to widespread verbal and physical harassment during fry collection from rivers.⁵⁰ Information regarding women’s involvement in the crab farming value chain is more limited given its relative nascence and scale, however a study focused on the target districts of Satkhira and Khulna found that up to 74% women were directly involved in mud crab farming through participation with their families, and that minority groups of women (Hindu women, and Indigenous women ‘adivasis’) experienced greater freedom to participate in crab value chains than the majority population of Muslim women.⁵¹ Similar to the fish and shrimp value chains, women were involved in applying feed to crabs (100%), while less than 20% were involved in pond preparation before stocking, and about 65% during harvesting, while participation of women in crab marketing was very low, at about 33%.⁵²

These gendered inequalities in the current aquaculture value chains in the coastal zones of Bangladesh arise from women’s limited access to resources, technologies, education, information and skills, which in turn stem from underlying social norms and constraints around work and women’s roles. There is clearly ample space for the women to contribute in the production and income from aquaculture, however it is clear that project interventions, must draw on previous project experience and the knowledge of local constraints and conditions to directly address the barriers facing women. Project teams must be well aware of gender issues and be gender balanced.⁵³ Special care must also be taken to ensure proper working conditions for woman, to secure land tenure arrangements and provide effective grievance mechanisms when subject to harassment and unfair treatment, to increase their skills to participate in high value segments of the value chain such as marketing, and finally to integrate women into sustainable sourcing of stock from hatcheries, as efforts are made to reduce reliance on wild stock.

[Access to Resources](#)

Although civil laws in Bangladesh guarantees a woman’s right to income and property, given the low percentage of women engaged in paid work, the possibility of accumulating capital is seriously limited for women and any income that may be earned by rural women by investing in poultry or livestock is usually spent for subsistence purposes. Additionally, lack of awareness of property rights, illiteracy, and local practices all restrict women from enjoying whatever legal inheritance rights they may have. Generally, access to and control over productive resources is unequal between women and men, including key productive resources, such as land, trees, housing, skills, and extension support. In regards to women’s access to land, one study found that the issue is “not just land ownership, but all that goes with it, including access to institutional credit, training, and extension facilities.”⁵⁴ That is, women are often not considered “farmers” in part because they do not own land, and hence they often miss out on agricultural extension and information about new technologies, even when these relate to types of production in which women

49 ibid

50 ibid

51 Ferdoushi, 2010

52 ibid

53 Morgan, 2015

54 Kelkar, “Feminization of agriculture,” footnote 3, pp. 8–9

have typically predominated, such as vegetable growing.⁵⁵ Clearly this lack of focus on women in agricultural extension, serves to exacerbate existing inequalities in regards to access to land, and highlights the importance of securing land tenure for women.

In regards to access to water resources, there are also significant gender differences, constraints and preferences, reflective of the socio-cultural context. Women are likely to give higher priority than men to the quality and accessibility of water for domestic use, because of their awareness of needs related to cooking, household hygiene, and health, and their responsibility for household water provision. Water Aid conducted a study titled “Assessment of increasing water scarcity in the coast and its socio-economic impacts on poor and vulnerable people” in 2013, which outlined how a lack of safe drinking has a strong negative impact on women in relation to the time required for collecting water from distant, unsafe and unsustainable sources. This heavy unpaid time burden directly affects women’s ability to finish household chores, creates household discord, and perhaps most importantly jeopardizes their ability to focus on any productive livelihood interventions.⁵⁶ Although external actors may assume that extreme-poor women and women-headed households would be likely to seek safe water access points where available, even if at a distance, women in the target districts reported that a long walk to a safer tube well is regarded as a luxury to them. In light of their household work burdens, women cannot waste time collecting safe water, and often resort to pathogen-laden or contaminated surface water, which in turn compounds their vulnerability when they become sick and further impoverished through lost wages and the costs of recovery (including medication).

Gender Based Violence

Gender based violence (GBV) is a common reality in Bangladesh and an important limiting factor on the choices available for women and girls, and on their participation in economic and leadership roles. The high levels of violence, and fear of violence, against women in families and communities remain critical constraints on mobility and quality of life.⁵⁷ The varied forms of GBV to which adolescent girls and women in Bangladesh are exposed, constitute a serious threat of their physical and mental health, personal development and sometimes even their survival. Harassment and intimidation is a common facet of life for Bangladeshi women and girls, throughout the public sphere, with girls reporting harassment on their way to school, and women subject to harassment in offices, in factories, at public transport stands, at railway stations, practicing agriculture and aquaculture and in other common public spaces. This harassment and insecurity often extends to interactions with the police, resulting in women avoiding a range of situations, including markets and employment options, which would increase their exposure. Women consulted in the target districts also mentioned that exposure to GBV is a consideration for them when required to walk to distant water access points.

Gender based violence is also of particular concern in disaster and emergency situations. Global evidence shows that sexual and gender based violence increases during and after disasters, heightening existing vulnerabilities. Given that people are displaced during and after disasters, this displacement can lead to an increase in violence, and the visibility of pre-existing violence, due to over-crowded and unsafe living conditions in evacuation centers, temporary housing and shelters. Furthermore, women staying in shelters

54 ibid

56 CGC, 2013.

57 ADB, 2010

can be exposed to rape, harassment, discrimination and violence, and have limited access to reproductive health services, worsened by the fact that government services such as police and health services may be less effective following disasters, and that medical services already overwhelmed by the emergency do not always meet the needs of survivors of violence⁵⁸. Overall the loss of homes, livelihoods, and community and family protection increases the vulnerability of women to violence, as do increased levels of poverty and scarce resources.

Gender and Climate Change Vulnerability

It is widely documented that women experience the effects of climate change differently than men, both in terms of adjusting livelihood strategies, in their changing relationships to scarce resources and in regards to disasters. There are physical, cultural and social factors, often linked with poverty, that blend in making women more vulnerable to climate change than men. For example, women in Bangladesh are more dependent than men on natural resources threatened by climate change for their livelihoods, with the responsibility to secure water, food and fuel for cooking and heating for their households. It has also been shown that women in Bangladesh face social, economic and political barriers that limit their coping capacity, confronting unequal access to resources and information and cultural restrictions, which limit their mobility.⁵⁹ Climate change effects on health also affect women and girls indirectly through the added burden of caring for sick relatives and, directly, through the additional work and physical effort of collecting water and other resources for their families at increasingly longer distances. Climate change impacts on food production and access also disproportionately affect the nutrition and health of poor women⁶⁰. Finally, recent research has also shown that the strenuous economic conditions created by climate change are leading to an increase in child and forced marriages in Bangladesh, as dowries become cheaper⁶¹. Compelling evidence from this research has shown that child and forced marriages of girls appear to be short term solution designed to ease both the food insecurity and future financial pressures on families exacerbated as a result of climate events. The research concludes that attention to climate challenges must take a much broader focus on social consequences in order to protect the human rights of women and girls in vulnerable communities⁶².

The IPCC suggests that the differentiation of vulnerability to climate change among population groups can be clearly observed in the pattern of vulnerability to natural disasters.⁶³ In general, women have less access to resources that are essential in disaster preparedness, mitigation and rehabilitation⁶⁴ and women and children are 14 times more likely to die than men during disasters.⁶⁵ In Bangladesh, as in global estimates, women are more affected and suffer more during and after disasters than men, exemplified by the impacts of cyclones on women in the coastal areas of Bangladesh. During Cyclone Sidr for example, many of the female casualties in coastal Bangladesh occurred because women, the majority of which are homebound, were busy tending the family livestock when the cyclone struck and could not leave without prior

58 IFRC, 2015

59 UN Women, 2009

60 IPCC, 2001

61 Alston, 2014

62 ibid

63 ibid

64 UN Women, 2014

65 Araujo, 2007

preparations, others died because their traditional clothing (saris) got trapped in trees and other objects while running, and others perished trying to rescue or search for children who could not evacuate fast enough^{66,67}. Furthermore, the cyclone was announced primarily among men, with many women lacking the necessary information to evacuate, remaining at home and facing serious risks.⁶⁸ Disaster preparedness requires decision-making and leadership, but in coastal Bangladesh, women are generally excluded from such roles.⁶⁹ Post disaster stages also take a toll on women. Often, women find facilities for personal hygiene in shelters are inadequate, and with few alternatives, are exposed to urinary tract diseases, may be sexually abused while looking for firewood or reconstruction materials, face deteriorating nutrition status as they eat less in order to offer more food to other household members and they lose the natural resources and livelihood assets they depend upon⁷⁰. Regarding early warning and disaster preparedness, women consulted mentioned having been included in village disaster management committees and have been provided training and necessary equipment, such as early warning flags. The GoB and Bangladesh Red Crescent Society are also rolling out a cyclone preparedness program using community volunteers. However, none of these initiatives has focused on women’s particular needs and have not identified gender segregated preparedness plans and priorities.

Both during disasters and in the face of changing environmental conditions, women’s role in communities is not formally recognized or accounted for in mitigation, adaptation and relief efforts and women’s knowledge about ecosystems and their particular strategies, experiences and skills for coping with water shortages, are often ignored⁷¹. For example, Cyclone Sidr contaminated at least 6000 surface water ponds with saline water, used primarily by women for small vegetable farming and domestic water requirements.⁷² Overall, women and girl’s vulnerability to climate change generally depends on the interaction of three key functions: - exposure (E), sensitivity (S), and adaptive capacity (AC). The exposure is largely determined by the climatic hazards and the extent the women and girls are exposed to cyclones, salinity and sea level rise. The following table provides a summary of the vulnerabilities of women and girls in the context of climate change in coastal areas in Bangladesh:

Table 2: Women and Girls Vulnerability to Coastal Hazards: Sea Level Rise, Coastal Flooding, Cyclone and Tidal Surge, Salinity Intrusion, Waterlogging

<i>Critical elements at risk</i>	<i>Exposure (degree and frequency)</i>	<i>Sensitivity (Low to High)</i>	<i>Deficit in Adaptive Capacity</i>
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66 Kabir, 2016

67 Alam, 2010

68 Kabir, 2016

69 Alam, 2010

70 Second National Communication to the UNFCCC (2012)

71 Dankelman, 2002

72 UN Women, BCAS (2014)



	<i>Cyclone & Tidal Surge</i>	<i>Coastal Flooding</i>	<i>Salinity</i>	<i>Waterlogging</i>	<i>Cyclone & Tidal Surge</i>	<i>Coastal Flooding</i>	<i>Salinity</i>	<i>Waterlogging</i>	
Life	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Less education to understand cyclone early warning; lack of warning system for tidal surge and coastal flooding; less access to early warnings; less places to evacuate during cyclone; tendency to undermine the risks from cyclones and tidal surges; lack of long term predictions of salinity and waterlogging, inadequate facilities for women and girls in public cyclone shelters; lack of women volunteers; lack of gender sensitive rehabilitation; lack of water and sanitation in houses and public shelters during cyclone, tidal surge, coastal flooding, salinity and waterlogging.
Employment	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of diversity of livelihoods; lack of off-farm livelihood skills; reduced options for on-farm livelihoods; cultural barriers in employment in industry sector; limited SMEs to absorb women labour; lack of women with diversified skills in urban sector jobs; poor capacity to enter into skilled service sectors; heavy domestic responsibility; lack of incentives in skilled job outside domestic territory; sole responsibility for child care.
Potable Water	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Very limited number of safe and salinity free water-points in public and private spheres; lack of available water sources during droughts; lack of economic ability for poor women and women headed households to install salinity free water sources; forced to spend long hours to collect water from distant sources; insecurity due to sexual harassment during long walks to collect water from distant sources.

Food Production	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of available varieties of food to produce in salinity and waterlogging context; lack of means to recover food loss from cyclones, tidal surges and coastal flooding; lack of fresh irrigation options; lack of grasses and other inputs for livestock rearing.
Food Preparation	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of fire-wood during coastal flooding, cyclone, tidal surges, salinity and waterlogging; unsafe and saline water for cooking; lack of hygiene during different hazards; lack of food during cyclone and tidal surge; lack of knowledge on food and nutrition standards; lack of storage facilities during hazard onsets; challenge of food preservation in extreme temperatures.
Sanitation and Hygiene	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of number of salinity, cyclone, flooding and waterlogged proof/resilient toilets; lack of hazard proof public toilets; poor public health condition; lack of personal hygiene knowledge.
Core Shelter Maintenance	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Poor maintenance of household assets and housing materials safer from salinity, coastal flooding, waterlogging, and tidal surge; lack of saline free housing materials for durable and cyclone resistant housing; lack of retrofitting materials and capacities to protect house from hazards; lack of financial capacities to prepare hazard proof/resilient house materials.
Child Care	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of means and knowledge to protect children from death, injury, fever, drowning, de-hydration, malaria, pneumonia, and other water-borne diseases.
Reproductive Health	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of knowledge and means for safe births during cyclone, tidal surge, waterlogging and coastal inundation; lack of trained birth attendants in disasters; lack of easy access to MCH clinic and hospitals in disasters.

Girl's Education	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Challenge to continue education of girls during cyclone, coastal flooding, tidal surge and waterlogging; increased role of adolescent girls in domestic spheres during disasters; increasing tendency to early marriage amongst disaster affected households; discontinuation of girl's education; lack of social safety net for girl's continued education.
Marriage and Family	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of social, human, and economic capacity to protect girls forced into early marriage; lack of capacity of poor families to protect divorce as consequence of economic crisis and dowry led consequences.

Source: Compiled by UNDP Bangladesh Country Office from (CDMP, 2009; GoB, 2008; FAO, 2006; GoB, 2006; BAU, 2013; UNWOMEN, 2014(a), (b); Asia Foundation, 2012; BUET, 2103; MoWCA, 2012; BDRC, 2013; WEDO, 2008)

III. Mechanisms to address gender inequality and climate change in Bangladesh - legal and administrative framework

Incorporating gender and gender-sensitive policy and planning is an essential part of effectively and strategically dealing with climate change impacts. Bangladesh has a range of policies in place, which explicitly prioritize gender responsiveness in a variety of sectors impacted by changing climate. For example the *National Agricultural Policy* includes women's access to agricultural extension and their "technological empowerment" and ensuring women's access to productive resources, inputs and services is highlighted in the *National Food Policy*. A key theme of the *National Water Policy* is increased participation by women, including commitments to ensure an enabling environment for women to play a key role in community organizations for the management of water resources.⁷³ Finally, there are policies that directly address the intersection of gender and climate change at the national level relevant to building gender transformative climate resilience, outlined below:

Gender and the Women's Development Policy

In the context of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Beijing Platform of Action, Bangladesh has developed several policies and sectoral strategies to ensure gender equality, including the Women's Development Policy (WDP), 2011 and the National Action Plan (NAP) to implement the WDP. The objective of this policy is to take special measures to enhance the overall safety and security of women and children, including helping them deal with disasters, ensuring rehabilitation services of those affected with special consideration for disabled women and ensuring food distribution and assistance to eliminate bottlenecks created due to extreme climate events and disasters.

Bangladesh Climate Change Strategy and Action Plan (BCCSAP)

⁷³ ADB, 2010

The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) identifies women, particularly in poor households, as an important target group for monitoring and planning to protect livelihoods and achieve objectives for equitable and sustainable growth.

Climate Change and Gender Action Plan (ccGAP)

1. The underlying principle of the ccGAP is the transformative nature of gender-focused interventions and the action plan has the potential to enhance the effectiveness and efficiency of climate change and socioeconomic development responses. The development of the ccGAP followed a participatory process that included in-country meetings, stakeholder consultations involved representatives from several ministries/ government departments, civil society, academia, research institutions, local NGOs and international organizations, as well as a desk review of several key reports, publications, websites, surveys and in-person interviews.
2. The ccGAP integrates gender considerations into four of the six main pillars as identified in the BCCSAP: (i) Food security, social protection and health; (ii) Comprehensive disaster management; (iii) Infrastructure and (iv) Mitigation and low carbon development. The remaining two pillars of the BCCSAP, those of research and knowledge management and capacity building and institutional strengthening, were mainstreamed within the above four pillars as crosscutting topics.
3. Under the food security, social protection and health pillars, emphasis has been given to integrate gender and climate change concerns into policies and national documents concerning the agricultural sector, create an environment to lease land/water bodies to women, ensure crop insurance and/or other safety nets for poor female farmers, access to financial instruments and involvement of women applying alternative technologies e.g. bio-fertilizer and climate resilient cropping practices.
4. Under the Comprehensive Disaster Management pillar, some actions worth highlighting are the development of a gender responsive disaster management policy, increased participation of women in central and local disaster management councils (UDMC/UzDMC), allocating financial resources to address gender and DRR issues, participation of women in community risk assessments, vulnerability and capacity assessment activities, as well as activities to help women and men provide first aid and primary health care as first responders in an emergency.

The National Plan for Disaster Management

This plan recognizes the particular vulnerabilities of women, though in implementation these do not necessarily trickle down into disaster-specific or local plans. The policy calls for incorporating the needs of female internally displaced persons (IDPs) in that it encourages the building of separate facilities where possible, and for the inclusion of women in the management committees of cyclone shelters. In practice, security and privacy concerns continue to deter women from shelters, and there as mentioned above there continues to be evidence of increased domestic and external violence against women taking place during and after the onset of disasters.

IV. Lessons learned from Climate Resilience and Gender Programmes in Bangladesh

Bangladesh has invested significant human and financial resources to both mitigation and adaptation priorities, and continues to improve in programmatic design and practice. In parallel, programmes which tackle gender inequality and social exclusion are led by the Ministry of Women and Children Affairs (MoWCA), which through its ongoing support of the GOB's development initiatives has gained a wealth of experience, particularly relevant to addressing the needs and priorities of rural women and other marginalized communities in the country. One of MoWCA most significant recent efforts is the Vulnerable Group Development (VGD) program, one of GoB's largest Social Safety Net (SSN) programs, providing in-kind transfers with development programs for selected women-headed households experiencing food insecurity. Programs such as these provide useful information in regards to targeting beneficiaries and provide an excellent foundation for integrating climate change adaptation programmes for the country's most vulnerable. Previous interventions and lessons learned suggest that local government financing does not currently directly address the climate change adaptation needs of vulnerable households, and that the schemes and projects of LGIs focus mostly on community level infrastructure development. This emphasizes the urgent need for better coordination and integration of efforts addressing multiple facets of resilience, and requires that the project draw on project/programme experience focused on alleviating gender inequality, as well as focused on building climate resilience. Although a general consensus exists among development professionals that women's economic empowerment improves gender relationship at the family and community levels, it is clear from project experience and stakeholder consultation carried out for the preparation of this project, that this conclusion is conditioned by many factors. In order to achieve a transformative impact, interventions must carefully incorporate lessons learned and design successes from previous interventions.

A review of the lessons learned from recent climate change adaptation programmes in Bangladesh⁷⁴ (CDMP, Coastal Afforestation, RVCC) include the following:

- Capacity building of individuals (both men and women) and community members in climate hotspots is critical to minimize risk.
- Capacity building of the institutions working on climate change adaptation is equally important.
- The generation of knowledge, knowhow and resources (material and money through savings, emergency funds and emergency plans) at the community level, and maintenance of community assets are essential to address immediate emergency needs.
- Ensuring the participation of women, girls, youth, indigenous people, religious minorities, and persons with disabilities in planning and implementation of climate resilience is critical.
- Adaptive economic opportunities for year-round employment and earning opportunities for community men and women are critical for their awareness and livelihood adaptability.
- Livelihood support to vulnerable women and their families needs to be followed up to ensure retention of assets and their productive use.
- The motivation and awareness raising activities should continue for project ownerships. Communities should understand that capacity building should be the prime objective of adaptation and disaster management strategies, rather than relief and response.
- More robust coordination between Government Ministries, as well as between Government Organizations, Non-Governmental Organizations and local government is essential.

⁷⁴ This GCF project is designed based on the lessons of these key projects in past implemented in the similar area, but did not address the gender based vulnerabilities and adaptive capacity.

- Besides preparedness, the capacity to respond in emergencies should be promoted as a community effort, as early response from external actors during disasters is inadequate or slow, and cannot sustain the livelihood strategies over longer timescales, of the inhabitants of the disaster prone area.

Recommendations for addressing gender inequality in the UN Women’s baseline survey⁷⁵:

- Increase access to training for economic activities, which are flood/drought/salinity resilient (as appropriate in the area).
- Maximize the diversification of livelihoods options to increase economic security.
- Increase training in financial skills to plan for crisis and maximize marketing of goods before crisis.
- Promote equal access for women and men to food and nutrition.
- Ensure women’s safety in shelters, latrines and public spaces.
- Ensure access to women’s specific and gender sensitive accessible medical care.
- Reduce women’s burden of unpaid work. Promote assistance from male members of the family with collection of fuel and water.
- Ensure new livelihoods for women do not involve a huge increase in time unless other household members take on other time burdens for responsibilities women currently hold.
- Ensure women’s voices as well as men’s voices are heard at all stages of adaptation and disaster management (from preparedness to recovery) planning.

The Chars Livelihood project (CLP) funded by DFID in Bangladesh, provided livelihood resilience support to poor women in the river islands in Bangladesh. Its 2013 impact study concluded the following:⁷⁶

- Targeting women had a positive impact on their status within the household
- Women from the core beneficiary households expressed that attending weekly social development meetings, helped to develop their confidence to move around the community and visit others.
- There was evidence to suggest greater levels of respect for women in the community and improved intra-household relationships.
- Both males and females from core beneficiary households appeared satisfied that the female member was selected and intra-household relationships were not negatively affected, nor did the target criteria aggravate community harmony.

Another evaluation of a recent BRAC ultra-poor program, showed that:⁷⁷

- A large capital transfer, intensive asset-specific training, and regular follow-up visits by an asset specialist had a significant, transformative impact on the occupational choices of very poor women in Bangladesh.
- Very poor women changed occupational choices from casual day labor to self-employment and increased earnings by 34% relative to the baseline, highlighting the flexibility of women to adopt new types of livelihood strategies.

75 UN Women 2014

76 International Programme Management, 2011: Impact assessment of CLP phase -1

77 Bandiera, 2012

V. Recommendations

Gender Analysis

The gender analysis undertaken at the design phase of this project, forms the basis of the overall gender-focused project design, and acts as a foundation for gender mainstreaming throughout the project's activities and implementation. As projections indicate that climate change will cause less secure means of subsistence, more vulnerability to poverty and hunger, exacerbation of social inequalities (including the gender inequalities described here) and more environmental degradation, it is clear that the poorest and most vulnerable groups in a society will be most affected.⁷⁸ The ability to participate in climate resilient income generating activities by these groups will therefore strengthen their climate change resilience and ability to withstand slow-onset climate impacts such as salinization, as well as recover from disasters. The project therefore provides climate change resilient livelihoods support, water-provision and capacity building, focused on the most vulnerable coastal populations in Bangladesh, and further focused on women, in light of the additional barriers to climate resilience that they face. Ensuring the central participation of vulnerable groups, particularly women, is not only a matter of social justice and respect, but also of responsible and effective project design and implementation. It is also clear from the above analysis that although women and men work together to fulfill the needs and contribute to the wellbeing of their families and communities in the face of changing climatic conditions, they often perform different activities on a day-to-day basis to meet these needs, and in order to integrate gender into climate change projects, it is necessary to recognize the different roles, priorities and needs of men and women, and the ways in which both perspectives are valuable.⁷⁹ It is particularly important to recognize and effectively utilize these gender-differentiated capabilities when it comes to designing project interventions. Recognizing women's invaluable contributions to resource management, while directly addressing the constraints that lead to diminished climate resilience, and facilitating women-led and managed interventions, also moves away from an approach which frames women as simply 'vulnerable,' but rather draws on women's strengths and capabilities.

Directly addressing the gendered dimensions of building climate resilience has therefore been central to project design and this proposal identifies and integrates lessons learned other interventions and extensive consultations to encourage not only gender responsiveness in implementation, but aims for gender transformative results. Furthermore, as discussed herein, and within the Feasibility Study and Environmental and Social Management Framework (ESMF), it is likely that gender equality concerns are not the only marker of exclusion or vulnerability, and it is therefore important to build on and leverage the project's approach to target the most vulnerable beneficiaries, including women, (and women-headed households), youth and children, the elderly, people living with disabilities and marginalized groups, such as religious and indigenous minorities found in the target areas.

In the preparation of this project, UNDP conducted stakeholder consultations with a wide range of stakeholders, including six Focus Group Discussions (FGDs) as part of the feasibility study. One of the key aspects of the feasibility study was to better understand the current gender relationships at the household and community levels. Table 2 above describes the gendered vulnerabilities to coastal hazards, and clearly demonstrates that addressing gender inequality at the household and community levels is essential for building resilience. Deepening this understanding, women and Upazila

78 UNDP Resource Guide on Gender and Climate Change, 2009

79 Secretariat of the Pacific Community, Pacific Gender and Climate Change Toolkit, 2013

representatives were asked in the FGDs to discuss how climate resilient grants, improved drinking water supply and disaster preparedness will impact the gender relationships at the household level. A compilation of the results of the 6 FGD findings is summarized in Table 3 below, which outline the expected changes from the project as described in the FGDs. Results from the consultations are included in full as an additional annex to this proposal.

Table 3: Gender Relations at household level in coastal areas (Baseline and Expected changes)

Dimensions	Male		Female	
	<i>Baseline</i>	<i>Expected Changes</i>	<i>Baseline</i>	<i>Expected Changes</i>
Division of Labor				
<i>Productive</i>	+++++	NA	+	++++
<i>Reproductive</i>	+	NA	+++++	+++
<i>Community/Social</i>	+++++	NA	+	+++
Unpaid Domestic Work				
<i>Drinking Water Collection</i>	+	++	+++++	++++
<i>Care of Livestock and Poultry</i>	+	++	+++++	NA
<i>Cooking and Washing</i>	-	NA	+++++	NA
<i>Child Care</i>	+	NA	+++++	NA
<i>Home Repair</i>	+++++	NA	+	NA
<i>House Keeping</i>	-	+	+++++	++++
<i>Collection of Fuel Wood</i>	+	++	+++++	+++
<i>Purchasing Food</i>	++++	NA	++	NA
<i>Means of Earnings</i>	+++++	NA	++	++++
Time Spent for Unpaid Work	+	NA	+++++	+++
Empowerment				
<i>Decision making about HH asset</i>	+++++	NA	++	++++
<i>Decision making about education</i>	+++++	NA	+	+++
<i>Decision making about marriage</i>	+++++	NA	+	+++
<i>Decision making about health</i>	++++	NA	+++	+++
<i>Decision making about food</i>	+++	NA	++++	NA
<i>Decision making about shopping</i>	+++++	NA	+++	++++
<i>Decision making about divorce</i>	+++++	NA	-	NA
<i>Decision making about sanitation</i>	+++++	NA	+++	++++
<i>Freedom of mobility</i>	+++++	NA	-	+++
<i>Freedom to work outside home</i>	+++++	NA	+	+++
<i>Decision making about livelihoods</i>	+++++	NA	++	++++
<i>Control over money earned</i>	+++++	NA	++	++++

Project Design and Implementation

The project design has considered various lessons and recommendations from previous interventions outlined above, and incorporates project components and actions to address them. Overall, the project aims to create a paradigm shift that transforms extreme poor women in coastal Bangladesh from primarily a vulnerable group that suffers disproportionately from climate change, to agents of change in climate change adaptation, with greater access to resources and productive assets. It does so firstly by not only targeting women as primary beneficiaries of the intervention, but also addressing their

unpaid burden of work through water provision, the collection of which can take 2.5 hours for women in the target districts. Furthermore, livelihood interventions supported by the project are not only climate resilient, chosen based on their resistance to increasingly saline conditions and vulnerability to extreme weather, but also able to provide significant economic gains, as well as the opportunity to better integrate women into value chains which are already being pursued in light of changing environmental conditions. The project will also address the unequal gender relations in the targeted communities, recognizing that livelihood strategies, which may push the boundaries of what is considered appropriate work for women, require parallel efforts in community sensitization, norms and behavior change, as well as ensure gender-responsive training and working conditions. The project aims at not only ensuring equitable access to resources, services and technologies for climate livelihoods, but also embeds safeguards for land tenure arrangements and community ownership, such as ensuring that water user groups are led by women and that land tenure support in the form of a land lease is provided for community groups. Finally, the project addresses the need for coordination and institutional capacity building at the intersection of gender-transformative climate change adaptation. Overall, the strategy and action areas are based on an empowerment approach for women and consistent with the GoB's gender strategy and action plan, aiming to transform gender relations in the target communities. The collaborative relationship between UNDP and the MoWCA, with the integration of other relevant government agencies such as the Department of Public Health Engineering (DPHE), brings valuable experience, country ownership and the cross-sectoral perspective required to ensure the success of this approach.

Overall, the gender analysis reveals the following key elements for gender-transformative project design:

Increasing Women's Skills and Capacities: A comprehensive adaptation strategy that engages women directly in decision-making and management of resources, and builds skills for the successful pursuit of climate-resilient livelihoods is the key to this project. The project components on livelihoods support and market linkages, and management of a reliable potable water supply have been designed to improve women's climate resilience by developing their awareness, technical skills, and resource management capacities regarding various facets of adaptation. Women's existing knowledge of homestead food production will be leveraged, developed and scaled-up in the support of homestead gardens, plantations, sesame cultivation and hydroponic gardens, acknowledging and enhancing women's central role in ensuring household and community food security. This, coupled with skills in managing a safe water supply, through the creation and reactivation of women's groups responsible for planning, operation and maintenance will in turn contribute to increased agency, and improved health and wellbeing of women and their families, resulting in lower incidence of disease and improved intra-household food distribution. Women's already growing role in aquaculture value chains will be supported through the promotion of skills in climate-resilient crab farming, and market linkages in feed processing and crab hatcheries, ensuring training is given in a gender-responsive manner, and ensuring good working conditions for women. Developing women's skills in management and O&M of water solutions, choice of economic options, contingency planning for livelihoods and disaster management are all identified as key areas for capacity building in regards to climate resilience.

Increasing Women's Economic Opportunities: A key aspect of promoting women's empowerment in dealing with climate change induced risks is expanding women's economic opportunities, already limited in the target districts and further threatened by climate change. Through the introduction and scale-up of climate resilient activities and applied technological options for market linkages, as well as through water provision, women can manage critical resources, gain access to assets and increase their savings over time. This practical support is essential for food security, safe year-round water access and

diversified income opportunities, which will bring higher economic gains in the short and long terms. Women will be supported in the form of necessary assets and infrastructure, capital, skills and linkage to markets. The support for access to water will further contribute towards women's resilience and economic gains by reducing the burden of unpaid work, expanding productive time to engage in new income earning opportunities and reducing the costs of care and lost time due to reliance on unsafe water supplies.

Increasing Women's Voice and Agency: Strengthening women's voices and increasing their agency brings extensive resilience dividends, not only for women themselves, but for their families and communities. The project will attempt to remove the multiple barriers to women's participation and provide opportunities to empower women socially. Women will be supported in participating in discussions on the situation of their families and communities and identify needs and gaps in coping with climatic conditions and the means to gain resilience. Women's awareness and skills in regards to managing climate change impacts will be enhanced to enable them to participate in community decision-making processes and to take action related to livelihoods, water management and overall wellbeing. Women's particular needs will be addressed, in terms of designing gender-responsive training and interventions and their active engagement will be ensured to enhance the effectiveness of the programme. The project thereby aims to enhance women's social capital and strengthen women's social networks, enhancing the collective capacity for forecasting, and undertaking contingency planning for climate resilient livelihood shifts. A climate change literacy integrated livelihood learning package will be introduced to enhance their knowledge of possible climatic shocks and methods of adaptation. The overall aim is to support women of targeted beneficiary families to become active agents in livelihood enhancement, disaster preparedness and management, and water management within their communities.

Creating an Enabling Environment for Women's Advancement: The project also goes beyond focusing interventions towards women beneficiaries, but recognizes underlying norms and social constraints, which may contribute to gendered vulnerability to changing climate conditions. The active involvement of women in planning, implementation and monitoring has the power to shift community attitudes and behavior towards women's status and roles, eventually creates an enabling environment for women to thrive. The project implementation strategy will address women's needs, while ensuring men's cooperation, and will ensure participation of both women and men in adaptation planning, implementation and monitoring of project outputs. Sensitization activities will take place, both embedded in training activities and through community theater, to promote an environment in which the target communities are supportive of women working with men, and encouraged to raise their voices against discrimination and violence against women/girls. The monitoring, reporting and verification of activities will ensure women's participation and benefits in order to reduce the resilience gender gap. Awareness raising programmes, capacity development of stakeholders from the community level to the institutional level and management systems put in place will aim at transforming existing women's development and social safety net programmes (i.e. Vulnerable Group Development) programme to deliver enhanced gender equality results within the climate change adaptation context. The project draws on lessons learned from previous interventions, and aims to integrate women from the project level, as primary beneficiaries, to the institutional level working on building the gender responsiveness of government institutions, across project intervention components.

Proactively Addressing Challenges: There is the potential, in the process of challenging and shifting of social norms and traditional gendered power relations, that interventions may raise social conflict. Project experience in Bangladesh shows however that social protection and micro finance programmes targeting women have had positive outcomes for household wellbeing, and considering that women

are among the poorest and most vulnerable segments of the population, targeting women is good for programme efficiency. Overall, a positive environment has been fostered in Bangladesh regarding gendered targeting in poverty-focused programmes run by the GoB and NGOs, and although there remains much progress to be made, negative attitudes towards women working outside the home are gradually diminishing with project efforts and changing socio-economic constraints. Regardless, there is some risk that gender transformative interventions will increase community conflict and Gender Based Violence (GBV) due to challenging community gender norms and targeting women as primary beneficiaries of project interventions. Addressing this directly when designing the livelihood interventions, a balance was considered between providing opportunities that would be considered suitable for, and preferred by, women with an expansion of opportunities in value chains in which women are already participating, but are often subject to unfair or unsuitable working conditions. This is particularly pertinent in the aquaculture value chain, for which additional skills and conditions are required to have access to fair and equitable economic opportunities, which build climate resilience. Better integration of women in these types of value chains, such as crab farming, has a strong potential for transformative change, and will be accompanied by community sensitization activities addressing norms around “appropriate” work for women. Finally, the unpaid burden of work has been central in project design, and in the site selection of both water provision and livelihoods support, with additional attention paid to integrated community involvement and norm change. Finally, a robust, gender-sensitive grievance mechanism will be put in place, which will allow beneficiary women to report any incidences of social conflict or possible increase of GBV arising from their involvement in project activities.

Beneficiary Selection: The project targets the most vulnerable areas and beneficiaries, particularly women and where appropriate, adolescent girls, who are disproportionately affected by the loss of productivity or livelihoods and the growing drinking water insecurity, due to observed and projected climate change induced salinity impacts. As such, a combination of observed and projected salinity impacts, land use changes and elevation models, screening for livelihoods that are currently non-climate resilient, and socio-economic vulnerability was used to identify target areas and formed the first criteria for beneficiary selection. The project components work holistically to reduce the unpaid work burden of beneficiary women, by targeting women for water interventions who do not already have access to existing sources and live the farthest from existing water points, while also addressing their economic constraints through livelihood interventions. The project will then further refine the beneficiary selection, through consultations with targeted communities and local government institutions, to identify households that face intersectional marginalization, including the poorest households with the least capital and assets to pursue adaptive livelihoods, female-headed households, households headed by adolescent girls that have been married early and are solely responsible for household income, households with disabilities or chronic illness, and will ensure that households of ethnic and religious minorities are represented proportionately among beneficiaries. The project will be careful to not target adolescent girls for livelihoods support, unless pre-maturely married and solely responsible for household income, in order to ensure that girls are encouraged to stay in school. This process will be externally monitored by the PMU. Additionally, orientation meetings will be arranged in the project areas and will disseminate the project objectives and the importance of the role of women and marginalized groups in community development, including in climate change adaptation, and will ensure clarity and transparency of the beneficiary selection criteria. The project will actively involve men and local level leaders as key stakeholders in the stakeholder workshops/dialogues/meetings, in livelihoods support training and in disaster management committees, in parallel with social awareness raising activities. Again, a tiered grievance mechanism will be established and available to target communities, to signal issues with beneficiary selection if they arise.

Gender-Responsive Grievance Mechanism: As mentioned above, a key element of the project is the establishment of a conflict-sensitive, gender-responsive and inclusive Grievance Redress Mechanism (GRM), to minimize possible conflict and to address it, if it occurs. The DFID Funded project Strengthening Government Social Protection Systems for the Poor (SGSP) is supporting a pilot grievance mechanism with Manusher Jonno Foundation (MJF), a national NGO, which will conclude in August 2017. In this context, MJF recently conducted a baseline survey of accountability of 10 Social Safety Net (SSN) schemes in selected areas, confirming the challenges ahead for establishing and mainstreaming grievance mechanisms at the national level, but also gaining valuable insight into how accountability can be approved. The grievance mechanisms piloted under this program are already facilitating demand-driven accountability of social protection programmes, and demonstrate a clear and distinctive role for civil society. MJF will use this experience to advocate for a greater participation of civil society and to embed lessons learned on grievance mechanisms within government systems. Furthermore, UNDP Bangladesh has also recently completed a Situation Analysis Report of Grievance Redress Systems in Bangladesh, which will also refine the implementation of the project-level GRM. The GRM is described in detail in Annex VIb - Environmental and Social Management Framework (ESMF).

VI. Proposed Gender Action Plan

The purpose of a Gender Action Plan is to operationalize the constraints and opportunities for women and men that were identified during the gender analysis, towards fully integrating them into the project design, providing the framework for a gender-responsive and socially inclusive project. In addition, specific indicators are also proposed to measure and track progress on these actions at the activity level, which can be incorporated into the detailed M&E plan which will be developed at the start of implementation, and provides concrete recommendations on how to ensure that the degree of gender-responsiveness and transformation (including collection of sex and age disaggregated data) continues to be measured throughout implementation. For each of the activities of the project directly related to gender actions that have been included below, a gender specific budget has been allocated as a subset of the overall project budget, shown below. Furthermore, it is recommended that the project take into consideration gender and social inclusion measures outlined above and these measures are tailored specifically for a Bangladeshi context. In order to do this, the following approaches are strongly recommended:

Overall:

- Increase women's participation in decision-making (contingency planning for disaster and climate resilient livelihoods, water provision, disaster preparedness committees, early warning system).
- Account for differing needs of women and other marginalized groups in building climate resilience.
- Identify gaps in equality through the use of sex and age disaggregated data, enabling development of action plans to close those gaps, devoting resources and expertise for implementing such strategies, monitoring the results of implementation, and holding individuals and institutions accountable for outcomes that promote gender equality.
- Include all stakeholders involved in the project to develop awareness / trainings aimed at drawing attention to the implication of climate resilience adaptation and gender equality.
- Undertake community dialogue in relation to gender and social inclusion in climate resilience.
- Include a Gender Specialist position to implement gender related activities and monitor outcomes.

For Targeting:

- Targeting of female-headed households and households facing intersectional marginalization.

- Ensure women are within 1 km of water provision infrastructure or 2km of community livelihood interventions, and when beyond that radius, provide household based options to account for mobility restrictions and the unpaid burden of work.

For Trainings:

- Provision of women trainers and women-exclusive training sessions, including flexible times, and provision of household training for women-headed households as required.
- Integration of men and community elders in community trainings that addresses women's participation, and norms around appropriate work for women, as well as mobility outside the homestead.

For Norm Change:

- Recognize the norms and restrictions on women's participation and establish an environment conducive to participation (committees involving men and women, girls and boys).
- Gender norm change programs in target communities including households sensitization activities, which encourage family members to help reduce women's unpaid burden of work, including men's involvement in child care and address the issue of 'appropriate' work for women.
- Promote positive social norms (community awareness and orientation on role of women and girls in general and in climate adaptation in particular) through training sessions and separate community theatre-based activities.

For Livelihoods:

- Analysis of the gendered division of labour (gender-differentiated responsibilities, and needs).
- Ensuring that working conditions are gender responsive at the homestead and community levels
- For hatcheries and factories: segregated sanitation, ensuring equal pay for equal work, and access to the administrative, technical and managerial positions.
- Promote advocacy and awareness regarding gender-based violence, in value chains and within work places, and in water collection.
- Provide gender ombudsmen for complaints related to sexual harassment and other forms of GBV.
- For household and community level agriculture and aquaculture based livelihoods: Consider Shaded ponds, shallow water depth, and proximity to homestead.

For Ownership of Assets:

- Enhance women's control over productive assets (finance, productive skills, land and technology) through women led groups and community land tenure arrangements.
- Training in land rights, fair working conditions, and negotiation.
- Monitoring of productive assets and revenues, to ensure that revenues are kept in the hands of women and targeted beneficiaries.

For Market Integration:

- Access to finance, financial management training, and market prices for women.
- Conservation training on managing wild stocks, and alternatives to mangrove fuel wood, given that women are often the collectors of wild crab fry and fuel wood from the mangrove areas.
- Give preference for employment in crab hatcheries.

For Grievances:

- Adoption of gender sensitive (and marginalized group sensitive) grievance mechanism, which allows women easy and unrestricted access, including provision of female GRM focal points.

For Continuous Learning:

- Take a continuous learning approach that incorporated the perspectives and experiences of women and refined interventions with the collection of sex-disaggregated data.
- Research on the underlying gender-based social dynamics and preferences related to technology adoption (for both water and livelihoods) to avoid project failure and to ensure that women can benefit from resources/assets made available to them.
- Monitoring of changing power dynamics and attitudes at the intra-household and community levels and monitoring possible increase in conflict as a result of project interventions

For Institutional Strengthening:

- Improve institutional capacity, accountability and oversight (capacity of project executing and implementing agencies in addressing gender issues in climate change programming).
- Build on the projects, structures and initiatives being rolled out by the GoB and other development partners, in order to maximize the use of resources, and for greatest efficiency and effectiveness.
- Assess how gender is currently being mainstreamed in differing Ministries and sectors, to most effectively develop needs assessments, enable planning, and be effective in monitoring and evaluation.

Objective	Actions	Targets and Indicators	Responsible Institutions	Allocated Budget (USD)
Output 1: Climate-resilient livelihoods, focusing on women, for enhanced adaptive capacities of coastal agricultural communities				
Activity 1.1: Enterprise- and community-based implementation of climate-resilient livelihoods for women	<p>1.1.1 Participatory mapping for the portfolio of climate-resilient livelihood options;</p> <p>1.1.2 Development of livelihood profiles based on the community livelihood risk and adaptation assessment and selection of beneficiaries (Utilize ActionAid women’s resilience index);</p> <p>1.1.3. Formation and reactivation of 1017 Women Livelihood Groups (WLGs) based on the livelihood profiles (coordinating with Water User Groups – WUGs – under Output 2);</p> <p>1.1.4. Procurement of inputs, assets and tools for adaptive livelihoods for women livelihood groups (for 176 crab farming; 4 crab nurseries; 18 crab feed processing; 61 aqua-geoponics; 189 homestead gardening; 410 hydroponics; 114 Sesame; 45 plant nurseries);</p>	<p>Baseline: 0 Target: 100% of women-headed households in targeted wards</p> <p>Indicator(s):</p> <ul style="list-style-type: none"> Number of women and women-headed households in targeted wards with improved assets and income from climate resilient livelihoods Sex and age disaggregated data on success of livelihood adoption⁸⁰ 	<p>Union Parishad DWA MoWCA</p>	<p>20,000</p> <p>10,100</p> <p>101,700</p> <p>4,249,488</p>

⁸⁰ Sex and age disaggregated data will be collected as part of the impact evaluations of the project

	<p>1.1.5 ToT approach and community sensitization/awareness for WLGs (involving WSCs/LGIs/MoWCA staff in 39 Unions) on skills development on climate resilient technologies, best practices and norms, sustainable management practices, and O&M of resilient livelihoods (in coordination with BFRI for aquaculture interventions);</p> <p>1.1.6 ToT approach for WLGs to support business skills development resulting in marketing and financing plans for the resilient livelihoods.</p>			23,400
				291,850
Activity 1.2: Strengthened value-chains and markets for alternative, resilient livelihoods development	<p>1.2.1. Participatory, climate-risk informed, value-chain development planning among WLGs, linking with value-chain actors;</p> <p>1.2.3. ToT based technical training, incorporating climate risks, for operation and management of value-addition technologies and facilities (hatcheries);</p> <p>1.2.4 Development of a Codes of Practice for sustainable production and management of small aquaculture as climate change risks evolve;</p> <p>1.2.5. Establishment and facilitation (through workshops and networking events at union level to form PPIs) of the PPIs at Upazila level to enable replication and scale of resilient livelihoods;</p>	<p>Baseline: 0 Target: 50% Indicator(s):</p> <ul style="list-style-type: none"> Number of women with improved access to markets <p>Baseline: 0 Target: 50%</p> <ul style="list-style-type: none"> Number of women with improved access to finance 	MoWCA Upazila Parishad Union Parishad	10,170
				11,604
				108,000
				975

	<p>1.2.6. Training of Upazila and District level staff (MoWCA, Department of Agriculture, Department of Fisheries, LGIs) on supporting PPIs to upscale resilient livelihoods;</p> <p>1.2.7. Capacity building workshops and networking events for WLGs, value-chain actors, and FIs to promote access to finance linkages for sustained resilient livelihood and value-chain investments.</p>			10,000
				29,250
Activity 1.3 Improving capacities of communities and institutions for sustained, climate-risk management and monitoring for adaptive livelihoods	<p>1.3.1. Awareness and training through 101 workshops for women groups, value-chain actors, and WSC/LGI staff on implementation of climate risk reduction strategies;</p> <p>1.3.2. Formation of women and girl volunteer groups and (one per ward) and ToT based training on dissemination and delivery of actionable early warnings (in coordination with CPP);</p> <p>1.3.3 ToT based training, learning exchange, and advocacy for DMC staff, Union level CPP volunteer groups, BRCS, and MoDMOR staff to enable replication of the volunteer mechanisms across other wards and Unions</p> <p>1.3.4 Development of climate-risk informed social audit protocol and toolkits for participatory monitoring and evaluation of resilient livelihoods;</p>	<p>Baseline: 0 Target: 75% Indicator(s):</p> <ul style="list-style-type: none"> Number of women participating in training on implementation of climate-risk reduction strategies and on results monitoring of livelihoods 		10,100
				288,903
				39,000
				19,200
				160,000

	1.3.5 ToT based training for WLGs and institutional staff (LGIs/DWA) on results monitoring of livelihoods in light of evolving climate risks;			
Output 2: Gender-responsive access to year-round, safe and reliable climate-resilient drinking water solutions				
Activity 2.1: Participatory, site-specific mapping, beneficiary selection, and mobilization of community-based management structures for climate-resilient drinking water solutions	<p>2.1.1 Consultations, in light of the selection criteria, to identify beneficiaries HHs, raise awareness, and plan for distribution of access to proposed drinking water solution systems in light of climate change risks;</p> <p>2.1.2 Participatory mapping, vetting, and siting of drinking water supply systems (based on site-specific assessments conducted during design);</p> <p>2.1.3 Formulation/reactivation/facilitation of WUGs and WMCs (synergizing with WLGs in Output 1);</p>	<p>Baseline: 0 Target: 50% Indicator(s):</p> <ul style="list-style-type: none"> Number of women participating in mapping and planning of installation and management of RWH tanks 	<p>MoWCA</p> <p>Department of Public Health Engineering</p> <p>Sub-contracted NGOs (from enlisted vendors)</p>	<p>11,488</p> <p>891</p> <p>15,825</p>
Activity 2.2: Implementation of climate-resilient drinking water solutions	2.2.2. Site preparation and construction of 13,323 household RWH systems including storage tanks, roof catchments, and conveyance elements;	<p>Baseline: 2hrs Target: <1hr</p>	<p>MoWCA</p> <p>Department of Public Health Engineering</p>	<p>1,769,831</p> <p>106,892</p>

<p>(RWH at HH, community and institutional level)</p>	<p>2.2.3 Site preparation and construction of 228 community-scale RWH systems including storage tanks, roof catchments, and conveyance elements;</p> <p>2.2.4 Site preparation and construction of 19 institutional-scale RWH systems including storage tanks, roof catchments, and conveyance elements;</p> <p>2.2.5 Site preparation and construction of pond embankments and installation of filtrations systems at 42 ponds;</p>	<ul style="list-style-type: none"> Time saved by women in collecting and carrying water, due to implementation of drinking water solutions 	<p>Sub-contracted NGOs (from enlisted vendors)</p>	<p>13,088</p> <p>312,271</p>
<p>Activity 2.3: Community-based, climate-risk informed Operation & Maintenance (O&M) and management of the resilient drinking water solutions</p>	<p>2.3.1. Facilitation of WUG and WMC meetings for yearly, adaptive water distribution and management planning in the face of a changing climate</p> <p>2.3.2 Awareness raising and capacity building for HHs, water user groups, WMCs on climate change and disaster risk management for water solutions</p> <p>2.3.3 Development of fee-based, three-tier O&M plan including identification of O&M needs, financing sources, and technical support</p> <p>2.3.4 ToT based technical training on operations, maintenance and use (including water quality monitoring, system condition assessment, end-point quality control) for HHs, water user groups, WMCs, technicians/caretakers, LGIs, and DPHE staff</p>	<p>Baseline: 0 Target: 50% of beneficiaries are women Indicator(s):</p> <ul style="list-style-type: none"> Number of women with awareness and training in climate risk informed management of water solutions 	<p>MoWCA</p> <p>Department of Public Health Engineering</p> <p>Union Parishad</p> <p>Sub-contracted NGOs (from enlisted vendors)</p>	<p>41,260</p> <p>150,037</p> <p>39,885</p> <p>45,953</p>

	2.3.5 Implementation of community-based and three-tier system for water availability and quality monitoring and operations & maintenance (including provision of water quality monitoring tool kits, caretaker costs, and O&M support)			560,461
Output 3: Strengthened institutional capacities, knowledge and learning for climate-risk informed planning and management of livelihoods and drinking water security				
Activity 3.1: Strengthen MoWCA and LGI technical and coordination capacities for design and implementation of gender-responsive climate-resilient coastal livelihoods	3.1.1. Development of and training (ToT approach) on climate risks and impacts and adaptation scenarios for coastal livelihoods	Baseline: 0 Target: N/A <ul style="list-style-type: none"> Evidence of policy/programs in other sectors integrating gender and climate change 	MoWCA Department of Public Health Engineering	144,672
	3.1.2 Development of and training (ToT approach) on tool kit for gender-responsive, adaptive livelihoods planning for the Southwest coast			125,000
	3.1.3 Development of 'Gender Sensitive Climate Change Action' Training Module and ToT for gender focal persons in across key ministries			75,000
				100,000

	3.1.4 Training and Mentoring of coordination capacity for DWA/ MoWCA to integrate gender and climate change across policy and programs for other sectors.			
Activity 3.2: Strengthen DPHE capacities for climate-risk informed management of drinking water solutions across the Southwest coast	<p>3.2.1. Development of and Training (ToT) on climate risks and scenario modelling for drinking water needs across the southwest coast.</p> <p>3.2.2 Establishment of a regional database for mapping of water supply sources and existing/planned water supply infrastructure;</p> <p>3.2.3 Technical capacities for R&D wing of DPHE (training and field-based studies) for innovation and design of climate-resilient water solutions across the coast, in coordination with technical institutes.</p>		<p>DWA</p> <p>MoWCA</p> <p>Department of Public Health Engineering</p>	<p>35,000</p> <p>20,000</p> <p>61,250</p>
Activity 3.3 Establish knowledge management,	3.3.1. Codification of knowledge, good practices, tools, and approaches such as climate risk and scenario analyses, tools for climate-resilient livelihood and drinking water solutions, and best practices and lessons		<p>DWA</p> <p>MoWCA</p>	<p>30,000</p> <p>40,000</p>

<p>learning and M&E mechanisms to promote long-term, adaptive capacities of coastal communities</p>	<p>3.3.2 Integration of knowledge and tools into training and informational modules of government and technical institutes;</p> <p>3.3.3 Establishment of a web-portal, co-hosted by MoWCA, for dissemination of climate and gender related knowledge, tools, and adaptation practices</p> <p>3.3.4 Design and implementation of ‘Adaptive Learning’ for young boys and girls through school- and community-based behavioural change communications;</p> <p>3.3.5 Implementation of monitoring and evaluation framework including: (i) baseline climate risk and vulnerability assessments (Incorporate ActionAid women’s resilience index); and (iii) impact evaluation to quantify project impacts.</p>	<p>Baseline: 0</p> <p>Target: 50% of beneficiaries are girls</p> <p>Indicator(s):</p> <ul style="list-style-type: none"> Number of girls and boys with increased awareness through ‘Adaptive Learning’ training through school and community-based communications 	<p>Department of Public Health Engineering</p>	<p>12,500</p> <p>60,000</p> <p>100,000</p>
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Annex XIII (d) – Gender Assessment and Action Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

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**Part II: Gender and Social Inclusion Action Plan:
(Project/Program Level)**

Gender Background

The World Economic Forum has recently published a report on Global Gender Gap captioned “The Global Gender Gap Report 2017²”. According to the report, Bangladesh ranks 47th among 144 countries in Global gender Gap index 2017. In 2016, Bangladesh was at the 72th position. Notably, the report measures only women's disadvantage compared to men's. The report is attached (file Name: WEF_GGGR_2017).

Bangladesh leads among the South-Asian countries in gender gap index 2017. Maldives comes second after Bangladesh among South-Asian countries with its ranking at 106th position. Pakistan is at the bottom in the region whose ranking is 143rd. India, Sri-Lanka, Nepal and Bhutan have ranked 108th, 109th, 111th and 124th respectively.

The report ranks countries by calculating gender gap between men and women in specific four key areas: political empowerment, economic participation and opportunity, educational attainment and health and survival. Key findings from the report are shown in the table below:

	% Female	%Male	Female to Male Ratio
Economic participation and opportunity			
Labor Force Participation	45.10%	83.30%	0.54
Estimated earned income (PPP, US\$)	2,364	4,776	0.49
Professional and Technical Workers	29.10%	70.90%	0.41
Educational Attainment			
Literacy Rate	69.90%	75.60%	0.92
Enrollment in Primary Education	95.10%	86.10%	1.10
Enrollment in Secondary Education	61.10%	53.60%	1.14
Enrollment in Tertiary Education	11.40%	15.40%	0.74
Health and Survival			
Healthy Life expectancy (years)	62.90	61.90	1.02
Political Empowerment			
Women in ministerial position	6.30%	93.80%	0.07
Years with female head of state (last 50 years)	23.6	26.4	0.89

Cookstoves and Gender

Bangladesh faces acute shortage of energy. Renewable energy constitutes less than 1% of total generation capacity. When it comes to cooking, use of clean energy is almost non-existent. Out of the total 30 million households in Bangladesh, about 90% use traditional biomass fuels such as firewood, cow-dung, and agricultural residues for cooking in low-efficiency stoves. Cooking in these low efficiency stoves has multiple economic, social, environmental and health impacts. In the traditional rural society of Bangladesh, women are responsible for cooking and collecting firewood for this purpose. In a land-scarce country like Bangladesh, supply of conventional sources of cooking energy (firewood, straws, dry leaves etc) is depleting. It has become difficult than that of the past to collect firewood. It is quite rare at present to gather these cooking fuels for free. Now people mostly have to buy firewood putting extra pressure on their family expenditure. In addition traditional cook stoves (TCS) harm the tin roof of the house and result in higher fuel use increasing financial burden for HH. In practice, poor households still resort to collecting these fuels which often causes security hazards. Numerous newspaper reports have shown how women and girls become victims of sexual assaults and rape when they venture out to collect firewood. With regards to health, the adverse impacts are more serious. According to the empirical data derived from gender responsive social assessment for RERED II undertaken in 2012, the smoke from the TCS cause respiratory problems for women and children. Moreover, deposition of shoots in the kitchen, makes cooking utensils dirty

¹ Template is adopted from the Asian Development Bank and further elaborated by the GCF

² http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

making cleaning difficult, which mostly fall on the female members. Thus, an improved cook stove is a welcome change for the female members of a household.

There are many advantages in Improved Cookstoves (ICS) compared to the Traditional Cookstoves (TCS), which are known to produce high levels indoor air pollution (IAP). High Air pollution levels are harmful for household members. The air pollution impacts women more; as women more than men, are involved in cooking within the household and stay indoors for longer periods. Younger children are also impacted more; as they tend to stay with the mother. In a recent study by IDCOL³, it is shown that the median values of PM10 and PM2.5 are lower by 73 and 48 ($\mu\text{g}/\text{m}^3$) respectively, for the Households (HHs) with ICS; compared to Households with TCS. The CO level in ICS HHs is almost 90% lower compared to the TCS households. Black carbon which is a SLCF, was found to be lower by 12 $\mu\text{g}/\text{m}^3$ (i.e., by about 50%). These lower levels for all the pollutants (PM10, PM2.5, BC, CO) are statistically significant at 95% confidence level. The lower pollution levels in ICS HHs translate to better health outcomes for the members of the HHs. The Improved Cooking system has some positive impacts on the lives of its users, for example due to their higher fuel efficient up 50% fuel can be saved which reduces HH expenses and time can be saved due to faster cooking. Even when fuel is collected free, less use of fuel saves time for collection. Saved time can be available for education, recreation and on other useful activities within the household. Women in a household are the most important beneficiaries of this ICS technology. The IDCOL study also found evidence for inter-household spread of IAP. This finding indicates that total ICS coverage of a given area will lead to lower IAP concentration in all HHs. Attempt needs be made to make the 100% of the HHs in a cluster to be covered by ICS. POs should also employ female workers (i.e., up to 40%) in the awareness raising program creating jobs for female community members.

Gender Action plan

However, the POs involved in RERED II project find that the advantages of ICS are not well-known to people in general and women in the vulnerable households in particular. Previously, many poor and vulnerable households often could not afford to make one time payment for buying the ICS. With the rise of income level in the rural HHs and with the introduction of more affordable ICS model from which HHs can make their choice; the accessibility has considerably increased for the poor HHs. One of the model of ICS in the IDCOL program, now costs less than one day's average wage of an agricultural labor. In the earlier social assessments, some complains on the lack of user-friendliness of ICS for women in rural areas of Bangladesh were reported. With the availability of larger variety of ICS in the AF phase, these issues will be substantially address.

The PDO of the RERED II AF is "To increase access to clean energy in rural areas through renewable energy." The ICS component will enhance the likelihood of realizing the PDO and will facilitate the attainment of positive outcomes and impacts for poor rural Bangladeshis including women and the children. Considering the positive impacts of ICS and potential demand, IDCOL started selling of ICS under its renewable energy project with support from Government of Bangladesh and the World Bank. Since August, 2014, about 1.34 million stoves have been installed. IDCOL tracks number of members, both male and female, in the households through its web based software. A total of 5.84 million rural population in 1.34 million households have benefitted so far through ICS installation. Among these beneficiaries, 2.85 million are female.

IDCOL has conducted a baseline survey through Bangladesh Institute of Development Studies (BIDS) which is a reputed autonomous public multi-disciplinary organization. BIDS conducts policy oriented research on development issues facing Bangladesh and other developing countries. The study surveyed a total of 3,000 households: 2,000 households in the treatment area (potential users of the improved cooking stove) and 1,000 households in the control areas (non-users). Results from this report will be used during the implementation of the project.

IDCOL plans to sell a total of five million stoves by 2021. The more ambitious goal is achieving 100% ICS coverage by 2030 as per Bangladesh Country Action Plan. The total projected potential market size of ICS is 30 million. However, to achieve these objectives, there is an acute need for awareness among rural population (potential buyers) about the benefits of adopting ICS instead of TCS. Given that this adoption will incur both financial costs and behavioral change at the household level. IDCOL works with Partner Organizations (POs) who distribute that ICS at the market. Unlike typical sellers (profit maximizing market actors), these POs are mainly NGOs with their own microfinance and development programs in social and human development sectors. They are in a very good position to take up selling of ICS as a social business and engage in awareness raising of rural households in general and women in the households in particular.

At present, IDCOL is working with 66 POs across the country and are mostly installing stoves with more than 35% thermal efficiency. Among the 66 POs working under IDCOL ICS Program, executive directors of seven POs are women. Another five POs have female program coordinator. Among the 2,942 staffs of the POs involved in ICS Program about 10% are female. Thus, the proposed gender action plan will cover both demand and supply sides of the ICS component

³ A study on Indoor Air Pollution Levels in Households with Improved and Traditional Cookstoves (IDCOL, 2017)

and will mainly benefit women and children in the households. The proposed theory of change of the ICS component is presented below:

Theory of Change as envisaged in proposed action

1. Need assessment: what is the problem?	2. Input/activity: what is the solution?	3. Output	4. Outcomes		5. Impacts
<p>Gender roles in rural Bangladesh constrains women as follows:</p> <ul style="list-style-type: none"> - Women work longer hours than men - Women spend more time doing unpaid domestic work -- that leads to time poverty and unpaid labor burden - Reliance on firewood forces women and children to spend hours collecting wood - potentially productive hours that could be spent on income generation/education. Such collection activities often causes security hazards - Households using inefficient stoves dedicate a significant portion of their expenditures to increasingly expensive fuels such as firewood - Women and children are disproportionately affected by health impacts 	<p>Distribution and installation of ICS by IDCOL POs</p>	<p>Household adoption of improved cookstove (take-up measured, observed or reported)</p>	<p>1. Shifts in time use</p>	<p>Decrease in average time spent cooking</p> <ul style="list-style-type: none"> - Decrease in average time spent collecting fuel - Shift in time spent on income generating activities (increase) - Shift in time spent on unpaid care work activities - Shift in time spent on leisure activities - Shift in time spent on education/training (increase) 	<p>Improved use of time for more productive activities (like education and/or income-generation) and increase in rest/leisure</p>
			<p>2. Shifts in labor allocation</p>	<ul style="list-style-type: none"> - Reduction in hours collecting fuel - Reduction in hours cooking - Shift in time spent on other activities different than cooking 	
			<p>3. Shifts in household finances</p>	<ul style="list-style-type: none"> - Increase in monetary income - Changes in the allocation of expenditure - Increase in savings and insurance - Increase of productive and non-productive asset ownership 	<p>Improved financial wellbeing</p>
			<p>4. Shifts in health (last 7 days/last 30 days)</p>	<ul style="list-style-type: none"> - Reduction in cooking burns and other accidents - Reduction of diseases linked to burning fuels (i.e. upper respiratory infections) 	<p>Improved health and safety of household members</p>
			<p>5. Technology adoption</p>	<ul style="list-style-type: none"> - Reduced use of low-quality cooking stoves - Increased use of high-quality cooking stoves - Reduction of cooking time 	<p>Consistent adoption of clean/modern cooking technologies</p>

Logical Framework of the proposed action

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>Impact Statement: <i>reduced GHG emissions, solid fuel use for cooking and Indoor air pollution (IAP) in Bangladesh by creating a sustainable market for higher efficiency cook-stoves in Bangladesh.</i></p>				
<p>Outcome Statement: <i>Improved access to affordable, year – round clean cooking energy services for all households, including poor and female – headed households by creating a demand through awareness raising among poor target groups to adopt ICS for cooking; resulting in significant health benefits on rural population in Bangladesh by reducing the exposure of households’ IAP and creating a safer indoors environment, which will primarily benefit women and children.</i></p>				
<p>Output(s) Statement: <i>Raising awareness among very poor and vulnerable households in rural areas of the country about the benefits of using ICS. will facilitate widespread introduction of ICS by establishing a sustainable market for ICS.</i></p>				

<p>(i) Market development activities by the POs to enable them to rapidly increase market penetration of ICS so that poor and socially excluded female headed households (FHH) can access the product</p> <p>(ii) Technical assistance to enhance supplier capacity and increase the demand for improved cook stoves among end users to help create the necessary conditions for market growth to continue beyond the duration of the project</p> <p>(iii) Enterprise development will consist of strengthening the gender mainstreaming capacity of the existing POs by a) encouraging women entrepreneurs to start ICS selling business and; b) encouraging existing POs to recruit more female staff members.</p> <p>iv) Awareness raising and community outreach to enhance demand of ICS with provision of low cost ICS for households below the poverty line.</p>	<p>(i) 70% FHHs and 70% of other vulnerable HHs (e.g. widowed, minorities, differently – abled, the elderly) in project areas will be using ICS. (at the baseline conducted by IDCOL in 2017, this percentage is zero)</p> <p>(ii) Provision of TA to POs for quality compliance in ICS production and monitoring of compliance of awareness activities will be continued; so that user training are to be provided to 70% HH members using ICS; who are mostly female.</p> <p>(iii) Special loan package will be designed and offered to female entrepreneurs so that by the end of the project female head POs constitute at least 20% of all POs.</p> <p>iv) 40% of female workers are to be engaged in the ICS business of the POs.</p> <p>iv) Awareness raising and community outreach to be enhanced for all HHs.</p>	<p>By 4 years</p> <p>By 4 years</p> <p>By 3 years</p> <p>By 3 years</p> <p>Continuous</p>	<p>IDCOL and POs</p>	<p>Expenses will be met from overall budget as the program will be integrated with other project activities.</p> <p>5</p>
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Vietnam: Green Climate Fund Proposal Scaling Up Energy Efficiency in Vietnam's Industrial Sector

A Gender Action Plan

I. Background

The World Bank (the Bank) has agreed with the Government of Vietnam (GoV) to adopt a holistic approach to scaling up energy efficiency (EE) in the high-energy intensive industrial sector aiming to unlock the huge potential for energy savings and greenhouse gas (GHG) emission reductions. The proposed Scaling up Energy Efficiency for Industrial Enterprises in Vietnam ("the Project") will substantially contribute to achieving Vietnam's Nationally Determined Contribution (NDC); i.e. 25% GHG emission reduction compared to the Business-As-Usual scenario with international support, under the Paris Agreement.

Overall, the Project comprises an integrated package of credit risk mitigation, technical assistance and capacity building activities together with a parallel IBRD credit line (IBRD Loan) to various stakeholders from public entities to local financial institutions and industrial enterprises. This will reduce EE investment market barriers, such as lack of access to finance and capacity of stakeholders, high project risk perceptions, and the existence of an insufficient policy and regulatory framework that governs EE in the industrial sector.

The Project comprises two interrelated and closely coordinated components complemented by a parallel IBRD Loan operation:

- Component 1: US\$78 million GCF Risk Sharing Facility (GCF-RSF)
- Component 2: US\$10 million World Bank and GCF Technical Assistance (WB/GCF-TA)

Complementing IBRD Loan:

- US\$100 million World Bank Energy Efficiency Credit Line - Vietnam Energy Efficiency for Industrial Enterprises Project (WB-VEEIE)

The joint implementation of these two components and the IBRD Loan will promote a market-driven approach to industrial energy efficiency and opening up the commercial lending market to local banks and non-bank financial institutions developing a new EE product line. With financial and technical support from the World Bank and the GCF, the Project and the IBRD Loan will mobilize approximately US\$ 407.3 million of EE investments, supporting over 100 industrial companies to reduce energy consumption and generate about 120 MtCO₂eq of GHG emission reductions over the lifetime of the investments. Ultimately, the Project will contribute to a paradigm shift in the nascent EE market, by providing know how and experience and by strengthening of capacity and creating an enabling environment for local financial institutions and industrial enterprises to scale up investments in energy efficiency.

II. Gender analysis

This analysis examines the different rights, roles, needs and opportunities of both women and men, boys and girls and the relations between them in Vietnam, with strong emphasis on economic opportunities in the industrial sector. The analysis would be used to identify opportunities and entry points for promoting gender inequality under the project and thus to inform the actions that are presented in Section 3 of this plan. The analysis would be focused on five key questions: *What is the context? Who does what? Who has what? Who decides? And who benefits?*

2.1. The context

Viet Nam signed the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1979 and ratified it in 1981. In 2000, Viet Nam signed the United Nations Millennium Declaration and committed to achieve the Millennium Development Goals (MDGs) which includes a major goal to promote gender equality and women's empowerment. In 2006, the National Assembly passed the first ever Law on Gender Equality (LGE), which promotes gender equality in all fields of social and family life. The legal framework for gender equality was strengthened by the passing of the Law on Domestic Violence Prevention and Control in 2007. Besides these laws, the Government also has a strategy on gender equality for 2011-2020, program on gender equality for 2016-2020 and a national action plan on domestic violence prevention and control for 2014-2020. There are other laws that target specific gender equality issues or contain provisions related to gender equality. The Land Law 2013 makes it compulsory to have both husband's and wife's names on land use certificates and house ownership documents. The Family and Marriage Law upholds the principle of equality in ownership and inheritance in case of divorce and death. The Law on the Election to the National Assembly and People's Councils stipulates that at least 35% of candidates must be women. The State Budget Law indicates that one of the principles of state budget management is to ensure budget allocation for gender equality objectives.

The National Strategy for Gender Equality 2011-2020 sets as target that "by 2020, substantive equality between men and women is ensured in opportunity, participation and benefits in the political, economic, cultural and social domains, contributing to fast and sustainable national development". The Strategy focuses on: promoting women's political participation and leadership; narrowing gender gaps in the economic domains; raising the education level of women; promoting gender equality in access to healthcare services; promoting gender equality in and through media and communication; ensuring gender equality in family life; and strengthening institutional capacity of the Government to effectively promote gender equality. Especially, Decree 34/2016/NĐ-CP, dated which provides guidance to implement the existing Law on the Issuance of Legal Normative Documents, stipulates that an assessment of gender impacts, if any, be conducted on a basis of analysis and anticipation of socio-economic impacts relating to opportunities, conditions, implementation capacity, and enjoyment of benefits for both men and women in preparing a proposed legal normative documents.

However, even when gender-equal laws have been put in place, entrenched inequalities, discriminatory social norms as well as dominant patterns of economic development, which of which are presented below, can undermine their implementation and positive impact" (UN Women, 2016).

2.2. Who does what?

From a gender and care responsibility perspective, the Viet Nam model of social welfare is characterized by limited public support for care services and rigid gender norms that still assign primary responsibility for care provision to women within the private sphere of the household (UN Women, 2016). A more 'modern' perception regarding housework as a shared responsibility between wives and husbands remains a minority's view in the context of strong traditional gender norms that consider a propensity for domestic and care work as "an important defining feature of the 'ideal wife'" (Thu and Efrogmson, 2008: 13). Research conducted by ActionAid with a sample of 495 women and 330 men in nine cities/provinces in Vietnam found that on average, women spend over 5 hours (314 minutes) every day on unpaid care work at household level and within the society, which is more than 2 hours (125 minutes) more than men.¹ The intra-household unequal division of labor between men and women constitutes a considerable brake on women's labor participation and returns to livelihoods, constraining their opportunities for training, networking, and promotion.

The participating IEs will come from different energy-intensive industries. Many of them are considered 'men-intensive', such as manufacturers of cement, iron, steel, pulp and paper, while others are women-intensive, such as food-processing factories. In Vietnam, women's participation in the labor force is lower than men's. The ratio for men was 82.5 percent in 2014, while it was only 73.3 percent for women.² There is quite a clear occupational segregation in Vietnam: female workers dominate in sectors like paid domestic services, education and training, hotels and restaurants, human health and social work, while male workers dominate in sectors like construction, transport and storage, electricity, gas, steam and hot water supply, mining and quarrying.³ This pattern was also observed in the social assessment conducted by the project. In three companies surveyed, the proportion of female staffs ranged from 10 percent in the Vietnam Construction Materials Co., Ltd to 41 percent in the Vietnam Paper Corporation. No women work in the energy units in all three companies. The banking sector is more gender balanced, with women accounting for 53 percent of all workers in the sector. The persistence of occupational segregation is usually attributed to several factors: gender differences in education and training; discrimination; the unequal distribution of unpaid work; and deeply ingrained stereotypes about gender differences in aptitudes. The occupational segregation may be negatively affected by gender stereotypes perpetuated through school textbooks and traditional ideas of jobs suited to women, e.g. service sector jobs like nursing, child care, community-based work. At school, girls tend to take only those subjects which are linked to traditional ideas of women's role in society. Therefore, women's participation in the labor market is slanted towards 'soft' social sectors, and away from 'hard' areas such as industrial development and business. (WB, 2010: 35). All these factors severely restrict women's participation in many industrial sector and are constraints to the development of a skilled and empowered female workforce. It demonstrates that more effective and innovative ways are needed to address continuing and pervasive gender stereotypes about 'suitable' occupations for women and girls.

The project will support the growth of a new market of industrial energy efficiency in Vietnam. Therefore, sectors delivering energy efficiency-related goods and services, such as manufacturers of efficient industrial equipment, will find more business opportunities from the expansion of the

¹ ActionAid, 2016. *"Make a House Become a Home"*

² General Statistics Office, *Labor Force Survey 2014*.

³ UN Women, 2016.

market. In these sectors, increased employment is expected to bring positive economic co-benefit to the society. Examples from across the globe point to the fact that women have used clean/renewable energy to increase profits and efficiency in their informal sector enterprises, and proven themselves capable of operating and also constructing clean energy technologies/solutions on their own when provided with appropriate training and support. It is important that more women have more opportunities for employment, as well as to lead and manage sectors delivering energy efficiency-related goods and services. The Government needs to put greater effort into facilitating women's access to a wider variety of decent jobs, with particular attention to enabling disadvantaged women to acquire the necessary skills and productive resources for entering non-traditional sectors. This recommendation was also put forward in earlier country gender assessments (CGAs), which stress the importance of encouraging women's participation in training in scientific, engineering and technical fields. Both CGAs point to the highly gender-stereotyped vocational training on offer in Viet Nam and its failure to prepare women to pursue a wider range of labor market opportunities. Other measures may include awareness raising activities for managers and HR people on the benefits of diversity in the labor force and the value of female workers to corporate performance.

2.3. Who has what?

The evidence suggests that access to assets has a gendered dimension; and various inequalities in the country affects the security and extent of women's access to assets versus men's. Disparities in access to assets, in turn, determine whether and to what extent women are able to realize their economic opportunities on an equal footing with men. Two kinds of assets are relevant to an analysis of economic opportunities. External assets or the factors of production, such as land, labor and credit. Internal assets of the entrepreneur itself, i.e. vocational and business skills, freedom from time poverty and human capital.

Female laborers have more limited opportunities to access to quality employment. The aspects of the quality of employment refers to vulnerability⁴, informality⁵, earning gaps and working conditions. LFS data show that in 2014, 68 percent of women workers were in vulnerable employment compared with less than 57 percent of men workers. In addition, the rate of informal employment seems extremely high, and with almost equal shares for men and women: 81 per cent of female workers and 82 per cent of male workers are in informal employment. It is not only the totality of own-account workers and unpaid family workers (i.e. the employed classified as 'vulnerable') that has no social insurance, but also about half of all wage workers. The proportion of women in vulnerable employment is higher than that of men, but the proportion of wage workers without social insurance is substantially higher among men (58 percent) than among women (39 percent). Furthermore, the gender earning gap has widened over the last decade and this applies to both wage workers and the self-employed. The gender earning gap is partly explained by the fact that women tend to cluster in low-paid occupations. Overall, female workers earn about 10% per month less than male workers. In the energy sector (electricity, gas, steam and hot water supply), women earn 85 percent of what men earn. The banking sector is one of

⁴ ILO defines workers in vulnerable employment as the sum of own-account workers and unpaid family workers.

⁵ ILO officially defines informal employment as that without social insurance.

few sectors where women's monthly earnings are more than men's (7,643 thousand VND versus 7,348 thousand).⁶

Studies have indicated that the characteristics of women-led business, many of which are small, also constrain access to finance. The inflexibility of traditional financial institutions in adapting to the needs of small businesses was also highlighted as a major barrier by women entrepreneurs in Vietnam (IFC 2006; WB 2010). Consequently, in Vietnam, women business owners are more likely to use informal sources of finance, while getting a bank loan is generally only feasible for large businesses (IFC 2006; WB 2010). However, it is not only the case that banks are unwilling to lend to smaller businesses, but also smaller businesses are unable to meet the conditions of bank credit. Women entrepreneurs are often unaware of their rights, or the various options for credit available to their businesses. More research is needed to determine whether informational deficits are relatively more severe for women, and to understand impacts of these deficits on their credit-seeking behaviour.

Vietnamese women have less access to quality vocational and technical training, which can be even more important than formal education in reducing occupational segregation. Viet Nam has made significant progress in reducing the gender gap in formal education but as far as Technical and Vocational Education and Training (TVET) is concerned, in 2014 only 16 per cent of the female workforce and 21 per cent of the male workforce had some kind of technical qualification. It is of concern that data from various rounds of the VHLSS suggest that since 2004, the share of the employed population with technical qualifications has fallen for women while it has risen for men (Rodgers, 2015). This is a cause for concern given the emphasis placed on technical training in the Government's workforce development strategy and among donors. Of serious concern is also that the distributions in fields of study still show marked gender patterns. According to Viet Nam's data from United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015), among students enrolled in tertiary education, men are considerably more likely to specialize in engineering, manufacturing, construction, and services, while women are more likely to specialize in social sciences, education, humanities and the arts. No significant change can be observed between 2008 and 2013. This gender segregation in the field of study can be further reinforced by discriminatory practices in the labor markets such as those described in ILO Vietnam (March 2015). Women are more likely to work in the informal sector due to their unequal household and family responsibilities, as informal employment often allows them to work from home. Where women are confined to low-skills jobs in the informal sector, they are unlikely to be able to gain access to opportunities for quality vocational and technical training. Moreover, time constraints is another important barrier.

Secure and equitable access to assets, human, financial and technical, is a crucial determinants of economic empowerment for women. To address formal and cultural inequities in access to assets, it is important to Improve the environment for, and access to, targeted vocational and business training to nurture human capital of budding women entrepreneurs. Furthermore, improve on-the-job training prospects providing fiscal and other incentives for enterprises to provide training to women employees.

2.4. Who decides?

⁶ UN Women, 2016.

The World Bank's 2016 Systematic Country Diagnostic (SCD) identifies a lack of women in leadership positions in business and particularly government and political spheres as one of three key gender concerns. According to this diagnostic, while substantial numbers of women are employed in wage jobs, few are in management positions. In the 2015 Enterprise Survey, just 22% of firms reported that they have a female top manager (compared to an average of 27% across EAP countries.). According to a recent survey on small and medium – sized enterprises (SMEs) of all sizes, the number of SMEs led by women in Viet Nam accounts for 25%. Findings from a recent ILO Vietnam study on gender-based discrimination in recruitment and promotion practices confirm these observations (ILO Vietnam, 2015). More specifically, the ILO review finds that up to 83 per cent of management job postings indicating a gender preference required male applicants. All of the director posts were exclusively for men and a similar bias was found across other management positions such as 'managers' and 'supervisors', where 78 and 87 per cent of job advertisements, respectively, only accepted male candidates. The findings of this review thus suggests that these practices are still widespread despite contravening the law that stipulates that job advertisements should avoid any mention of gender.

Women tend to have less opportunities and time compared to men to engage in business development. Time constraints that it is harder for women to attend trade fairs, make new contacts (ADB 2008), properly manage and develop their business and to navigate complex procedures, due to the tension between their reproductive and productive roles (their traditional role as care givers for the young and the elderly). More informal networking may also be more difficult for women, due to cultural norms and family responsibilities. Although data on these kinds of 'soft' cultural barriers to women entrepreneurs participating in networking and developing their business is not available. The SCD calls for measures to boost the participation of women in leadership positions in both the public and private sectors, including childcare support, training opportunities, and eliminating gender discrimination in the retirement age.

There is no exact data indicating the number of SMEs in Viet Nam, but a rough estimate indicates that SMEs account for 97% of the total number and contribute to about 40% of the GDP. The large percentage of SMEs in Viet Nam points to the fact that this is an important industry/market segment that could be tapped in terms of the sustainable energy portfolio. As also reported, rising energy and material prices are leading to higher production and distribution costs which erode enterprise competitiveness and profitability among a majority of these SMEs, including those owned/led by women. Reducing energy waste or using alternative, renewable sources of energy can considerably lower enterprise spending.

2.5. Who benefits?

Both men and women who work for industrial enterprises and live around their areas will benefit from EE investments, such as avoidance and reduction of local pollutants, noise and dust. The benefit derives from increased life expectancy and reduced mortality that comes from a reduction in local toxic pollutants. However, the rate of male or female employees who benefit directly from the shift from EE technologies may vary depending the type of participating industries. Many of the energy-intensive industries, such as manufacturing of cement, iron, steel, pulp and paper, employ more men than women, while some energy-intensive industries, such as food processing, hire more women than men. The project recognizes different vulnerabilities of women and men as a consequence of both direct or indirect impacts of the project. Some of these vulnerabilities

have been analyzed in various sections above. The project will develop specific response strategies for each target groups during the design, formation, and implementation of the project.

Furthermore, Industrial Enterprises (IEs) and Participating Financial Institutions (PFIs) will be accessible to the project's aware-raising activities on gender awareness and responsiveness in their relevant operations. The participating government agencies will benefit from the relevant TA and capacity building activities to supported to develop the relevant EE regulatory framework, standards and guidelines, have limited awareness of the linkages between gender and EE sub-projects, particularly in relation to their specific working domains.

III. The Gender Action Plan

This plan presents key impacts, outcomes and output statements which are informed by the gender analysis in Section 1 and mirrors the project outputs in order to address key gender gaps and contribute to greater equality between men and women through the project activities. Each output will be followed by associated gender-responsive activities with gender-performance indicators and targets, timeline, and responsibilities. Many activities in this plan can be incorporated in other outputs under Component 3 of the project on technical assistance and capacity building, as noted in the budget column of the matrix below.

The Gender Action Plan

Seq	Activities	Indicators and targets	Timeline	Responsibilities	Budget
<p>Gender impacts</p> <p>The intended gender impacts of the project are determined on a basis of identification of the project’s key stakeholders and its contribution to closing gender gaps in the country relating to the sectors of participating IEs. As a result, the main intended gender impacts of the project include:</p> <ul style="list-style-type: none"> • Improved quality of employment for women; • More EE businesses owned or led by women; • Reduced health risks and caring responsibility for women; • Promoted gender-responsive policy-making and budgeting at the corporate and national levels; 					
<p>Gender outcomes</p> <p>Below are specific intended changes in knowledge and skills of female workers in participating IEs, and gender awareness amongst their managers as well as mitigated risks and adverse impacts for project-affected people.</p> <ul style="list-style-type: none"> • SMEs, including those owned/led by women, provided with tailor-made, preferential and concessional EE loans; • Lower production costs and higher productivity and environmental performance for SMEs; • Women and men from vulnerable/minority groups provided with employment; • Improved quality of employment for women and men in IEs; • Raised awareness on gender issues among IEs, PFIs, and participating government agencies; • Improved EE knowledge and skills for women; • Reduced health risks for male and female workers, and people living around IEs; and • Safeguards requirements complied. 					
<p>Gender outputs</p> <ul style="list-style-type: none"> • EE loans to IEs provided; • Delivery of EE-related goods and services to IEs; 					

- Awareness-raising activities and training courses organized;
- Strengthened policy, legal and regulatory framework for EE in IEs; and
- Compliance with social inclusion and safeguards requirements.

I	Output 1: EE loans to IEs provided				
1.1.	<p>Providing tailor-made, preferential and concessional EE loans targeted specifically at SMEs, including those owned/led by women;</p> <p>Develop specific outreach/information programs for women-owned/led SMEs to become familiar with EE loans;</p> <p>Identify and address specific financial service needs of women-owned/led SMEs to access EE loans.</p>	Rate of EE loans provided to SMEs owned/led by women;		PMB, the program implementing agency and PFIs	30,000 USD
II	Output 2: Delivery of EE-related goods and services to IEs				
2.1.	Promoting equal opportunity, inclusion, and non-discrimination in the EE sector	<p>Selection criteria for sub-borrowers and subprojects (in operation manual) includes:</p> <p>(i) Prospective borrowers would be required to develop a gender equality strategy that includes commitment to equal pay for equal work, equal opportunity recruitment; support to upskilling and</p>	Continuous throughout project implementation	AE through programme implementing agency; IEs	Included in the budget of IEs

		<p>training women employees in technical areas.</p> <p>(ii) Sub-projects are required to provide a Health and Safety action plan: including health and safety at work, and actions for the prevention of sexual harassment at worksites; grievance redress, and awareness and training to management and employees.</p>			
2.2.	Reporting on equal opportunity and health and safety actions	100% of borrowers/sub-projects report on achievement and progress of implementation of equal opportunities and health and safety action plans.	Annually	AE; IEs	20,000 USD
III	Output 3: Awareness-raising activities and training courses organized				
3.1.	Sharing the existing good practices and lessons learnt, local and international, in gender awareness and responsiveness for project stakeholders	One workshop organized	Before the project implementation	PMB	20,000 USD
3.2.	Training of IE managers to raise awareness of the relevant gender issues (recruitment, gender-sensitive working conditions, equal remuneration, promotion)	Incorporated in training activities under Component 3	Annually	PMB	TA budget under Component 3
3.3.	PFI staff training to raise awareness of the relevant gender issues	Incorporated in training activities under Component 3	Annually	PMB	TA budget under Component 3

3.4.	Capacity building for pipeline development (gender awareness and reporting)	Incorporated in training activities under Component 3	Incorporated in training activities under Component 3	PMB	TA budget under Component 3
3.5.	Capacity building on safeguards	Incorporated in training activities under Component 3	Incorporated in training activities under Component 3	PMB	TA budget under Component 3
3.6.	Training to women-owned/led SMEs to become clean energy entrepreneurs with the capacity to deliver energy efficiency – related goods and services to various sectors	One training course conducted per year	Annually from 2018-2023	PMB	20,000 USD
3.7.	Conducting an awareness raising and communication campaign on EE for SMEs, including women led/owned SMEs (to increase business recognition and understanding of economic and environmental benefits of investing in EE and cleaner production)	A communication campaign conducted jointly with relevant industry associations	Incorporated in training activities under Component 3	PMB	TA budget under Component 3
3.8.	Publish case studies on gender diversity and promotion in the EE financing scheme and disseminate widely	One case study is per year from year 2 of implementation.	Annually from Year 2	PMB	40,000 USD
IV	Output 4: Strengthened policy, legal and regulatory framework for EE in IEs				
4.1.	Encouraging involvement of women from IEs and PFIs in the policy-making and budgeting process	At least a member of the IE's women's union or an elected female representative from IEs and PFIs involved in the policy-making and budgeting	2019 onwards	PMB	20,000 USD
4.2.	Collection, analysis and use of relevant sex-disaggregate data	Sex-disaggregate data on client request for EE (e.g. request	2018 onwards	PMB	20,000 USD

		information, request loan, access to loan)			
4.3.	Support to preparing a required gender assessment for strengthening the policy, legal and regulatory framework for EE in IEs	Gender assessment completed	2023	PMB	35,000 USD
4.4.	Preparing inputs to the preparation of gender-responsive policy, legal and regulatory documents for EE in IEs	Gender-responsive policy, legal and regulatory documents for EE in IEs prepared and issued	2023	PMB	15,000 USD
V	Output 5: Compliance with social inclusion and safeguards				
5.1.	Preparing a Resettlement Action Framework (RPF) and an Ethnic Minority Planning Framework (EMPF)	RPF and EMPF completed and approved ⁷	Before project approval	PMB	Completed
5.2.	Consultations with local people, including women and members of ethnic minority groups or other vulnerable/marginalized groups, wherever relevant, on any impacts of the project on local communities;	At least 20 percent of the participants in a consultation being women At least a member of ethnic minority groups or other vulnerable/marginalized groups, wherever relevant, attending a consultation	Every stage of the project <i>(preparation, implementation and evaluation)</i>	PMB	20,000 USD
5.3.	Providing separate sanitary facilities for women in construction sites; separate rest – rooms for women; make-shift childcare facilities for working mothers; basic medical/nursing services for all workers	Availability of the required facilities	At the start of any civil works	Contractors	From budget of related IEs

⁷ Adequate gender-sensitive arrangements will be specified in the Operations Manual (OM) for sub-projects. In particular, relocation sites must have improved and secure housing and sanitary structures, improved infrastructure (e.g. access roads that are lighted, safe and secure for women and men to use, and conveniently connected to local markets, public health centres etc.), community facilities (e.g. community centres that are climate/disaster proof and have separate rest rooms and toilets for women and men), and schools for both boys and girls. The project will ensure that consultations take place with women and minority communities in the selection and design of new relocation sites.

5.4.	Ensuring compensation documents, if any, have signatures of both husbands and wives	Signatures of husbands and wives in compensation payment documents	During RAP implementation	PMB	Included in the budget for RAP implementation
5.5.	Indicators on important gender resettlement impacts and gender impacts on ethnic minority groups are included in internal and external monitoring	At least one indicator on gender resettlement impacts included in a Resettlement Action Plan (RAP); and one indicator on gender impacts on ethnic minority groups in an Ethnic Minority Development Plan (EMDP).	During preparation of RAP, MTR, end-project evaluation	PMB	Included in the project's monitoring budget

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Gender documents for
FP072

**Zambia: Strengthening climate resilience
of agricultural livelihoods in in Agro-
ecological regions I and II
Gender Assessment and Action Plan**



Contents

I.	Introduction	3
II.	Resilience of the most vulnerable communities and stallholder farmers in Agro-ecological regions I and II in Zambia and their response to the increasing threat of climate change.....	4
III.	Existing Gender Inequality in Zambia	7
IV.	Legal and Administrative Framework Protecting Women and Protecting Gender Equality	21
V.	Gender issues in response to the expanding threat of variability to rainfall and increased frequency of drought	22
VI.	Recommendations	24
	Proposed Gender Action Plan	31



I. Introduction

The proposed project supports the Government of Zambia to *strengthen the climate resilience of agricultural livelihoods in agro-ecological regions I and II.*

The agro-ecological regions I and II in Zambia are facing increasing risks as a result of climate change, primarily due to the variability of rainfall and increased frequency of droughts.¹ This puts Zambia at “extreme risk” from climate change. The poorest smallholder farmers in these regions, who primarily practice rain-fed cultivation,² are facing devastating impacts on their livelihoods, which will further erode development gains.

Women face being disproportionately affected by these impacts, given their role in ensuring household food production and security, despite their unequal access to land, information and inputs (e.g. improved seeds, fertilizer, tools).

The proposed project supports the Government of Zambia to strengthen the resilience to climate change of vulnerable smallholder farmers in the country’s Agro-ecological Regions I and II. These Regions are facing increasing risks as a result of climate change, primarily variability of rainfall and increased frequency of droughts, which have direct impacts on the agricultural production in the region. They are also the regions of Zambia which have the highest concentration of poverty incidence and where rain-fed agriculture is predominant. Therefore, the poorest smallholder farmers in these regions are facing devastating impacts on their livelihoods which will further erode development gains, with women disproportionately affected.

This project will meet these objectives by taking a value chain approach, addressing risks posed across the key stages of the value chain, related to inputs, production and post-production. At the same time, the project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains in the target regions. This includes three interrelated sub-components, the

¹ Republic of Zambia (2007), National Adaptation Programme of Action. Available at: unfccc.int/resource/docs/napa/zmb01.pdf

² Makondo CC, Chola K, Moonga B. (2014), ‘Climate change adaptation and vulnerability: a case of rain-dependent smallholder farmers in selected districts in Zambia’. *American Journal of Climate Change* 3:388–403.

first focuses on strengthening capacity of farmers to plan for and manage climate risk, the second focuses on strengthening resilient agricultural production and diversification practices (for both food security and income generation) and finally the third focuses on strengthening farmers' access to markets and commercialization of resilient agricultural commodities.

This gender assessment provides an overview of the situation in Zambia, identifying gender issues that are relevant to the project, and examining gender-mainstreaming opportunities for the project.

The resulting gender assessment is based on:

- Undertaking a desk-review, and aligning approaches in this proposal with the national priorities of Zambia;
- Incorporating information and lessons learnt from past studies and assessments on gender in Zambia by the Government of the Republic of Zambia, the United Nations, Development Partners, civil society organizations, and multilateral development banks;
- Conducting stakeholder consultations and engaging women affected by the project and
- Integrating gender considerations into project indicators, targets and activities

II. Resilience of the most vulnerable communities and stallholder farmers in Agro-ecological regions I and II in Zambia and their response to the increasing threat of climate change

Climate change affects women and men differently, due to existing social norms and gender roles. The risk of climate change often magnifies women's relative poverty, and discrimination increases. Women are also underrepresented in decision-making for resource management and other adaptation strategies. In addition, resource scarcity reduces work opportunities for men; the associated financial hardship increases the risk of gender-based violence against women in stressful and crises situations.

Addressing gender dimensions within the project design and implementation, this proposal works to identify and integrate interventions to provide gender-responsive and gender-transformative results.



Women are key players in strengthening climate resilience of the agricultural livelihoods sector, given that up to 80 percent of food producers are women. As a result, women have the opportunity to contribute and be leaders in addressing food security, livelihoods and water management. How this is to be approached and why it produces positive impacts to women themselves and the entire community are explored further in Section V below. Women, however do own fewer assets, have less access to land and other agricultural inputs, and less access to fewer financial services.

The Government of the Republic of Zambia, in its *Zambia Vision 2030*, is clear on recognizing agricultural production as key to its economic development, and in doing so requires 'exemplary work ethics, honesty, values, quality consciousness, the quest for excellence and exceptional performance by all players in the economy.' (2006, Republic of Zambia) Unequal power relations between men and women have resulted in the subordination of women, resulting in gender based violence, and lack of access to finance and education.

While gender mainstreaming is acknowledged as an area that needs to be addressed, it has been problematic due to limited skills in gender analytics. Acknowledging barriers for women to actively participate in the growth of the economy requires recognition and change at all levels.

Subsequent to the inception of the Rio Conventions (1992) it was evident that, without gender equity, poverty reduction, environmental sustainability and long-term economic development achievement of aspired goals is less attainable. As women and men experience poverty differently, they also have differentiated knowledge of natural resources, yet their contributions are unequally recognized. Improving environmental management and achieving poverty eradication requires full acknowledgment on the roles of both women and men in effecting changes.

As a result of gender roles historically and socially assigned to women and men, including the gendered division of labour, it is recognized that female vulnerabilities to climate change are different. Vulnerability of rural women in Sub-Saharan Africa (including Zambia) is highly related to biophysical, socio-economic and political factors. Difference in levels of education, wealth, reliance on natural resources, health status, access to credit, access to information, capital, as well as access to and participation in decision-making potential lead to high variations and intensify vulnerability.

The Gender Equity and Equality Act of 2015³ established the Gender Equity and Equality Commission affirm the rights of women. As a result, Part II of the Act commits to:

Mainstreaming gender in all policies, legislation, programmes and budgets; recognizes the observance of women's rights as an integral part of attaining equity and equality in all spheres of life; reaffirms commitment to non-exploitation, degrading or undermining of women; acknowledges that public and private bodies shall work together as partners in a coordinated manner in achieving gender equity and equality; and commits to the elimination of gender bias. The Act serves to ensure that women living in rural and peri-urban areas benefit from development and in that respect participate in the elaboration and implementation of development planning at all levels; be free to organize self-help groups and cooperatives in order to obtain access to economic opportunities through employment or self-employment; and have to access agricultural credit and loans, marketing facilities, appropriate technology, land allocation and agrarian resettlement schemes.⁴ (2015 Government of Zambia).

Communities' can take action on adapting to climate change, such that men and women can take preemptive action to reduce their vulnerability and build their resilience to potential new and discriminatory risks. In the past communities have used their own strategies for coping with climate variability and extreme weather. But climate change and intense change in weather patterns now cause new risks that fall outside the previous experience of communities. Therefore, new techniques and approaches need be used in combination with indigenous knowledge.

Within the two Agro-ecological regions prioritized under this project proposal, 16 districts across 5 provinces will be targeted by the project, with indirect beneficiaries representing approximately 1.26 million people, or 9.6 percent of the total population. These districts were selected given their specific vulnerability to climate change risks, primarily increasing droughts, variability of rainfall and occasional floods. This is coupled with a high incidence of poverty in these districts, where target beneficiaries currently have little resilience to cope with climate impacts or sustain livelihoods in the face of climate.

³ The Gender Equity and Equality Act 2015

<http://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Gender%20Equity%20and%20Equality%20Bill,%202015.pdf>

⁴ The Gender Equity and Equality Act 2015

<http://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Gender%20Equity%20and%20Equality%20Bill,%202015.pdf>

III. Existing Gender Inequality in Zambia

Gender inequality is one of the main indicators of inequality and is played out along political, social and cultural dimensions. It is closely linked to poverty and other development challenges which is deeply rooted in social norms and economic conditions with a greater impact on the poor, particularly women and young people.

Women play a critical role in agriculture. Gender equality and agriculture must undergo a significant transformation in order to meet the related challenges of food security and climate change. Female farmers' influence in decision-making must increase in order for the agricultural sector to adjust, adapt and continue to be profitable in the face of climate risks.

Cultural and social norms, as well as traditions have not favoured women well in Zambia. Women's development has been impeded by the inability to own land, barriers to education, barriers to earning an income, access and control over resources, and division of labour. As a flow on effect from this disadvantage women are then not in a good position to become visible in decision-making and leadership roles.

Potential barriers to behavioural change were discussed with respondents, as were ways of overcoming these barriers. The research team was particularly keen to establish whether implementation of the household approach resulted in improved agricultural outcomes.

Poverty

Poverty has continued to be an issue for Zambia. The multidimensional poverty index (MPI) within the United Nations Development Programme's Human Development Report (2015), measures the percentage of the population that is multi-dimensionally poor adjusted by the intensity of the deprivations. It lists



Zambia as being one of the highest at 50.7 percent⁵, based on indicators pertaining to living standard, education, and health.

Zambia's economy and social wellbeing are already exposed to climate variability and weather extremes. Smallholder farmers in the Agro-ecological regions I and II contribute to Zambia's economy

Zambia has seen impressive growth over the past decade, among the 10 fastest growing economics of Sub-Saharan Africa in 2012. It has capitalized on rich natural resources, particularly copper, and agricultural potential. However, this economic growth has not translated equitably across the country, with living standards continuing to decrease particularly in rural areas. According to the data from the 2010 Living Conditions Monitoring Survey (LCMS), national poverty incidence was 60 percent throughout the country, compared to 62.8 percent in 2006. 42 percent of the population was living in extreme poverty, that is, with insufficient consumption to meet their daily minimum food requirements. In fact, due to population increase, the absolute number of poor has increased from approximately 6.0 million in 1991 to 7.9 million in 2010. Further, the population growth is staggering, with the population expected to double by 2030, compared to the 2010 population of 13.3 million.

Poverty in Zambia is located mostly in rural areas, in which the poverty rate is almost tripled the level observed in urban areas. In 2010 rural poverty was estimated at 77.9 percent compared to urban poverty levels of 27.5 percent. Similarly, about 58 percent of the rural population was afflicted by extreme levels of poverty, whereas, in urban areas, the number of extreme poor remained at approximately 13 percent. Based on the World Bank's 2015 Mapping Subnational Poverty in Zambia (2015), it is evident that the poverty incidence is highly concentrated in Agro-ecological Region I and II where rain-fed agriculture is predominance.

Climate change affects men and women differently - which in turn affects exposure to poverty - depending on their roles and responsibilities in the household and community. In many communities, climate change has a disproportionately greater effect on women, since women are often poorer and less educated than

⁵ UNDP Human Development Report, 2015, p181.

men and often excluded from political and household decision-making processes. In addition, women tend to have fewer assets and depend more on natural resources for their livelihoods.

Both women and men's roles in society contribute and effect change, yet their contributions are unequally recognized. Improving environmental management and achieving poverty eradication requires full acknowledgment of the roles of women and men in effecting change.

Health

Impacts of climate changes will have a negative effect on women's health, if gender equality is not addressed in congruence with adaptation measures. Women represent a high percentage of the poor in communities dependent on local natural resources for their livelihood, particularly in rural areas where they shoulder the major responsibility for household water supply, firewood fetching collection for cooking and heating, and ensuring family food security. Women are more exposed to water borne diseases due to the nature of their roles in the community. This importance is captured in UNFCCC (2007) report indicating that climate change threatens to reverse progress in fighting diseases of poverty, including malaria and water borne diseases.

The disproportionate impact on women's nutrition and health can be contributed to their limited access to and control over services. Women have negligible participation in decision-making and are not involved in the distribution of environmental management benefits. Consequently, women are less able to confront vulnerabilities associated with climate change. Hence, again there is a need to distinguish between vulnerabilities associated with poor sectoral responses to the needs of the rural poor and the causes of women's vulnerabilities – due to climate variability. The inequalities are multifaceted, due to tradition and cultural barriers, gender insensitivities, or how development service agents go about creating awareness, assistance, and feedback amongst the development community for more responsive actions.

Education

Women are underrepresented in many areas of socio-economic activities and including education.

According to the Central Statistics Office, female participation in secondary school was 63.2 percent in 2010, considerably lower than males at 74.6 percent.⁶ The poor performance of girls in the education sector reflects their lower participation rates in formal wage employment across all sectors. As a result, women's participation in decision-making positions also lags far behind that of males in both private and public institutions where serious gender gaps of 70 percent or more exist.

Results from *Millennium Development Goal 2: Achieving universal primary education* indicate that primary school completion rates increased from 64 percent in 1990 to 93.2 percent in 2009. (p.11 USAID 2011).⁷ In spite of gender parity reached at primary level, gender imbalances persist. For girls, from Grade 5, there is a lower retention rate.⁸ UNICEF's most recent Country Programme (2010-2015) identifies increasing access to quality basic education for all children as an essential tool for breaking the cycle of poverty.⁹

Gender parity and increasing access for children to education has made progress, however there are still an estimated 250,000 children not attending school, and almost 50 percent of those enrolled do not complete primary education.¹⁰ UNICEF's Country Programme 2010-2015 paid particular attention to:

- Capacity and systems strengthening for improvement of quality of education;
- Equity in participation and progression from pre-primary to primary and lower secondary education, particularly for girls, rural children, and other excluded groups; and
- HIV prevention and behavioral change are promoted through life skills programme for children who are in school and out of school.¹¹

Increasing access to basic education has been a priority of the Government of Zambia since the introduction of the free basic education policy in 2002, however rural children, children from poorer homes, and females are the 'last to enroll in school and the first to drop out, and are significantly

⁶ Central Statistics Office, Data Portal, accessed: 21 June, 2016 (<http://zambia.africadata.org>)

⁷ *Ibid.*

⁸ USAID Country Development Cooperation Strategy Zambia 2011

<https://www.usaid.gov/sites/default/files/documents/1860/USAIDZambiaCDCS30Sept2011.pdf>

⁹ UNICEF Zambia Country Programme Document 2011-2015

http://www.unicef.org/about/execboard/files/Zambia_final_approved_CPD_11_Feb2011.pdf

¹⁰ *Ibid.*

¹¹ *Ibid.*



underrepresented in the upper grades of basic education as well as the secondary level. (p. 3, UNICEF, 2011)¹²

USAID's Country Development Cooperation Strategy 2011-2015 also acknowledges education as being a key challenge that needs further addressing, affirming that education constraints limit the ability of many Zambians to fully participate in economic opportunities. Only 20 percent of Zambian children complete secondary school, and of those, girls are particularly disadvantaged.¹³

Zambia's Development Strategy, encompassed within the '*Vision 2030: A prosperous middle-income nation by 2030*' document, includes achieving 100 percent access to education. Addressing their long-term goal to eliminate gender inequality, the Zambian Government will strive to improve educational attainment and eliminate gender gaps at all levels of human and social economic development.¹⁴

Political Participation

The Constitution of Zambia (Amendment), dated 5 January 2016 has placed a strong commitment to end discrimination against women. While issues presented in this assessment continue to persist, the Government of Zambia is taking strident action to address inequality in a considered manner.

The Constitution of Zambia (Amendment), includes within its *Preamble*, that:

'We, the people of Zambia:

- Confirm the equal worth of women and men and their right to freely participate in, determine and build a sustainable political, legal, economic and social order'.¹⁵

¹² *Ibid.*

¹³ USAID Country Development Cooperation Strategy Zambia 2011

<https://www.usaid.gov/sites/default/files/documents/1860/USAIDZambiaCDCS30Sept2011.pdf>

¹⁴ Republic of Zambia, *Vision 2030, A Prosperous Middle-Income Country by 2030 (2006)*

<http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

¹⁵ p. 9, Government of Zambia (2016)

http://www.parliament.gov.zm/sites/default/files/documents/amendment_act/Constitution%20of%20Zambia%20%20%28Amendment%29%2C%202016-Act%20No.%202_0.pdf

Part IV of the Constitution on Representation of the People in Electoral Systems and Process will ensure the electoral systems provided for in Article 47 for the election of President, Member of Parliament or councilor shall include:

- Gender equity in the National Assembly or council.¹⁶

It outlines on page 20, that Political Parties, shall not:

- Be founded on a religious, linguistic, racial, ethnic, tribal, gender, sectoral or provincial basis or engage in propaganda based on any of these factors.¹⁷

In regard to *Elections to National Assembly and Members of Parliament*:

- The President may nominate a person referred to in Article 68 (2) (b) where the President considers it necessary to enhance the representation of special interests, skills or gender in the National Assembly.¹⁸

In regard to *Speaker, Deputy Speakers and Officers of National Assembly*:

- There shall be two Deputy Speakers of the National Assembly who are not members of the same political party and of the same gender.¹⁹

Part XIII Public Service Values and Principles requires:

- Adequate and equal opportunities for appointments, training and advancement of members of both gender and members of all ethnic groups.²⁰

¹⁶ p. 15, *Ibid.*

¹⁷ p. 20, *Ibid.*

¹⁸ p. 24 *Ibid.*

¹⁹ p. 32. *Ibid.*

²⁰ p. 73. *Ibid.*

Part XVIII, Services, Commissions and Other Independent Offices, most importantly, contains a specific and detailed section on the Gender Equity and Equality Commission, with the following principles stated:

- There is established the Gender Equity and Equality Commission which shall have offices in the Provinces and progressively in districts.
- The Gender Equity and Equality Commission shall promote the attainment and mainstreaming of gender equality.
- The Gender Equity and Equality Commission shall –
 - Monitor, investigate, research, educate, advise and report on issues concerning gender equality;
 - Ensure institutions comply with legal requirements and other standards relating to gender equality;
 - Take steps to secure appropriate redress to complaints relating to gender inequality, as prescribed; and
 - Perform such other functions as prescribed.²¹

And lastly, **Part XX, General Provisions** requires:

- That fifty percent of each gender is nominated or appointed from the total available positions, unless it is not practicable to do so.²²

In practice, current information on the Government of Zambia's website,²³ depicts gender representation in parliament with 13.9 percent female and 86.1 percent male, as illustrated in Figure 1.

²¹ p. 93-94. *Ibid.*

²² p. 103. *Ibid.*

²³ <http://www.parliament.gov.zm/members/gender> (accessed: 18 June, 2016)

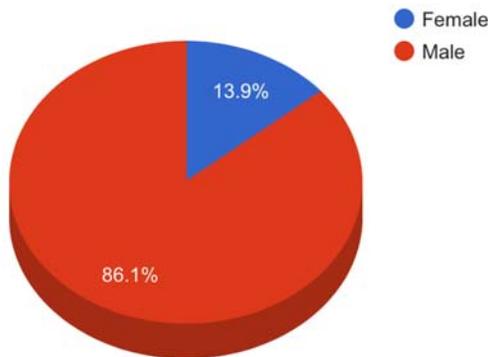


Figure 1: Members of Parliament by Gender. Source: National Assembly of Zambia²⁴

Women's representation in politics and decision-making positions in Zambia has been increasing. The Minister for Women and Child Development, the Honourable Inonge M. Wina, Zambia's first female Vice-President urged political parties in Zambia to ensure that they continue to adopt more women at all levels. This is prudent in the lead up to this year's General Elections, to be held 11 August 2016 in order to meet gender parity required by the Southern African Development Community (SADC) protocol on Gender.

As outlined by the Honourable Inonge M. Wina in an interview available on The Embassy of the Republic of Zambia, Washington D.C. website,²⁵ the challenges faced are that while Zambia has a number of female politicians, they do not have enough female representatives in Parliament and in Councils. The Parliament consists of 158 members, of those only 20 are women. The Cabinet consists of 20 members, of those, only four are women. The Honourable Inonge M. Wina continues and expands on the barriers to women's political participation in Zambia.

These are identified as:

- Lack of resources;
- Competitive political environment;
- Limited financial resources for women to participate in elections;
- Cultural norms and practices act as a barrier to women's political participation in politics; and

²⁴ <http://www.parliament.gov.zm/members/gender> (accessed: 18 June, 2016)

²⁵ Interview with the Honourable Inonge M. Wina 2016. The Embassy of the Republic of Zambia, Washington D.C., <http://www.zambiaembassy.org/print/2190>

- Family issues, such as caretaking of small children.

In providing a pathway forward, the Honourable Inonge M. Wina acknowledges that there are determined women who are moving toward participation in the political arena and recognizes the need to encourage young women in particular to participate in politics.

Suggestions on how to do this include:

- Provide awareness to the young generation to appreciate politics;
- Provide awareness raising of the importance of being involved in political participation as it allows them a voice in decision-making;
- Women’s concerns and aspirations need to be known to the political leaders (both male and female political leaders);
- The importance of women engaging in political activism, in order for issues to be addressed that concern them – not only for themselves, but for their families and their communities.²⁶

Decision-making

Decision-making opportunities in Zambia are influenced by many factors. In addition to the gender disparities as mentioned in the sub-sections above, age also plays a role in the social expectation of males and females. The largest disparities are between adults in middle age, and are lowest for children. The roles of men and women have been institutionalized and normalized throughout childhood. Combined with females being removed from school to tend to family duties, this has added to the disparity between men and women.

Currently, care work and domestic duties are amongst the highest determinant of women not being involved in the participation of training, group activities, leadership development and community consultation – all of which lead to opportunities of decision-making roles and influence. This is an area that needs to be addressed in order to determine the most valuable entry points and recommendations to benefit the women in the community. As reaffirmed in the Government of Zambia’s Vision 2030, A

²⁶ *Ibid.*

Prosperous Middle-Income Country by 2030 These ‘negative cultural beliefs and traditions also undermine the empowerment of women. According to the 2000 Population Census, there are more women than men in the country. However, due to a number of factors, such as the low levels of education, culture, limited access and control over resources, and the division of labour, women’s participation in the development process has been impeded. They are comparatively disadvantaged relative to men as participants in decision-making due to their relatively low levels of education.’ (p. 23 Republic of Zambia, 2006).²⁷). In addition, and linked to the poor performance of girls in the education sector is their lower participation rate in formal wage employment. This is apparent across all sectors. As a result, ‘women’s participation in decision-making positions also falls far behind that of males in both private and public institutions where serious gender gaps of 70 percent or more exist’. (p. 27 Republic of Zambia, 2006).²⁸

Labour force

With regards to the Zambia population’s engagement in the labour force, at 119, Zambia is ranked in the top ten countries on the equality survey and lowest performing countries regarding professionals and technical workers.²⁹ In the quest to achieve middle-income status, the Government of Zambia recognizes that ‘enforcement of labour laws and observance of appropriate labour standards by social partners on the labour market’ needs enhancing. (p. 4 Republic of Zambia, 2006).³⁰ While reference to labour laws in general are made within the Zambia’s Vision, 2030, A Prosperous Middle-Income Country by 2030, goals for women in the labour force are not mentioned specifically – only in regard to division of labour. It does however - as indicated in previous subsections – acknowledge the necessity to increase women’s education and decision making, as well as access to resources and land ownership which has influence in the labour force of the generations to come.

²⁷ Republic of Zambia, Vision 2030, *A Prosperous Middle-Income Country by 2030 (2006)*
<http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

²⁸ *Ibid.*

²⁹ <http://reports.weforum.org/global-gender-gap-report-2014/part-1/the-global-gender-gap-index-results-in-2014/country-results/>

³⁰ Republic of Zambia, Vision 2030, *A Prosperous Middle-Income Country by 2030 (2006)*
<http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

Women’s agricultural work is often unpaid or if not unpaid, then certainly undervalued. Women provide the majority of unpaid work both in their homes and communities, including domestic work, caring for the unwell, and children. In addition to agricultural duties, this lack of time proves to be another hindrance on their educational access and employment opportunities.

Access to resources

The Government is being proactive in creating an investment climate consistent with the socio-economic development objectives. To achieve this, the Government seeks to i) “Improve access to affordable credit and other financial services as well as the development of capital markets in both rural and urban areas, for both men and women; and ii) streamline work permit and license requirements and procedures, improve access to land by both men and women, and improve the performance of key government agencies servicing private investors, as well as improve tax and customs administration procedures.” (2006, Republic of Zambia). This in turn serves to address the lack of resources that women in Zambia face including access to land, finance, credit, decision-making, education, markets, and business opportunities.

Smallholder farmers struggle to access inputs through channels other than subsidized government programmes. Furthermore, while large-scale farmers can invest in more sustainable practices, limited access to credit and high interest rates make the necessary long-term investment difficult for smallholders. As obtaining a loan often requires land as collateral, it is complicated by insecure land ownership. This particularly affects women, who are often hindered from ownership of land.

The Government of Zambia’s ‘National Long-Term Vision, 2013, states ‘gender responsive sustainable development; as their first objective. To address this, a development plan – the Sixth National Development Plan 2012 – 2018, consists of the following priorities, i) securing land ownership, ii) improving access to finance, iii) launching a sustainable green revolution, iv) championing market-oriented activities, v) diversifying agricultural activities; and vi) increasing added value - all of which consider gender parity in their implementations.

The dual legal system currently in place in Zambia is to the detriment of women in both cases when it

comes to land access. The two land tenure systems in place in Zambia – customary / tribal and secondly, leasehold tenure, both marginalize women and their access to owning land.

The Government of the Republic of Zambia aims to allow women to have equal access to productive land for socio-economic development (2006, Republic of Zambia). Enabling women to have access to land ownership increases their self-preservation abilities, providing more control over their lives and that of their children, as well as encouraging empowerment and to act as agents of change. The issues of gender based violence and access to land all feed back to the social norms and gender roles of the population. The government acknowledges that ‘most of the cultural norms and practices in Zambian society rarely support the view that women should acquire and control land in their own right’ (2011, Norad). While the leasehold tenure legal system provides the statutory law that outweighs customary law, in everyday life and practice, the population does not adhere to this.

Gender- based Violence

The existing social norms with regards to gender-based violence must be addressed. At times of crisis, displacement, severe weather events, or disasters, which result in food insecurity, and water scarcity – incidences of gender based violence rise. In providing a thorough and inclusive gender lens to adaptation programming, combining the leverage and weight of the Government’s existing initiatives assists two of the world’s major threats - climate change and gender equality.

Gender based violence is further exemplified in times of stress, greater need, disaster, loss of income – all of which are linked to climate change. By addressing climate issues and gender inequality simultaneously, projects have an opportunity to co-benefit in aspects of attracting funding and delivering outcomes and successes for the community and environment.

Gender inequality must be addressed seriously in all preparatory phases of all climate change adaptation programming. Gender based violence hinders the development of a nation, and the Government of Zambia recognizes this is a critical area of concern.

UN Women’s Global Database on Violence Against Women³¹, determines the prevalence of violence toward women in Zambia as follows:

Prevalence Data on Different Forms of Violence against Women:	
Lifetime Physical and/or Sexual Intimate Partner Violence	50 percent ³²
Physical and/or Sexual Intimate Partner Violence in the last 12 months	43 percent ³³
Lifetime Non-Partner Sexual Violence	3 percent ³⁴
Child Marriage	42 percent ³⁵

Seeking to address these concerns a Joint Programme between UNDP and UNFPA, UNICEF, ILO, IOM, and WHO in conjunction with the Ministry of Gender and Child Development is currently running a programme to address gender-based violence within Zambia. The four-year (2012-2016) UN Joint Programme contains two objectives:

- Increasing GBV survivors’ access to health services, to efficient justice delivery system and to protection and support services; and
- Enabling the Gender and Child Development Division to Coordinate (GCDD) an effective, evidence- based and multi-sectoral response to GBV in Zambia.

³¹ <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

³² Proportion of ever-partnered women aged 15-49 years experiencing intimate partner physical and/or sexual violence at least once in their lifetime. Source: Central Statistical Office (CSO), Ministry of Health (MOH), Tropical Diseases Research Centre (TDRC), University of Zambia, and Macro International Inc., 2009. Zambia Demographic and Health Survey 2007. Calverton, Maryland, USA: CSO and Macro International Inc. as per <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

³³ *Ibid.*

³⁴ *Ibid.*

³⁵ Percentage of women aged 20-24 years who were married or in union before age 18. Source: UNICEF global databases 2014. Based on DHS, MICS and other national household surveys as per <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

Guided by Zambia's Sixth National Development Plan and is expected to support the 'government in attaining zero tolerance of GBV and contains the below expected outcomes'³⁶.

Gender Inequality Index

Through the years, several indices have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).³⁷ The GII is a composite measure that shows inequality in achievement between women and men in reproductive health, empowerment and the labour market while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women.

Zambia has a GII of 0.617 (2013) and ranks 135 out of 149 countries assessed. The GDI value (2013) of 0.913 has Zambia ranked as 101.³⁸

The Global Gender Gap Index (GGGI) of the World Economic Forum examines the gap between men and women in four categories: economic participation and opportunity, educational attainment, health and survival and political empowerment.³⁹ Out of 142 countries, Zambia is ranked at 119 based on the GGGI 2014 results given below⁴⁰:

Description	Score	Rank
Economic participation and opportunity	0.644	86
Educational attainment	0.846	127
Health and survival	0.974	66
Political empowerment	0.081	114

³⁶ UN Joint Programme on Gender-based Violence Fact Sheet
http://www.zm.one.un.org/sites/default/files/united_nations_joint_programme_on_gender_based_violence.pdf

³⁷ United Nations Development Programme. Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

³⁸ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>

³⁹ World Economic Forum. The Global Gender Gap Report 2014 Country Profiles. <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ETH> http://www3.weforum.org/docs/GGGR14/GGGR_CountryProfiles.pdf.

⁴⁰ <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ZMB>

Gender Gap Index 2014	0.636	119
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* Inequality = 0.00; Equality = 1.00. Source: The Global Gender Gap Report 2014

The Organization for Economic Cooperation and Development (OECD) developed the Social Institutions and Gender Index (SIGI), a composite index that scores countries (on a 0 to 1 scale) on 14 indicators grouped into five sub-indices: discriminatory family code, restricted physical integrity, son bias, restricted resources and assets, and restricted civil liberties to measure the discrimination against women in social institutions across 160 countries. The 2014 SIGI value for Zambia is 0.4489 suggesting that discrimination against women is very high.⁴¹

With regards to the gender gap, the indicators that display the largest gender gap are paid labour, public visibility / speaking / credit and access to and decisions over finance. Time allocation and resource access account for over 60 percent of women’s disempowerment (2014, Alkire et al).

The indicators that display the largest gender gap are paid labour, public visibility / speaking / credit and access to and decisions over finance. Time allocation and resource access account for over 60 percent of women’s disempowerment (Malapit et al 2014).

IV. Legal and Administrative Framework Protecting Women and Protecting Gender Equality

The Government of Zambia has initiated change within its own Gender Sector Vision, outlining the following targets:

Targets:

⁴¹ <http://www.genderindex.org/country/zambia>

- Reduce and ultimately eliminate gender imbalances and inadequacies associated with the provision of education, training and development;
- Harness the types of knowledge, skills, values and competencies necessary for economic development;
- Facilitate special consideration/affirmative action to adequate allocation of funds to the Health sector in support of programmes affecting women and children;
- Facilitate and ensure appropriate health services to, and protection of women during pregnancy, confinement and post-natal period as well as adequate nutrition;
- Implement measures that combat the adverse effects of HIV/AIDS, particularly on women and children;
- Prevent and combat the existing Gender Based Violence scourge, particularly against women and girl children;
- Economically empower women through acquisition and ownership of titled land;
- Enact and enforce a law that will facilitate the allocation of at least 30 percent of available land to women as an affirmative action by the year 2030; and
- Facilitate and provide economic support to institutions that offer credit facilities to women for land development.

Source: Republic of Zambia, *Vision 2030, A Prosperous Middle-Income Country by 2030 (2006)*.

V. Gender issues in response to the expanding threat of variability to rainfall and increased frequency of drought

It is important to note that in order to create transformational change, women are not just seen as climate change victims or adaptation beneficiaries. Women are imperative to promote and lead climate change adaptation efforts. They practice adaptive measures as a part of daily life – through farming and in the

face of increasing risks – through disaster recovery and preparation.⁴² By utilising these existing skills into project design and implementation and by providing a platform for empowerment women are enabled to increase their influence from a household to a community and national level. Leadership and decision-making capacities and opportunities increase.

Women from the poorest households often pay the most, sacrifice the most, are the most disadvantaged and the least resilient.

Women are impacted differently by climate change in the following ways:

- Women rely more on natural resources for their livelihoods, with staple crops providing up to 90 percent of food in farming districts of some countries and 60–80 percent of food in most developing countries. Women struggle to fulfill their key responsibility for the production of food, in spite of the detrimental impacts of climate change on agriculture.
- Women and children are often responsible for gathering water and fuel in traditional agrarian societies, tasks that are laborious, challenging and time consuming. These tasks become more time intensive due to the impact of climate change.
- Climate change is linked to increased incidences of tropical diseases such as cholera and malaria, which have severe impacts on women because of their limited access to medical services and their responsibility to care for the sick.
- In some societies, more women are dying during natural disasters because men receive preferential treatment in rescue and relief efforts.
- Women are disproportionately affected due to vulnerability and the capacity to adapt to the process of climate change are affected by various factors, including age, education, social status, wealth, access to resources, sex, gender and many other social dimensions;
- In addition, at the time of crisis, women’s needs are not considered priority in recovery programmes.

⁴² <http://asiapacificadapt.net/gender-sourcebook/wp-content/themes/iges/pdf/integrating-gender-sourcebook.pdf>

VI. Recommendations

The Government of the Republic of Zambia, in its *Zambia Vision 2030*, is clear on recognizing agricultural production as key to its economic development, and in doing so requires ‘exemplary work ethics, honesty, values, quality consciousness, the quest for excellence and exceptional performance by all players in the economy.’ (2006, Republic of Zambia) Unequal power relations between men and women have resulted in the subordination of women, resulting in gender based violence, lack of access to and, lack of access to finance, and lack of access to education.

While gender mainstreaming is acknowledged as an area that needs to be addressed, it has been problematic due to limited skills in gender-dimension analytics. Acknowledging barriers for women to actively participate in the growth of the economy requires recognition and change at all levels.

To build the resilience of smallholder farmers to adapt to climate change, while seeking to address the disparity of men and women, it is recommended to fully engage women from the design phase. As women are the cornerstone of the household and the primary manager (unpaid, paid, visible or otherwise), their engagement is poignant in the success of the project.

In order to increase women’s empowerment, address climate change adaptation, and increase the resilience of smallholder farmers, it is determined that the following recommendations and interventions are considered:

Recommendations and interventions:

- Improving women’s role in decision-making by leveraging the Government’s existing initiatives;
- Provide capacity building training in building agricultural resilience, business and management skills, and leadership;
- Engagement of men and youth in gender training;
- Adding gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training.

- Building and tailoring an asset base for female-headed households and poor women, and also in addition to improving access to service providers, including micro-credit and insurance providers.

In order to address gender inequalities, the following outputs have been identified for gender-responsive and gender transformational change:

- Develop the initiatives of the government with regards to gender and ensure that a higher level of understanding and action is undertaken in core gender concepts.
- Ensure that gender divisions of labour, acknowledgement of paid and unpaid work, time intensive chores, access to and control over assets are recognized by all participants and the effect of addressing or no addressing has on agricultural productivity;
- Context specific training, understanding, and approach, supported by targeted measures to strengthen women in areas where they suffer gender disadvantage;
- Development and implementation of interventions that focus on building an asset base for women (including female-headed households);
- Tailored and improved access to service providers such as micro-credit and insurance companies.
- Awareness and provision of agricultural tools and practices suitable for women, while also addressing the practicalities of such tools, tasks, location and time.
- Addressing women’s practical needs should be accompanied by the process of encouraging men to share reproductive tasks.
- Design and implement gender-responsive training that facilitate linkages between women farmers and markets.
- Taking action to affirm women friendly products including traditionally female crops and small livestock.

Gender analysis

The gender analysis undertaken at the onset and design of this project acts as an entry point for gender mainstreaming throughout implementation.

Results from the consultations are detailed below in the Stakeholder engagement section.

The gender analysis, through stakeholder engagement and consultation, enabled the following:

- Assessment of the gender-related project activities, with regards to their ability to respond to the expanding threat of drought and rainfall variability, including gender roles and responsibilities, resource use and management, and decision making;
- Engagement, development and input into the design of project activities
- Demonstration of the need for gender-disaggregated data and indicators to establish a baseline in which to measure improvements and identify areas of focus; and
- Establishment of recommendations to incorporate into the Gender Action Plan.

Project design and implementation

Addressing gender dimensions within the project design and implementation, this proposal identifies and integrates interventions to provide gender responsive and transformative results. As women are key players in the agricultural sector, with direct impact on food security, livelihoods and water management, it is integral to the success of the project that women are considered, targeted and engaged throughout all stages of the project cycle.

Zambia is among the poorest countries' in the world and has a population highly dependent on smallholder farming for livelihoods. Fortunately, the Government of Zambia's Gender Sector Vision, as expanded upon above, provides leverage to strengthen and cement project design and implementation.

The project design has taken into account the following gender implications:

- Women's role as primary homestead and resource manager;
- Differing conservation incentives faced by women and men;
- Analysis of gender division of labour (e.g. gender-differentiated roles, responsibilities, and needs);
- Women's access to, and control over, environmental resources and the goods and services that they provide (Increasing women's access to and control over resources, improves the effectiveness of such projects);

- Identification of gaps in equality through the use of sex-disaggregated data enabling development of gender action plan to close those gaps, devoting resources and expertise for implementing such strategies, monitoring the results of implementation, and holding individuals and institutions accountable for outcomes that promote gender equality.
- Assess how gender is currently mainstreaming in differing ministries and sectors, to develop a need assessments, enable planning, and be effective in monitoring and evaluation.
- Involve women both at macro and micro level in climate resilience process.
- Involve men both at macro and micro level in climate resilience process.
- Financing and budgeting gender related initiatives in the climate resilience process.
- Involve women in identifying new and innovative technology that can support women to protect their environment and climate, promoting independence, empowerment, and entrepreneurship;
- Evaluation of women's work time, both as paid and unpaid;
- Identify specific strategies to include / target female-headed households;
- Identify differing conservation incentives faced by women;
- Promote advocacy and awareness adjusted to most effectively reflect gender-specific differences. Strategies used in the project are tailored, taking into account such differences.

The project implementation will take into consideration the following gender implications:

- Address the division of labour on small farms, taking into consideration gender specific views on management;
- Inclusion of a Gender Specialist position within the project management unit to ensure mainstreaming of gender into all activities;
- Inclusion of all stakeholders involved in the project to develop awareness raising / training aimed at drawing attention to the links between climate change and gender, and the impacts of adaptation on gender equality.
- Inclusion of gender and climate issues into all training and technical support;



- Linking income generating activities identified by an engaging woman with microfinance institutions and cooperatives;
- Undertaking community discussions and dialogue in relation to gender and climate resilience/adaptation strategies with the inclusion of indigenous knowledge.

During project implementation, qualitative assessments will be conducted on the gender-specific benefits that can be directly associated to the project. This will be incorporated in the annual Project Implementation Report, Mid-Term Report, and Terminal Evaluation. Indicators to quantify the achievement of project objectives in relation to gender equality will include men and women who had access to affordable adaptation technologies and knowledge, number of men and women engaged in livelihoods promoted by the project, training opportunities, knowledge management and information dissemination.

Stakeholder engagement

Stakeholder engagement enables the capture of the specific issues and difficulties that women face in responding to the expanding threat of rainfall variability and the increased risk of drought. It also enables identification of specific issues and difficulties that women face in strengthening and diversifying climate-resilient Agri-based value chains, and in addition outlines how women's security is affected by these issues.

The stakeholder consultations and engagement of women's organizations promote gender equality at the local as well as at national level. The involvement of women's organizations in the project design will assist in the identification of relevant gender issues within the country's social context, and implementation and monitoring of gender aspects of the project.

During the design phase of this project, consultation with 16 target districts, across 5 provinces, took place to inform the project activities and structure. The target populations for consultation included women and men as representatives at the local (camp) level, including farmers themselves, district and province level, and national level. It also specifically includes women's organizations and CSOs.

The project will continue to engage stakeholders throughout project implementation, enabling even more effective Monitoring and Evaluation.

Through analysis, data has been collated to establish a baseline. This data shall be monitored against this baseline throughout implementation and evaluation.

The analysis identified the differences between men and women within at-risk populations. In order to monitor and evaluate progress of the project, the following indicators can be measured:

Quantitative indicators

- Women and men as beneficiaries;
- Female/male-headed households as beneficiaries;
- Improvements in health and well-being;
 - Health status of women and children;
 - Female school enrolment and retention;
- Improved livelihoods;
 - Women and men engagement in income generating activities;
 - Purchasing capacity and production of food for household consumption and income generation;
 - Distance and time saved due to climate resilience projects;
 - Use of leisure time saved by the project;
- Business development service components targeting rural women entrepreneur groups;
 - Availability and accessibility of microfinance institutions and cooperatives;
- Women participation and engagement in local business.

Qualitative indicators:

- Opportunities to generate additional income. Women are more likely to respond to incentives that address their family's basic needs, such as better health and nutrition, linking agriculture and food security improvements;

- Time-saved by women as a result of the reduction of labour hours required for agricultural and water management practices prior to the implementation of the project;
- Contribution to self-esteem raised and empowerment of women in the community;
- Expanded involvement in public and project decision-making as a result of initiation of women to actively participate in income generating activities;
- Support for training and educational activities which may include activities related to climate change, agriculture, water management, leadership, business, finance, entrepreneurship and decision-making, thereby empowering and increasing involvement of women to participate with confidence in community meetings;
- Effectiveness of awareness increasing;
- In reflection of the level and Involvement of women in contributing to the prevention of environmental degradation - rehabilitate the key natural resources, such as soil or forests that mitigate temperature rises and water scarcity;
- Protect or minimize contamination of local water supplies, spread of communicable diseases and child and mother related problems, sanitation;
- Ability of women and men to identify their environmental changes and risks based on their different roles and access to resources; and
- Build communities fallback options such as savings, remittances, or saleable assets, as a means of coping with climate shocks.



Proposed Gender Action Plan

Activities	Actions	Targets and indicators	Time line	Responsible Institutions	Budget (US\$)
					16,069,000
Output 1: Smallholder farmers are able to plan for and manage water to support resilient agricultural production					
Activity 1.1: Strengthen generation and interpretation of climate information and data collection for women to ensure timely and detailed weather, climate, crop and hydrological forecasts is available to support smallholder in planning and management of water resources used in resilient agricultural practices	<p>Identification of female community members who are engaged in existing systems of climate information interpretation and data collection through survey</p> <p>Identification of female community members who are interested in engaging in strengthening interpretation of climate information</p>	<p>Baseline: 0 Target: 62% of female population provided with access to improved climate information, weather and agricultural advisories.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of women already engaged in the interpretation of climate information and data collection • Number of women new to the interpretation of climate information and data collection • Number of manuals / guidelines developed 	Year 1 to year 7	ZMD in coordination with MOA and WARMA	369,000

	Development and promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops	<ul style="list-style-type: none"> Number of female participants engaged in training 			
Activity 1.2: Strengthen co-development and dissemination of tailored weather / climate-based agricultural advisories to ensure female smallholder farmers receive the tailored information they need for planning and decision-making	Development and promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops	Indicators: <ul style="list-style-type: none"> Number of women female small holder farmers Number of manuals / guideline developed Number of women participants engaged in training 	Year 1 to year 7	ZMD in coordination with MOA and WARMA	100,000
Objective	Action	Indicator		Responsible Institution	
Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods					
Activity 2.1: Promote irrigation schemes, water storage and capture as well as other resilient water management strategies to increase access to water for agricultural	Identify female community members who are working with existing irrigation schemes and / or those who are interested in introducing water	Indicators: <ul style="list-style-type: none"> Number of female smallholder farmers introduced to existing irrigation schemes or commence with new water management practices 	Year 1 to year 7	MOA and DWA	200,000



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<p>production in the target districts within Agro-ecological Regions I and II</p>	<p>management technologies</p> <p>Development and promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops</p> <p>Improvement of female smallholder farmers access already to existing irrigation schemes or commence with new water management practices</p> <p>Improvement of female smallholder farmers introduced to existing irrigation schemes or commence with new water management practices</p>	<ul style="list-style-type: none"> • Number of women supported in the development of rural enterprises, business training and capacity/skills building 			
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Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



	Promotion of market-orientated and gender sensitive production				
Activity 2.2: Increased access to agricultural inputs (e.g. seeds, soil kits) for resilient crops	<p>Increase access to seeds of drought, pest-resistant and early maturing crop varieties for women farmers</p> <p>Increase adoption of diversified crops for women farmers in target communities</p> <p>Increase access to soil kits to for women farmers</p>	<p>Indicators:</p> <ul style="list-style-type: none"> • Number of female participants engaged • Number of female farmer recipients of seeds • Number of female farmer recipients of soil kits • Success rate of new agricultural practices introduced (in regard to crop production) • Success rate of new agricultural practices introduced (in regard to time saved) • Disseminated and shared knowledge • Number of women and men involved in the process 	Year 1 to year 7	MOA	8,000,000
Activity 2.3: Introduction of new agricultural practices	Increase adoption of diversified crops	<p>Baseline: 0</p> <p>Target: 90% of female recipients are able to strengthen production</p>	Year 1 to year 7	MOA	3,000,000



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



<p>to strengthen production and diversify amidst climate variability and change</p>	<p>for women in target communities</p> <p>Introduce new agricultural practices for women drawing on indigenous knowledge strategies</p> <p>Identify and document indigenous knowledge, practices and coping mechanisms</p>	<p>and diversify amidst climate variability and change with the Introduction of new agricultural practices</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of female participants engaged • Number of female participants engaged • Success rate of new agricultural practices introduced (in regard to crop production) • Success rate of new agricultural practices introduced (in regard to time saved) • Disseminated and shared knowledge • Number of women and men involved in the process 			
<p>Activity 2.4: Introduce alternative livelihoods to strengthen resilience of women in target communities</p>	<p>Community dialogue / conversation and engagement</p> <p>Identification of female</p>	<p>Baseline: 0 Target: 378,461 women benefit from the adoption of diversified, climate-resilient livelihood options</p> <p>Indicators:</p>	<p>Year 1 to year 7</p>	<p>MOA</p>	<p>4,000,000</p>



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



	<p>community members who are working within existing systems and whom are introduced to alternative livelihoods</p> <p>Identification of female community members who are not working within existing systems, however are introduced to alternative livelihoods</p>	<p>Number of female participants engaged who utilize existing methods and are diversifying with new methods</p> <ul style="list-style-type: none"> • Number of female participants engaged who are utilizing newly introduced methods for the first time • Disseminated and shared knowledge 			
<p>Activity 2.5: Establish farmer field schools and learning centers of excellence to further document and scale up successful practices taking into account gender differing needs</p>	<p>Community dialogue / conversation and engagement with women and men to determine local context specific and appropriate training methods for farmer field schools and learning centers of excellence</p>	<p>Baseline: 0 Target: 83,000 female recipients are able to strengthen production and diversify amidst climate variability and change with the Introduction of new agricultural practices</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of female participants consulted and engaged in the development of 	<p>Year 1 to year 7</p>	<p>FAO</p>	<p>100,000</p>



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



	<p>Determination of local context specific female appropriate training methods, identifying their specific needs, goals and addressing gaps in existing knowledge and / or previous training</p> <p>Determination of provincial, district and local plans to incorporate climate risks and opportunities</p> <p>Identification of female community members who are interested in training</p> <p>Development and promotion of tailored and targeted gender sensitive training manuals /</p>	<p>farmer field schools and learning centers of excellence (influencing their power of autonomy, exposing them to decision-making and leadership opportunities and generating ownership)</p> <ul style="list-style-type: none"> • Number of women engaged in training programme • Number of female participants completing proposed training (retention rates) • Success rate of new agricultural practices introduced (in regard to crop production) • Success rate of new agricultural practices introduced (in regard to time saved) • Disseminated and shared knowledge 			
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Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL

	guidelines / workshops				
	Development of gender sensitive training on business skills, leadership and decision-making				
Objective	Action	Indicator		Responsible / Institution	
Output 3: Increasing farmers' access to markets and commercialization of resilient agricultural products					
Activity 3.1 Strengthen processing of resilient products for women	Context specific training, understanding, and approach, supported by targeted measures to strengthen women in areas where they suffer gender disadvantage Action taken to affirm women friendly products including traditionally female crops and small livestock	Indicators: <ul style="list-style-type: none"> Number of women and men engaged in the discussion and / or trained Number of solutions identified and action taken through the process 	Year 1 to year 7	MOA	200,000
Activity 3.2 Strengthen storage, aggregation and transportation of	Context specific training, understanding, and approach,	Indicators: <ul style="list-style-type: none"> Number of women and men engaged in 	Year 1 to year 7	WFP	100,000



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



<p>resilient products to enhance commercialization and linkages to market and SMEs</p>	<p>supported by targeted measures to strengthen women in areas where they suffer gender disadvantage</p> <p>Action taken to affirm women friendly products including traditionally female crops and small livestock</p> <p>Identify female community members who are working within existing market systems and those who are interested in joining this form of employment</p> <p>Promotion of market-orientated and gender sensitive training</p> <p>Development of gender sensitive training on</p>	<p>the discussion and / or trained</p> <ul style="list-style-type: none"> • Number of solutions identified and action taken through the process • Number of female smallholder farmers with Improved access to markets • Number of women supported in the development of rural enterprises, business training and capacity/skills building • Number of women engaged in leadership and decision-making training • Number of women in leadership and decision-making roles • Tailored and improved access to service providers such as micro-credit 			
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Annex XIII (b) Gender Assessment and Action Plan
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	<p>business skills, leadership and decision-making</p> <p>Improvement of women's role in decision-making by leveraging from the Government's existing initiatives</p> <p>Addition of gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training</p> <p>Provide capacity building training in building agricultural resilience, business and management skills, and leadership</p>	and insurance providers			
Activity 3.3 Increase access to finance and insurance	Community dialogue and consultation	Indicators:	Year 1 to year 6	WFP	100,000



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL

<p>products for female smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources.</p>	<p>processes, in formal and informal ways in which communities discuss issues affecting women or service providers seek input, opinion and information from women</p> <p>Strengthen systems and practices for climate and gender-responsive planning and budgeting engaging women</p> <p>Development of gender sensitive training on business skills, leadership and decision-making</p> <p>Building and tailoring an asset base for female-headed households and poor women, and also in</p>	<ul style="list-style-type: none"> • Number of women participants engaged in training • Number of solutions identified and action taken through the process • Number of women engaged in business skills training, leadership and decision-making 			
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Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL

	addition to improving access to service providers, including micro-credit and insurance providers				
Activity 3.4 Identify available markets and promote climate-resilient products for women	<p>Community dialogue and consultation processes, in formal and informal ways in which communities discuss issues affecting women or service providers seek input, opinion and information from women</p> <p>Identify female community members who are working within existing market systems and those who are interested in joining this form of employment</p> <p>Promotion of market-</p>	<p>Baseline: 0 Target: 80% of resilient commodities produced by target female farmers are sold on the markets</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of female smallholder farmers with Improved access to markets • Number of women supported in the development of rural enterprises, business training and capacity/skills building • Number of female smallholder farmers utilizing climate-resilient products • Number of women who saw success in crop growth by 		WFP	100,000



Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



	<p>orientated and gender sensitive training</p> <p>Development of gender sensitive training on business skills, leadership and decision-making</p> <p>Improvement of women’s role in decision-making by leveraging from the Government’s existing initiatives</p> <p>Addition of gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training</p> <p>Provide capacity building training in building agricultural resilience,</p>	<p>utilizing climate-resilient products</p> <ul style="list-style-type: none"> • Number of women engaged in leadership and decision-making training • Number of women in leadership and decision-making roles • Tailored and improved access to service providers such as micro-credit and insurance providers 			
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Annex XIII (b) Gender Assessment and Action Plan
GREEN CLIMATE FUND FUNDING PROPOSAL



	business and management skills, and leadership				
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Gender Analysis/Assessment and Gender and Social Inclusion Action Plan

Part I: Gender Analysis/Assessment – A comprehensive Gender analysis is included as a separate report

Part II: Gender and Social Inclusion Action Plan

<p>Impact Statement: Increased resilience of vulnerable communities, including women and girls, to climate change; watershed services restored, agricultural and forestry practices adapted to climate change and reduced exposure of human settlements to flooding and landslides.</p> <p>Outcome Statement: Improved and diversified livelihood opportunities for 150,000 people (50% women and girls) from rural communities currently dependent on rain-fed agriculture in Gicumbi District in Northern Rwanda.</p>				
<p>Output 1: Sub-catchment B of the Muvumba watershed restored and small scale farmers supported to adopt climate resilient practices</p>				
Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>1.1 Women trained and supported to take on leadership roles in community based adaptation</p> <p>1.2 Poor and socially excluded female headed households (FHH) targeted for CAF support</p> <p>1.3 Women targeted to participate in public works to reduce slope erosion to sustainable levels and to stabilise rivers, roadsides and steep slopes with protective forestry</p> <p>1.4 Women's preferences taken into account during species selection for integrating agro-forestry into farming systems</p> <p>1.5 Poor and socially excluded female headed households (FHH) targeted for support to adopt agro-ecological approaches to increase climate resilience</p> <p>1.6 Women are specifically targeted and trained to be trainers and Farmer Promoters to better engage and communicate with other women farmers in integrate climate resilient practices into local extension services</p> <p>1.7 Training and job opportunities communicated through various channels to reach women, men and youth</p>	<ul style="list-style-type: none"> • At least 40% of leadership roles filled by women in community based adaptation • At least 20% of CAF funds flow to FHH • At least 40% of workers in public works schemes are women • Species selection reflects women's preferences in at least 50% of target HH • At least 25% of HH supported in CRA are FHH • At least 40% of trainers and 30% of FPs are women. • At least 40% of employment opportunities filled by women. • Women's participation in training is at least 50%. • At least 70% of facilitators score more than 60% on annual gender test. • At least 30% of tea pluckers are women • At least 80% of women tea have proper clothing 	<p>By Year 6</p>	<p>Executing Entity</p> <p>Social safeguards and gender specialist</p>	<p>Many of these activities will be undertaken by the Social safeguards and gender specialist recruited to work on the project with oversight from the component leads and team Leader and supported by short term inputs by an international gender specialist. They cannot, therefore be individually costed. Each year the project will undertake a gender analysis as part of the annual assessment to track progress against these targets.</p> <p>A budget of USD 42,651 has been included for clothing to enable</p>

<p>1.8 Training timed with consideration toward women's traditional responsibilities and roles and the location of, transportation to, and costs associated with training are responsive to local gender norms and cultural stigmas. E.g. training locations need to provide sanitation facilities for women and be mindful of children who may be accompanying women to training</p> <p>1.9 Training materials are gender-responsive and take into consideration different literacy levels</p> <p>1.10 Facilitators are knowledgeable on local gender issues and dynamics and can foster space and confidence for women to actively engage</p> <p>1.11 Women farmers are engaged and targeted to increase the involvement of women in tea plucking activities</p> <p>1.12 Proper clothing is provided to allow women to participate in tea plucking activities comfortably and effectively</p> <p>1.13 Women are consulted on shade tree species to incorporate gender differentiated knowledge and experiences</p>	<p>suitable for this activity</p> <ul style="list-style-type: none"> • At least 50 women farmers are consulted on shade tree species • 			<p>women to work as tea pluckers.</p> <p>All training and awareness costs have been built into the budget for this component.</p>
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Output 2: Communities supported to implement sustainable forest management and adopt fuel-efficient cooking methods

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>2.1 Women and men in communities are consulted to gain their perspectives, knowledge and their specific preferences of tree species and what benefits they derive from each species.</p> <p>2.2 Local women's rights and advocacy organisations, such as local representatives from the NWC are engaged to support gender equitable participation and benefits from SFM interventions</p> <p>2.3 Women are equally engaged in techniques necessary to deliver high quality trees and wood products that meet industry standards</p> <p>2.4 Women and men in communities are sensitised and mobilised to form tree nursery group enterprises, associations or VSLAs that engage in permanent mass production of high quality seedlings</p> <p>2.5 Women's skills are built in seedling management to address the issue of poor quality seedlings</p> <p>2.6 Business skills development, such as management, planning, book keeping and financial management, includes women and men to provide additional opportunities at nurseries and in other economic activities</p> <p>2.7 Equal compensation and opportunities for advancement for women and men in nurseries</p> <p>2.8 Participatory Forest Management Model developed to integrates women and men from communities adjacent to plantations</p> <p>2.9 Modern hive technology dissemination targets women and men currently involved in beekeeping as well as households who may not have otherwise been involved in beekeeping</p>	<ul style="list-style-type: none"> • At least 50 male and 50 female farmers are consulted • At least one women's rights and advocacy organisations, such as local representatives from the NWC are engaged to support gender equitable participation and benefits from SFM interventions • At least 40% of forestry technicians are women • No of community members trained in tree nursery management (3960) – at least 50% will be women • No. of Tree Nurseries, Tree Growers and Bee Keeping cooperatives or associations operational (40 - For tree nurseries, at least 50% members will be women and at least 50% committee members will be women. For beekeeping, at least 65% members will be women and at least 40% committee members will be women. For tree growing, at least 40% members will be women and at least 10% committee members will be women • At least 40% of people receiving Business skills development are women • Compensation for women is equal to men in nurseries • No of women/men accessing loans increases by at least 20% 	<p>By Year 6</p>	<p>Executing Entity</p> <p>Social safeguards and gender specialist</p>	<p>Many of these activities will be undertaken by the Social safeguards and gender specialist recruited to work on the project with oversight from the component leads and team Leader and supported by short term inputs by an international gender specialist. They cannot, therefore be individually costed.</p> <p>Each year the project will undertake a gender analysis as part of the annual assessment to track progress against these targets. The budget for this is USD 63,000 and it will cover all components.</p> <p>A budget of USD 24,000 has been included for training of project staff and community volunteers in (gender sensitive) adaptation planning.</p> <p>A budget of USD 42,651 has been included for clothing to enable</p>

<p>2.10 Financial access for women and men is increased to provide training on financial products and services to build confidence in taking risks and participating in loans</p> <p>2.11 Women and women's organisations, such as the Global Alliance for Clean Cookstoves and Solar Sisters, participate and receive training that promotes clean energy alternatives</p> <p>2.12 Awareness raised campaigns around the connection between women's role in production of energy and energy use/efficiency in rural areas and households, as well as the health and climate impacts</p> <p>2.15 Women and women's organisations are consulted throughout the planning and implementation of energy interventions to determine needs, preferences and affordability of the various options</p> <p>2.16 Clean energy in households (particularly in rural areas) promoted for reduced time burden, health impact, and forest degradation especially on women and youth</p> <p>2.17 Women and female-headed households targeted for sale and use of clean cookstoves, but also in training for engaging as purveyors/entrepreneurs in clean energy alternatives</p> <p>2.18 Women provided with opportunities to access technical training and skills building opportunities to become specialised in specific industrial skills linked to tea factory improvements</p> <p>2.19 Women and men trained in monitoring, recording and reporting energy savings from improved or installed systems in tea factories</p>	<ul style="list-style-type: none"> • At least one women's organisation participates and receives training in clean energy alternatives • No. of households or institutions installing and operating efficient energy technologies for cooking (60,000 stoves tier 1 and 2; 2300 domestic biogas units; 8 institutional biogas units, 10,000 gasifier stoves tier 3/4; 100 large stoves for institutions) • At least 100 women and 5 women's organisations are consulted during planning and implementation of energy interventions to determine needs, preferences and affordability of the various options • At least 40% of participants receiving technical training in clean energy alternatives are women • At least 2 women and 2 men trained in monitoring, recording and reporting energy savings from improved or installed systems in tea factories 			<p>women to work as tea pluckers.</p> <p>All training and awareness costs have been built into the budget for this component.</p>
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Output 3: Development and modifications of human settlements to increase climate resilience

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>3.1 Women are targeted for training on installation, use and maintenance of green infrastructure</p> <p>3.2 Water catchment systems and piping to households are installed to promote access to water, with additional health and sanitation benefits, to reduce time and labour burdens on women and children</p> <p>3.3 Women are made aware of and can access employment opportunities in construction works</p> <p>3.4 Women and men are trained in new building technologies</p> <p>3.5 Poor and socially excluded FHH are targeted to receive social housing</p>	<ul style="list-style-type: none"> • At least 40% of trainees on installation, use and maintenance of green infrastructure are women • At least 80% of women surveyed report that installed water catchment systems and piping to households increase their access to water, with additional health and sanitation benefits, to reduce time and labour burdens on women and children • At least 40% of employment opportunities from this component are filled by women. • At least 40% of trainees in new building technologies are women. • No. of low carbon social housing units developed and occupied by climate vulnerable families (240 - at least 40% WHH with young children) 	<p>Year 6</p>	<p>Executing Entity</p> <p>Social safeguards and gender specialist</p>	<p>Many of these activities will be undertaken by the Social safeguards and gender specialist recruited to work on the project with oversight from the component leads and team Leader and supported by short term inputs by an international gender specialist. They cannot, therefore be individually costed.</p> <p>All training and awareness costs have been built into the budget for this component.</p>

Output 4: Successful adaptation and mitigation strategies communicated and mainstreamed at the national level

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
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<p>4.1 National and local gender machinery and gender/women's organisations included as stakeholders in awareness building and mainstreaming activities</p> <p>4.2 Gender/women's organisations trained on climate change and gender differentiated impacts, with particular emphasis on female-headed households</p> <p>4.3 A national (and sub-national) Gender Action Plan for responding to climate change impacts across sectors related to this project developed</p> <p>4.4 Gender and climate change sensitisation training conducted with stakeholders, implementing agencies and partners</p>	<ul style="list-style-type: none"> • Website developed, maintained and promoted to users (Website updated on a monthly basis and accessed regularly) • No. of farmer-to-farmer participatory videos made and viewed by other farmers (100) • No. of staff from GoR and NGOs trained in climate resilient forestry, watershed management and green settlements (560) • No. of people (women, men) trained in green and climate resilient construction. (580 - includes 580 jobs created in constructing houses and infrastructure (incl. 313 for women) in Kabeza and Kaniga) • Number of climate resilience plans adopted and implemented (2) • No. of tea/coffee policy changes or investment decisions influenced by climate information (2) 	<p>Year 6</p>	<p>Executing Entity</p>	<p>Many of these activities will be undertaken by the Social safeguards and gender specialist recruited to work on the project with oversight from the component leads and team Leader and supported by short term inputs by an international gender specialist. They cannot, therefore be individually costed.</p> <p>All training and awareness costs have been built into the budget for this component.</p>
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Africa Hydromet Program
Strengthening Climate Resilience in Sub-Saharan Africa:
Burkina Faso Country Project

Gender Analysis and Gender Action Plan

Table of Contents

Résumé Exécutif..... 2

Introduction 4

Gender Mainstreaming in the Project Development Objectives: 5

 Gender entry points to the project..... 8

 Component 1 - Capacity building and institutional development..... 9

 Component 2 - Improvement of hydromet and early warning infrastructure 9

 Component 3 - Enhancement of service delivery and warnings to communities..... 10

Burkina Faso: Social and Gender Assessment 12

 Country Gender Context:..... 12

 Gender Inequality in Human Endowments – Education and Health 13

 Women’s decision-making and agency..... 15

 Gender Differentials in Economic Opportunities and Control over Assets 16

 Livelihood areas and vulnerabilities to natural disasters 17

Gender Action Plan 22

 Reducing Vulnerability to Climate Change and Natural Disasters..... 22

 Hydromet Information, adaptation, resilience to climate risks..... 22

 Gender-Specific Risks..... 23

 Knowledge Gaps..... 25

 Gender Action Plan 25

Gender Log Frame..... 30

Résumé Exécutif

Les hommes et femmes ont un accès différencié aux ressources économiques, aux opportunités, et aux financements selon les rôles attribués à chaque genre : ces différences de genre conditionnent aussi les responsabilités vis-à-vis des autres membres de la famille et de la communauté. Pendant les crises économiques, les conflits et les désastres naturels, ces inégalités ont tendance à se renforcer.

La sécheresse par exemple augmente la charge de travail pour les femmes et les jeunes filles car elles sont chargées de parcourir des plus longues distances pour s’approvisionner en eau pour les besoins domestiques et le bétail. Plus de temps passé à la recherche de bois et d’eau soustrait du temps destiné à l’éducation, à la création de revenus, et à la production alimentaire – activités qui sont nécessaires pour rendre les ménages plus résilients. En raison du récent conflit dans le nord du Mali et de l’instabilité politique au Burkina Faso en 2015, ces activités posent des risques supplémentaires pour leur sécurité.

Les normes de genre conditionnent aussi les capacités, les stratégies et les mécanismes de subsistance comme par exemple la nutrition. Les femmes contrôlent la nutrition des membres de la famille et surtout des enfants : en temps de crise elles peuvent ainsi être amenées à réduire leur propre consommation pour que le reste de la famille ait de quoi se nourrir. Les femmes jouent donc un rôle important dans la famille et dans la communauté mais nécessitent d’être mieux impliquées dans la prévention et la gestion des désastres naturels.

Cette étude analyse le rôle économique et social des femmes et des hommes au Burkina Faso ainsi que leurs conditions de vulnérabilité face aux aléas hydrométéorologiques dans différents secteurs de production, en particulier l’agriculture, et face aux risques de crise alimentaire et de malnutrition. Dans cette perspective, l’étude prend en compte les usages du territoire et des ressources naturelles spécifiques à chaque zone climatique du Burkina Faso, et répond aux questions suivantes :

Contexte	Quel est le statut légal de la femme au Burkina Faso? Quelles sont les normes et valeurs liées au genre ? Quels sont les niveaux d’éducation et formation des femmes et des hommes? Quels sont les croyances, perceptions et stéréotypes concernant le genre?
Qui fait quoi?	Quelle est la division du travail entre les hommes et les femmes? Quelle est la situation des hommes et des femmes dans les secteurs d’intervention du projet? Quelle est la participation des femmes et des hommes dans les secteurs formel et informel de l’économie? Qui gère les ménages, et qui est responsable des enfants et personnes âgées?
Qui possède quoi?	Les femmes et les hommes ont-ils un même accès à la finance, aux technologies, à l’information, et aux services (aux niveaux local et national)? Qui contrôle les ressources? Les femmes et les hommes bénéficient-ils de ces ressources équitablement? Les femmes et les hommes ont-ils un accès équitable à l’éducation, au savoir technique, et à la formation continue?
Qui décide?	Qui décide au sein du ménage, du secteur public, et des entreprises? Les possibilités de négociation des hommes et des femmes sont-elles différentes? Les femmes sont-elles impliquées dans les décisions économiques? Les

	hommes et les femmes participent-ils de façon équitable aux activités de la sphère politique? Qui possède l'influence politique?
Qui bénéficie du projet, et de quoi?	Quelles sont les opportunités pour assurer une participation au projet et des bénéfices égaux entre femmes et hommes? Le projet prend-il en compte les différents besoins et priorités des femmes et des hommes? Les services et technologies fournis par le projet seront-ils accessibles aux hommes et aux femmes? Le projet reconnaît-il les différentes vulnérabilités des femmes et des hommes et développe-t-il des stratégies de réponse spécifiques pour chacun des groupes cibles?

Table 1 : Questions guidant la présente étude genre du projet pour le Burkina Faso

Sur la base de l'évaluation de ces différences de genre, le projet souhaite mettre en place un système de suivi, alerte et prévisions hydrométéorologiques qui prévoient une meilleure implication de la femme dans la gestion et la prévention des désastres naturels. Le projet prend ainsi en charge la formation et la valorisation du rôle de la femme au sein de la communauté dans l'observation et la récolte des données relatives à la variabilité du climat ; dans la maintenance de l'équipement et dans la transmission des données ; et enfin dans la prise de décision aussi bien au niveau communautaire qu'interministériel et institutionnel.

Introduction

One of the world's poorest countries, Burkina Faso ranks 183rd of 188 countries in the Human Development Index. Some 45 percent of its 17.59 million people live on less than US\$1.25 per day and life expectancy is just 58 years. Still, Burkina Faso's population is growing at a fast pace.

With cotton and gold its main export commodities, sound macroeconomic management has enabled Burkina Faso—a small land-locked country in West Africa—to achieve stable growth for 10 years even as its predominantly rural population of 13.6 million has been expanding rapidly. According to the last World Bank Country Partnership Strategy¹ the country has made progress in terms of structural reforms, sound economic policies, increased cotton and mining production, steady investments, and a stable macroeconomic environment. Monetary and exchange rate policy is well-managed, and in 2012, inflation was held to about 3 percent. Burkina has a healthy banking sector, and its banks observe regional prudential norms. It is also working toward an integrated and open regional economic space through the West African Economic and Monetary Union (WAEMU), the Economic Community of West African States (ECOWAS), and other cooperative initiatives².

Dependence on a narrow base of natural resources coupled with a Sahelian climate and an inland location, exposes Burkina Faso to both climatic changes and exogenous shocks, such as exchange rate volatility and declines in international prices of cotton. These problems have been exacerbated by recent unrest in neighboring Mali, from which Burkina Faso has taken in numerous refugees, whose support is putting additional pressure on the budget and food security. There has also been internal unrest about the unequal distribution of resources and a perceived lack of accountability in the management of public resources.

As the 2015 presidential election approached in 2015, political uncertainty heightened. When citizens protested against then president Blaise Compaoré last year, no one expected the mass movement to work – or to see the much-feared Compaoré, who had clung to power for 27 years, retreat into exile. Lastly, when the head of the presidential guard arrested the interim leadership and declared himself in charge just three weeks before planned elections, few thought that General Gilbert Diendéré would be forced out within the week. ECOWAS played a more direct role in it. It was only after talks with the ECOWAS mediation team that interim President Michel Kafando was returned to office, with the mediators' instrumental in persuading Diendéré to accept the deal³.

Persistent high levels of poverty and insecurity - especially rural poverty - still undermine development in Burkina Faso: about 46 percent of the population lives below the poverty line. There are significant inequalities by region, gender, and location (urban or rural). Non-income indicators of poverty and welfare, particularly in the areas of education and health, are among the lowest in the world: infant and maternal mortality rates are very high, and the fertility rate is 6.2 children per woman.

Burkina Faso's 2014 HDI is 0.402 - below the average of 0.505 for countries in the low human development group and below the average for countries in Sub-Saharan Africa. In Sub-Saharan Africa,

¹ A new one is under preparation at the World Bank.

² World Bank, 2013, *Burkina Faso: Country Partnership Strategy 2013-2016*, p.viii

³ The Guardian, *How the people of Burkina Faso foiled a military coup*, Sept 25, 2015

Burkina Faso fared worse than neighboring countries with comparable for population size such as Mali and Chad (see table)⁴.

	HDI value	HDI rank	Life Expectancy at Birth	Expected Years of Schooling	Mean years of schooling	GNI per capita (PPP US\$)
Burkina Faso	0.402	183	58.7	7.8	1.4	1,591
Mali	0.419	179	58.0	8.4	2.0	1,583
Chad	0.392	185	51.6	7.4	1.9	2,085
Sub-Saharan Africa	0.518	-	58.5	9.6	5.2	3,363
Low HDI	0.505	-	60.6	9.0	4.5	3,085

Even though the livelihoods of most of the population depend on agriculture, agricultural productivity is far below potential. The redistribution of growth gains has also been impeded by a lack of opportunities for gainful employment, particularly for youth, and by inefficiencies in public sector management. Despite numerous measures to promote equal rights for women and men, Burkina Faso is still among the 10 countries in the world with the lowest indices of gender equity. There is a 32 percent gender gap in employment, and a 15 percent gap in education. Women have minimal land use and ownership rights⁵.

Gender Mainstreaming in the Project Development Objectives:

The **Project Development Objective** of the proposed project is to strengthen the adaptive capacity and climate resilience of vulnerable communities and the economy of Burkina Faso. This will be achieved by developing the capacity of national hydro-meteorological and warning services, which will in turn support adaptation planning for public and private sector users.

Burkina Faso already experiences large weather and climate variability. Extreme weather and climate events are also frequent. The urban and rural exposure to flooding and droughts, and the very high level of vulnerability to these events, already cause large impacts to the population and economy of Burkina Faso. Climate change will further exacerbate these impacts, because of the increase in the frequency and magnitude of extreme events. Against this background, improved weather and climate information and services are needed from the national level down to the household level so that government, communities and the private sector can better plan for and adapt to climate projected changes.

Hydromet systems and early warning services act as key enabler for a broad range of adaptation decisions, ranging from the agriculture sector, infrastructure, disaster risk management, and others. For

⁴ UNDP, 2015, *Human Development Report. Briefing note for Countries on the 2015 Human Development Report, Burkina Faso*

⁵ World Bank, 2013, *Burkina Faso: Country Partnership strategy 2013-2016*, p.viii

example, projected changes in climate are expected to result in increased rainfall over shorter time spans for some areas of Burkina Faso.

Improved hydromet and early warning services would allow agencies to better monitor, prepare for and respond to extreme rainfall events and flooding, thus building adaptive capacity and reducing the vulnerability of communities and economic activities. In areas of infrastructure development, hydromet information can inform the design of resilient infrastructures such as bridges, culverts, and erosion protection. In terms of agriculture and food security, reliable hydromet information assists farmers in deciding which agricultural technologies and adaptation mechanisms may be most useful in responding to weather variability and climate change. Private companies and businesses also need and rely on the hydromet data to make investment decisions related to climate risk mitigation for their operations.

By ensuring delivery of services to communities, the project will benefit highly vulnerable groups, including the 80% of country's population whose livelihoods are dependent on predominantly rain-fed agriculture and about 7 million people exposed to drought or flooding. The project will consist of four project components with a total budget of US\$ 27 million, of which 22.5 would be financed through a grant from the GCF, US\$ 2.5 million through a grant from GFDRR and the remaining resources would be covered by the government.

1 - Capacity building and institutional development

This will include: (i) training and capacity building programs for agencies' staff and management, (ii) enhancing institutional and regulatory frameworks, and (iii) providing support for detailed design and system integration of project activities.

2 - Improvement of hydromet and early warning infrastructure

This will include (i) modernizing and upgrading hydromet observation networks, (ii) enhancing data collection & transmission, forecasting and decision support systems, and (iii) strengthening preparedness and emergency response facilities and operations.

3 - Enhancement of service delivery and warnings to communities

This will include (i) establishing a national framework of climate services, (ii) improving flood and drought forecasting and warnings, (iii) developing new products for sector specific needs (agriculture, health, energy, water resources management, disaster risk management, etc.), (iv) strengthening "last mile" connectivity to ensure appropriate understanding and use of information, and (v) mobilization and sensitization of community and establishing effective feedback mechanisms for communities at risk.

4 - Project management

This component will include support to the project management unit providing assistance to executing entities and ensure fiduciary compliance.

The **benefits** of the project include:

- Increased generation and use of climate information in decision making for adaptation planning
- Strengthened adaptive capacity and reduced exposure to climate risks
- Strengthened awareness of climate threats and risk-reduction processes
- Increased food security

The executing entity of the project will be the Permanent Secretariat of the Transport Sector Program (SP/PST), hosted by the Ministry of Transport, Urban Mobility and Road Safety (MTUMRS), which will manage the project in close collaboration with and in support of the Directorate General for Meteorology (DGM), the Directorate General of Water Resources (DGRE), the National Council for Emergency Relief and Rehabilitation (CONASUR), the Directorate General of Civil Protection (DGPC), the Early Warning System (SAP) of the National Food Security Commissariat (CNSA).

Since 2014, several consultations were held with the Government of Burkina Faso and users of hydromet information and warning services in preparing this project proposal. The proposed project is fully in line with key national strategies such as the Proposed National Program for Social and Economic Development (PNDES), the Sustainable Development Strategy, the National Civil Protection Policy, and the National Water Resources Strategy. It notably contributes to the implementation of law no 012-2014/AN from April 22 2014, which covers the prevention and management of risks, humanitarian crisis and disasters. The proposed project is also aligned with the National Adaption Plan (NAP) and the Intended Nationally Determined Contributions (INDC) of Burkina Faso to the UN climate convention.

Who benefits?	Where are the opportunities or entry points to the project to ensure equal participation and benefits? Does the project address the different needs and priorities of women and men? Will the services and technologies provided by the project be available and accessible to both women and men? Does the project recognize the distinct vulnerabilities of women and men and develop specific response strategies for each target group?
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Hydromet and early warning services act as a key enabler for a broad range of adaptation decisions, ranging from the agriculture sector and the related issue of food security and nutrition, infrastructure, disaster risk management, and others. For example, projected changes in climate are expected to result in increased rainfall over shorter time spans for some areas of Burkina Faso, with potential impacts on the levels of agricultural production and urban flooding, among others. Improved hydromet and early warning services would allow agencies to better monitor, prepare for and respond to extreme rainfall events and flooding, thus building adaptive capacity and reducing the vulnerability of communities, including women.

In areas of infrastructure development, hydromet information will inform the resilient design of relevant works such as bridges, culverts, and erosion protection. In terms of agriculture and food security, reliable hydromet information assists farmers in deciding which agricultural technologies and adaptation mechanisms may be most useful in responding to weather variability and climate change. In the context of growing tensions due to climate change between groups relying on seasonality to practice complementary activities like fishing, herding and farming on the same areas, the project should also contribute to ease tensions by fostering better dialogue between groups and enhancing preparedness to adapt to and address together the effects of disrupted seasonality. Private companies, micro-insurances and businesses also need and rely on the hydromet data to make investment decisions related to climate risk mitigation for their operations. Burkinabe women are heavily involved in all of these sectors, whether formally or informally, and are therefore set to be primary beneficiaries of an improvement of the country's hydromet and early warning services.

Gender entry points to the project

Agro-climate monitoring in the region indicates that drought conditions occurred during critical stages in the growing season, and that long-term effects of repeated drought shocks had consequences on soil quality, crop failure, and regional food shortage. By ensuring the delivery of services to communities, the project will benefit vulnerable groups, including the 80% of country's population whose livelihoods are dependent on predominantly rain-fed agriculture and about 5.3 million people directly exposed to drought or flooding. In Burkina Faso's agricultural sector, there are more women (52%) than men (48%), according to population analyses. The project will be an entry point for women's reduced economic vulnerability through natural disaster risk reduction, covering their enhanced preparedness, resilience and recovery capacities to natural disaster.

The project will rely on new technologies to capture, assess, and communicate data more quickly and with greater reliability, benefiting women equally as men. Mobile phones and tablets, up-to-date hydrological maps, and online platforms for two-ways information collection will improve risk management by enabling men and women to:

- Be better informed of risks.
- Better evaluate evolving risks.
- Better manage risks in pursuit of opportunity. Respond to risk more quickly.
- Evaluate the effectiveness of risk management and adjust their strategies accordingly.
- New technologies can make new types of information available, improve its timeliness, provide more flexible ways of handling information, and cut costs significantly.

Second, the project will be an opportunity **for women's empowerment through better women's inclusion in weather forecasting, warnings and disaster risk preparedness**. Such goals will be achieved through training, effective communication, and capacity building. The project will therefore generate enhanced economic opportunities and voice for women and girls.

To be successful the project needs to foster women's empowerment and elevate women's status within the community, increasing female participation in disaster risk resilience and decision-making. Gender norms need to be unpacked at every level of project cycles, including project design. Development aid has sometimes reinforced existing local gender norms, relegating women to a marginal role under pretext of their lower level of literacy and engagement compared to their male counterparts. For example, during interviews with women's organizations in the Sahel, Oxfam Canada (2013) found that women identify risks that are often absent from "mainstream resilience frameworks": "Women emphasize risks that originate at the household level, that are rooted in gender inequality, and that are exacerbated by cultural stereotypes about women's roles and their ability to engage in decision making. They also cite barriers to building resilience that are linked to sexual stereotypes, care responsibilities and time poverty".

It is thus recommended to mainstream gender issues in all the processes, roles and responsibilities during the generation and dissemination of the relevant hydro meteorological information. Meteorological services need to ensure: (i) equal involvement of women and men in agro-meteorological services and farmer-observer committees; (ii) the establishment of systems to verify that

information has reached both women and men equally; (iii) documentation of the hazards and climate risks that women consider relevant; (iv) collection of gender-differentiated data from regional networks, adjacent territories, and international sources accessible; (v) production of data and warnings that can be understood by both women and men; (vi) women and men trained on how to forecast hazards using different resources; and (vii) that women and men's traditional knowledge is considered equally.⁶

Indirect or gender-neutral policies will also be considered. Project interventions geared to support general services and public good – e.g. training of government officials and/or the extension of meteorological services to agriculture – needs to be considered through a gender lens as they can become catalyzers for women's empowerment. Recommendations on gender mainstreaming will be systematically provided in all project components to mitigate risks deriving from existing gender differentials in education, access to legal services, inputs, land, finances, technology and equipment in rural areas.

Each of the project components will spur social benefits:

Component 1 - Capacity building and institutional development

This will include: (i) training and capacity building programs for agencies' staff and management, (ii) enhancing institutional and regulatory frameworks, and (iii) providing support for detailed design and system integration of project activities. The scope of this project component is to enhance government capacity and regulatory frameworks in hydrology, meteorology, food security and disaster risk management.

Challenges, vulnerabilities and specific responses: The component draws heavily on training of government officials both at national and local level. Women are low represented in organization-wide task forces in disaster risk management, especially at local level. The regulatory frameworks needs to be enhanced in order to foster a better coordination among the government agencies involved (hydrology, meteorology, food security, and civil protection) and make sure that gender issues are considered as relevant for all the agencies involved. Training time and curricula need to be gender-sensitive; as women in Burkina Faso have lower levels of literacy and specific schedules. The teaching methodology needs to be adapted to allow both men and women to fully participate.

Component 2 - Improvement of hydromet and early warning infrastructure

This will include (i) expanding and upgrading hydromet observation networks, (ii) enhancing data collection & transmission, forecasting and decision support systems, and (iii) strengthening preparedness and emergency response facilities and operations. This component aims at reinforcing data collection and dissemination in hydromet observations strengthening preparedness.

Challenges, vulnerabilities and specific responses: Success depends on communities' capacity to participate, understand and being active agents for the preservation, maintenance and appropriate use of equipment.

Burkinabe women involvement in the development and delivery of hydromet services is currently quite limited. Moreover, their involvement in farming management decision-making is also extremely limited,

⁶ UNISDR, UNDP, and IUCN, 2009, *Making Disaster Risk Reduction Gender-Sensitive: Policy and Practical Guidelines*, Geneva.

although they perform 60 percent of the agricultural work; in addition, they have less access to farming equipment than men. The better inclusion of women in the hydromet technical services and the agricultural practice decision-making on an equal footing to men would improve productivity and climate risk resilience.

Strengthening preparedness and emergency response facilities and operations implies having well-trained units who are able to address gender-specific issues, master communication channels that work for women, and be prepared to address spike in violence, domestic violence and GBV during emergencies. As a commitment to gender equality, technical fields should be equally accessible to both men and women: when women are totally absent from a technical field efforts should be made to open up opportunities for gender-balanced teams. In addition, shelters for emergency response, communication equipment and hydromet information for extension services in agriculture should involve more women.

Component 3 - Enhancement of service delivery and warnings to communities

This component will include (i) establishing a national framework of climate services, (ii) improving flood and drought forecasting and warnings, (iii) developing new products for sector specific needs (focused on agriculture, food security and disaster risk management, etc.), (iv) strengthening “last mile” connectivity to ensure appropriate understanding and use of information, and (v) mobilization and sensitization of community and establishing effective feedback mechanisms for communities at risk.

Unpredictable weather, natural disasters (including drought, locust infestations and floods), environmental degradation and fluctuating commodity prices have led to numerous food security challenges in Burkina Faso. The enhancement of agro meteorology and early warning service delivery to communities, through enhanced connectivity will complement the existing initiatives aimed at strengthening food security: those include projects related to drought relief, the development of the milk industry, technical support to stabilize and restructure the cereal markets, food aid for refugees and those affected by conflict in neighboring countries, and the creation of cooperatives to enable small farmers to become competitive cereal suppliers on local and regional markets.

Challenges, vulnerabilities and specific responses. This is the key project component in terms of gender mainstreaming and focuses heavily on impacts, end-beneficiaries and their capacity to understand and react to warnings. Profiling of end beneficiaries is key to understand habits, livelihood activities, hazard exposure and vulnerability. Livelihood profiling of end beneficiaries often tends to focus on formal workers, their needs and preference. However, the most vulnerable population is often engaged in multiple forms of survival livelihood activities, which have low representation and visibility. For example, poor women are often engaged in petty trade, hairdressing, seasonal farm labor, and artisanal mining therefore do not receive appropriate training and information about risks and hazards. Relying on the local and community levels to identify women involved in the informal sectors and vulnerable to hydro meteorological hazards will be key since formal sources of information are likely to be insufficient to that respect. Beyond transmitting information, it is also important to deeply understand social and cultural norms are embedded in agency and influence decision-making. Improved last mile service require a blend of i) organizational and decision-making processes institutionalized; ii) effective communications equipment; iii) but most and foremost the fact that warning messages are recognized, understood and respected.

Burkina Faso: Social and Gender Assessment

Gender vulnerability in Burkina Faso is strictly interwoven with poverty, high fertility rates, land titling/land use and gender norms. Gender norms impact women and men, boys and girls in the way they i) understand and perceive risks, and ii) cope and respond.

Disasters reveal inequalities at all levels, including at the gender level. Migrant groups lacking citizen status, and ethnic groups lacking political voice and participation are more vulnerable to natural disasters. In turn, gender influences entitlement to economic opportunities and family care responsibilities, which can be disrupted in the event of a natural disaster, making women more vulnerable. For example, drought and erratic rainfall increase the workload of women and girls on family farms because they need to walk longer distances and spend more time securing water for cooking, household sanitation needs, and caretaking of young children and livestock. Additional time spent on resource collection means less time available for education, income generation, or household food production – all of which are cornerstones for resilient individuals and households. Women and girl's limited rights in succession and assets accumulation, also make them less resilient in buffering shocks.

Gender norms also influence the skills, strategies, and survival mechanisms such as food intake. For example, women may reduce the amount they eat so their children and husbands have enough. Small livestock, typically owned by women and youth, is sold first in hard times. Domestic violence, early and forced marriage, as well as gender based violence (GBV) tend to increase in times of insecurity and when social structures experience failures. The Sahel region ranks high in female genital mutilation, domestic violence and early marriage. For girls early marriage rate increases during food shortage times. Burkinabe women in general, and those affected by gender based violence in particular, are therefore vulnerable to the effects of natural disasters, since they are less independent socially and economically, and as such less prepared to develop coping mechanisms that differ from the traditional lifestyle which the natural disaster will disrupt. To be effective, a project aiming to help them be more resilient to hydro meteorological hazards therefore needs to be adapted to their specific needs and socio economic profile.

Country Gender Context:

What is the context?	What is the legal status of women in the country of intervention? What are the gender norms and values? What are the training and education levels among women and men? What are commonly held beliefs, perceptions, and stereotypes relating to gender?
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Due to gender imbalance in the level of education and literacy, women's limited rights and political representation, and access to social infrastructure, including health facilities, Mali ranks at the top ranking in maternal mortality, children's malnutrition and stunting. Although DRR and climate change

are high government priorities, female-led cooperatives, which tend to be less formal and numerous than men's, receive less information and support, and limited financial help.

In 2014 UNDP introduced a new measure, the Gender Development Index (GDI), based on the sex-disaggregated Human Development Index (HDI), defined as a ratio of the female to the male HDI. The GDI measures gender inequalities in achievement in three basic dimensions of human development: health (measured by female and male life expectancy at birth), education (measured by female and male expected years of schooling for children and mean years for adults aged 25 years and older); and command over economic resources (measured by female and male estimated GNI per capita).

The GDI is calculated for 161 countries. The 2014 female HDI value for Burkina Faso is 0.376 in contrast with 0.427 values for males, resulting in a GDI value of 0.881. In comparison, GDI values for Mali and Chad are 0.776 and 0.768 respectively.

Gender Inequality in Human Endowments – Education and Health

The 2010 HDR introduced the Gender Inequality Index (GII), which reflects gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Reproductive health is measured by maternal mortality and adolescent birth rates; the share of parliamentary seats held by women and attainment in secondary and higher education by each gender measures women's empowerment; and economic activity is measured by the labor market participation rate for women and men. The GII can be interpreted as the loss in human development due to inequality between female and male achievements in the three GII dimensions.

Burkina Faso has a GII value of 0.631, ranking it 144 out of 155 countries in the 2014 index. In Burkina Faso, women hold 13.3 percent of parliamentary seats, and 0.9 percent of adult women have reached at least a secondary level of education compared to 3.2 percent of their male counterparts. For every 100,000 live births, 400 women die from pregnancy related causes; and the adolescent birth rate is 115.4 births per 1,000 women of ages 15-19. Female participation in the labor market is 77.1 percent compared to 90.0 for men.

In comparison, Mali and Chad are ranked at 150 and 153 respectively on this index.

	GII value	GII rank	Maternal mortality ratio	Adolescent birth rate	Female seats in parliament (%)	Population with some secondary education (%)		Labor force participation rate (%)	
						Female	Male	Female	Male
Burkina Faso	0.631	144	400	115.4	13.3	0.9	3.2	77.1	90.0
Mali	0.677	150	550	175.6	9.5	7.7	15.1	50.8	81.4
Chad	0.706	153	980	152.0	14.9	1.7	9.9	64.0	79.2
Sub-Saharan Africa	0.575	-	506	109.7	22.5	22.1	31.5	65.4	76.6
Low HDI	0.583	-	461	92.1	20.5	14.8	28.3	57.2	79.1

Burkina Faso has a GII value of 0.631, ranking it 144 out of 155 countries in the 2014 index. In Burkina Faso, women hold 13.3 percent of parliamentary seats, and 0.9 percent of adult women have reached at least a secondary level of education compared to 3.2 percent of their male counterparts. For every

100,000 live births, 400 women die from pregnancy related causes; and the adolescent birth rate is 115.4⁷.

Social and cultural constraints limit women's access to basic services and land, and men tend to be responsible for making household economic decisions. Such disparities are due women's lower status, lower level of literacy, education attainment and completion, and lower control over assets and decision making.

In the domain of education, expected years in school for boys is 8.1 while for girls 7.4, while the mean years spent in school are 1 year for girls and 1.9 for boys. Primary school enrolment rates have increased in recent years to a national average of 87 percent (in 2015). But retention rates, gender and regional disparities, secondary school enrolment and the quality of education remain major concerns. The literacy rate among those over 15 years of age is a low 36 percent. The proportion of adults aged 25 and older who have at least some secondary education is very low for both genders, but especially so for women (0.9 percent compared with 3.2 percent for males). The birth rate for adolescent mothers, meanwhile, is 11.5 percent.

In the health sector, considerable progress has been made. Thanks to subsidized obstetric and neonatal emergency care, and free preventative care for pregnant women, maternal mortality has been cut to the current rate of about 0.37 percent from 0.55 percent in 2000. Over the same period, the mortality rate for children aged under 5 was reduced by more than half to 8.9 percent. Yet there are still many preventable deaths, mostly from diarrhea, malaria and measles. HIV prevalence has also dropped dramatically since 1994. But 22 percent of people living with HIV still lack access to antiretroviral treatment.

The national rate of global acute malnutrition (GAM) for children aged under five rose to 10.4 percent in 2015, according to the SMART nutrition survey. The rate of stunting, caused by chronic malnutrition, was 30.2 percent. An African Union-led cost of hunger study concluded that in 2012, undernutrition in children was costing Burkina Faso an estimated 7.7 percent of GDP.

The nutrition status in children is marked by regional disparities and a slight gender imbalance in favor the girls. In the Sahel region stunting prevalence is recorded with a rate close to 46%. This situation thus seems to keep up with the high infant mortality rate reported in this region. Though occupying the 4th place, stunting prevalence is also high in the Sud-Ouest region with a rate close to 40%, which is nearly the double of the rate prevailing in the Centre region. Stunting remains the most relevant malnutrition indicator of the level of welfare⁸.

Malnutrition – especially iron deficiency – and obesity are the main health concerns for women in Burkina Faso. While thinness in women is a concern in rural areas, obesity and overweight appear to be an urban phenomenon. The body mass index - used to rank women according to the WHO standards indicates that four groups can be identified, based on the nutritional status of women: (i) the group affected by thinness, (ii) the group of those women with a normal weight, (iii) the group of women affected by overweight, and (iv) that of women suffering from obesity. Thinness is a risk factor for a

⁷ UNDP, 2015, *Human Development Report. Briefing note for Countries on the 2015 Human Development Report, Burkina Faso*

⁸ World Bank, 2013, *Burkina Faso Non-Monetary Poverty and Gender Inequalities 1993-2010 Trends A Policy Note 5*, Washington, p.11

women during pregnancy, leading to low birth rate and maternal health issue, while obesity and overweight are risk factors leading to chronic diseases such as diabetes, cardiovascular diseases, as well as some cancers and muscular disorders. While obesity and overweight remains relatively insignificant in rural areas where only 5% of women are concerned in 2010, the proportion is higher in urban areas with an estimated rate of about 20% during the same year⁹.

Women’s decision-making and agency

Women are under-represented in political decision-making and in business and employment (World Bank, 2013). Female-headed households tend to be poorer after adjusting for household size and scale economies in consumption and within households, females perceive themselves as poorer than their husbands in terms of both wealth and decision-making power. As elsewhere in Sub-Saharan Africa, females are under-represented in political decision-making in business and employment.

<p>Who decides?</p>	<p>Who participates in the decision making in the household, the public sector, and corporate sector? Are the bargaining positions of women and men different? Are women involved in making economic decisions? Is there an equal participation of women and men in the political sphere? Who has political influence?</p>
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While some significant improvement is recorded since the 1990s, **Female Genital Mutilation (FGM)** and **early marriage** continue to be a serious issue in Burkina Faso, particularly in rural areas. Practices like FGM, as well as girls’ pregnancy and early marriage, are likely to curtail women and girls’ human rights. In Burkina Faso the occurrence of FGM significantly declined in the country as, among women aged 15-24, the proportion of women having undergone a genital mutilation decreased from 85% in 1998 to nearly 65% in 2010. The improvement is more significant in urban areas where the rates fell from 97% to 56% against 82% and 69% in rural areas. Early sexuality prevalence also decreased between 1993 and 2010, but still remains high. Indeed, the proportion of women having had sexual intercourse before being 16 still accounts for more than 20% in the country in 2010, namely 13% in urban areas and 26% in rural areas.

Early pregnancy, which only slightly declined over the period, also remains a serious concern especially in rural areas where the proportion of affected women accounts for 28% against 12% in urban areas. Early marriage also remains a primarily rural phenomenon though the incidence in cities is not negligible. Actually, the proportion of women having got married precociously decreased between 1993 and 2010 from 34% to 21%. In rural areas it fell from 57% to 50% over the same period¹⁰.

⁹ World Bank, 2013, *Burkina Faso Non-Monetary Poverty and Gender Inequalities 1993-2010 Trends A Policy Note 5*, Washington, p.13

¹⁰ World Bank, 2013, *Burkina Faso Non-Monetary Poverty and Gender Inequalities 1993-2010 Trends A Policy Note 5*, Washington, pp.15-16

Regarding early pregnancies, 4 regions (Cascades, East, Sahel, and South- West) are top with proportions standing at more than 30%. Concerning FGM, the North and Center-East regions appear to be mostly affected with a proportion of more than 80% women. On the other hand, the Center-West and Center-South regions are the least affected and display a proportion of less than 50% women. Although some efforts are being deployed since 2003, there still remains a large proportion of children who do not have a birth certificate.

Gender Differentials in Economic Opportunities and Control over Assets

Who owns what?	Do women and men have equal access to resources including finance, technologies, information, and services (at national, sectoral and local level)? Who has control over these resources? Do women and men equally benefit from these resources? Do women and men have equal access to education, technical knowledge, and/or skill upgrading?
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According to the Human Development Report 2015, some 85 percent of the population in Burkina Faso is employed in agriculture and only 12 percent in services. The work related indicators – although their limited coverage - provide a partial picture of the working conditions in the country. For example, the percentage of vulnerable employment is 89.6 percent, and child labor (% ages 5-14 years old) is 39.2¹¹.

The dimensions of access to credit, housing, assets, and basic utilities also deeply affect gender equality: **mobile phone** penetration is very high with 71.7 percent of the population owning a mobile phone, but we lack sex-segregated data in this respect. According to the Global Findex Index 2014, only 14 percent of the population owns a **bank account**, as most of the population is unbanked – 3 percent of which via mobile banking. Only 5 percent has formal savings and 9 percent has access to formal credit (see detailed table).

In terms of **land ownership**, women are disadvantaged compared to men. Muslim inheritance norms are bilateral, recognizing daughters’ rights to family property (albeit the half of their male siblings). Where the customary tenure system is strongly patrilineal, however, Muslim norms may be ignored and a strictly patrilineal inheritance applies. Amongst the Mossi communities of Burkina Faso, for example, although the majority of families are Muslim women do not inherit land. Only sons inherit land from their family, whilst daughters are given use rights to their father’s land if they are widowed or divorced. Single daughters with children also enjoy temporary use rights. Once she (re)marries, the family relinquishes responsibility over her¹². Married women depend on their husbands and cannot even decide where to live independently from their husband’s consent¹³.

Women’s situation is worsened by the practice of **polygamy**. No effective and gender-sensitive titling procedures have been developed for polygamous households. Several countries have attempted to legislate land rights for women in polygamous marriages. Under Burkina Faso’s 1990 Family Code, if a

¹¹ UNDP, 2015, *Human Development Report. Briefing note for Countries on the 2015 Human Development Report, Burkina Faso*

¹² World Bank, FAO, IFAD, 2009, *Gender in Agriculture Sourcebook*, p.129

¹³ IFC, 2016, *Women, Business and the Law*

couple is monogamous, their property is marital property, but if there is more than one wife, all property is separate property¹⁴.

Polygamous households present another set of issues in relation to marital property. Not all societies outlaw polygamy, and even if they do, the law is generally ineffective if polygamy is customary or traditional. Polygamy seriously affects women's rights to property, however, and generates much tension and anxiety over land rights in many countries. Polygamy complicates legislation requiring written consent of spouses to dispose of property; it also complicates provisions on inheritance and co-ownership of land. Legislating around polygamy is difficult, but to ignore formal or informal polygamy is to protect women's property rights inadequately. The situation is made even more difficult by the fact that many men refuse to acknowledge or discuss polygamy, and women are often hesitant to raise the issue.

Housing ownership and deprivation displays wide regional disparities. Thus, while the housing deprivation rate stands below 20% in the Centre region, it exceeds 90% in the Sahel region in 2010 (see part (1) of Figure 1.3). The Boucle du Mouhoun and the Sud-Ouest regions have also high rates which go beyond 80%. The Centre-Est region also displays a relatively low rate, with a level below 30%. Differences in deprivation in some regions (Boucle du Mouhoun, Centre and Centre-Sud) increased over the period by less than 10 percentage points. Inversely, in the other regions deprivation of housing dropped, especially in the Centre-Nord where the reduction ranges between -20 and -30 percentage points¹⁵. Women appear to be slightly disadvantaged in the access to basic services as compared to men.

Livelihood areas and vulnerabilities to natural disasters

Although women make up 65 percent of farmers, they largely do subsistence farming and have very limited land use and ownership rights. These roles and responsibilities vary slightly between different ethnic groups.

Burkina Faso's national economy is based **on agriculture**, the exploitation of natural resources and stockbreeding. Together, these three sectors are the livelihood for 92 per cent of the population. Plots cultivated by women are more vulnerable to climate change. The land where they grow their crops, either as part of a group or individually, is usually of poorer quality. Because they do not own these plots, women do not invest in them. Moreover, they do not use adaptation techniques such as *zai pits* or stone walls, since they do not have the necessary physical strength and support. They do not have access to the appropriate tools (which are reserved for men's plots), and fertilizers are usually used on family-owned land. As a result, these plots produce lower yields and are more vulnerable to climate change. Another important impact of climate change on women is increased workload¹⁶.

Droughts, floods and a lack of rainfall all damage harvests, meaning families do not have enough to feed themselves throughout the year. Moreover, during the period between harvests, women are

¹⁴ World Bank, FAO, IFAD, 2009, *Gender in Agriculture Sourcebook*, p.157.

¹⁵ World Bank, 2013, *Burkina Faso Non-Monetary Poverty and Gender Inequalities 1993-2010 Trends A Policy Note* 5, Washington, pp.3-5

¹⁶ OXFAM, 2011, *Climate change and Women Farmers in Burkina Faso*

responsible for providing food for the family, which means they have to redouble their efforts to seek alternative activities that will bring in income with which to buy the food they need. They spend more time fetching water or wood, which are increasingly scarce as a result of desertification and overexploitation. The increased workload leaves women with very little time to dedicate to income generating activities or take part in community life.

Who does what?	What is the division of labor among women and men? What is the situation of women and men in the specific sector of intervention? What is the participation between women and men in the formal/informal economy? Who manages the household? Who takes responsibility for the care of children and the elderly?
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Normally in Burkina Faso, the male head of the family is responsible for growing cereals on the family farm. Once the cereals have been harvested, they sell part of this harvest, enabling them to have their own funds. This money is used for their personal expenditure or to finance family parties and celebrations. The rest of the cereals are stored and used to feed the family.

It is the husband’s role to distribute supplies and to periodically provide women with rations. The women are responsible for processing the cereals into flour, making the food and producing sauce or extra ingredients (this means providing all the food, in addition to the cereals). Men normally have a productive role: they are responsible for growing the cereals, as well as building and maintaining the house, buying and selling livestock and, in some cases, doing paid work.

Women tend to have both a productive and reproductive role: they are responsible for providing food for the entire family, looking after children and sick family members, cooking, looking for water and wood, harvesting and processing forest products, and working on the family farm. They also perform some gender-specific productive tasks, such as selling and marketing products, feeding livestock and growing crops in an individual or collective plot. The period between harvests (from the time the cereal stocks from the first harvest run out to the beginning of the second harvest), between June and August, is the hardest¹⁷.

Livelihood Activity	Men’s Role	Women’s Role	Control over Resources
Agriculture	Men are mainly responsible for cereal and cash cropping production and sale. Cereals are the main staple food.	If women cultivate cereals they cannot take decision on extension practices. In some region, beyond working on the family farm, they also work on a plot of land assigned to them by their husband/father	Male household heads make decision on extension practices (when to plant and harvest; what to buy or sell and at what prices). Men also control the income from cash crops and sale of cereals and the share part to be distributed to the wives.

¹⁷ OXFAM, 2011, *Climate change and Women Farmers in Burkina Faso*

			Women retain control only of the vegetable they sell and produce.
Cattle and sheep herding	Men are responsible for buying and selling cattle	Women can contribute in cattle fattening when the livestock activity is sedentary	Only Fulani women can own cattle and control the income from the sale of milk and dairies
Farmyard activities & poultry	Men do not participate in this activity	Women and children are responsible for this activity	Both men and women control the revenues of this activity
Forest products harvesting (timber, shea butter, nere, honey, <i>soumbala</i>, baobab leaves)	Men marginally participate in this activity as lumberjack and timber production	Women are mainly responsible for forest harvesting, processing and sale of non-timber products	Men and women control the income of their activities
Horticulture	Men begin to engage in this practice, depending to the size of the plot	Women grow trees and vegetables in plots of land assigned to them by their husband	Women sell the products at the market and normally control the revenues of the sale
Fetching water	-	Women and children are involved in this activity	Water resources are controlled by the elders
Fetching firewood	-	Women and children are involved in this activity	Forests are public land
Petty trade	-	Women are mainly responsible for this activity	Women can decide what to produce and whether to sell
Migration and remittances	Men (both the household head and young male adults) migrate either temporarily during the off season to send remittances. Young men can migrate to neighboring countries (mainly Cote d'Ivoire) for long-term or permanently	Women tend to stay behind to look after the family and the farm	Men control the revenues of their work, decide where to seek employment and when they return home
Day labor	Men can find jobs on farms and off- farm activities	It is practically impossible for women to find paid work in the rural sector	Men retain control over the income
Children's care and education	Men make decisions on whether children should pursue education	Women are responsible for paying school fees and taking care for the family, including health fees	

Source: OXFAM

A sector specific vulnerability analysis has been carried out for this project (pastoralists, agriculturalists and fishermen) within the World Bank-led PRECA-Sahel project TA framework. Data analyze specific land/water resources use and gender differentials in access, entitlements, and income. They also take into account social change under stress and economic shocks. Available data on household coping mechanisms are also available through a wide range of sources, including a World Bank survey at village level on climate adaptation (World Bank, 2011) and a Poverty and Gender Note about Burkina Faso¹⁸.

Burkina Faso is a fragile country and all of the fundamentals for growth tend to suffer in this context. Fragile and conflict affected situations create severe challenges including for jobs. Where institutions and infrastructure are weak and there are high levels of insecurity or instability, private investors may be

¹⁸ World Bank, 2013, *Burkina Faso Non-Monetary Poverty and Gender Inequalities 1993-2010 Trends A Policy Note 5*, Washington

reluctant to do business. Disrupted education and training mean that people's skills in these settings are often well below their potential. In Burkina Faso working poor with PPP \$2 a day is the large majority (70.1 percent of the total population)¹⁹.

Fragility also contributes to the severity of more gender-specific constraints. Insecurity and lack of infrastructure can disproportionately **affect women's mobility**. Fragility and conflict tend to worsen gender-based violence, both in the household and as a weapon of war. According to the World Bank, female entrepreneurs in Afghanistan and Iraq face lower mobility and especially high vulnerability to harassment and violence, hindering simple business transactions or building networks. In Burkina Faso, Niger, Pakistan, the Philippines, South Sudan and Zimbabwe, surveys conducted by Plan International found that while both adolescent boys and girls faced high dropout rates in periods of crisis, due largely to heightened needs for children to participate in paid labor (especially boys) or domestic work (especially girls), girls overall were particularly vulnerable to dropping out. Girls are also especially vulnerable to early and forced marriage²⁰.

At firm level, fragility and vulnerability to natural disaster hampers economic growth and therefore access to jobs. According to the World Bank Enterprise Surveys²¹ factors shaping the business environment are mainly access to financial services, competition from the informal sector, taxes and corruption.

¹⁹ UNDP, 2015, *Human Development Report. Briefing note for Countries on the 2015 Human Development Report, Burkina Faso*

²⁰ World Bank, 2014, *Gender At Work, A Companion to the WDR on Jobs*, p.51

²¹ World Bank – IFC, 2009, *Enterprise Survey. Burkina Faso Country Profile*

Burkina Faso

Sub-Saharan Africa		Low income	
Population, age 15+ (millions)	9.2	GNI per capita (\$)	750
	Country data	Sub-Saharan Africa	Low income
Account (% age 15+)			
All adults	14.4	34.2	27.5
Women	12.6	29.9	23.9
Adults belonging to the poorest 40%	8.9	24.6	19.4
Young adults (% ages 15–24)	8.3	25.9	20.2
Adults living in rural areas	13.0	29.2	24.8
Financial Institution Account (% age 15+)			
All adults	13.4	28.9	22.3
All adults, 2011	13.4	23.9	21.1
Mobile Account (% age 15+)			
All adults	3.1	11.5	10.0
Access to Financial Institution Account (% age 15+)			
Has debit card	4.3	17.9	6.6
Has debit card, 2011	2.0	15.0	6.3
ATM is the main mode of withdrawal (% with an account)	20.2	53.8	20.2
ATM is the main mode of withdrawal (% with an account), 2011	3.6	51.7	19.7
Use of Account in the Past Year (% age 15+)			
Used an account to receive wages	3.9	7.3	3.2
Used an account to receive government transfers	2.0	3.8	1.0
Used a financial institution account to pay utility bills	0.9	2.8	0.9
Other Digital Payments in the Past Year (% age 15+)			
Used a debit card to make payments	1.4	8.7	2.1
Used a credit card to make payments	1.4	1.9	0.6
Used the Internet to pay bills or make purchases	1.7	2.4	1.2
Domestic Remittances in the Past Year (% age 15+)			
Sent remittances	18.5	28.7	18.3
Sent remittances via a financial institution (% senders)	13.0	31.0	15.4
Sent remittances via a mobile phone (% senders)	16.5	30.8	42.8
Sent remittances via a money transfer operator (% senders)	30.2	21.0	14.1
Received remittances	26.7	37.2	25.6
Received remittances via a financial institution (% recipients)	9.2	26.6	13.0
Received remittances via a mobile phone (% recipients)	6.9	27.6	33.8
Received remittances via a money transfer operator (% recipients)	24.0	22.1	14.8
Savings in the Past Year (% age 15+)			
Saved at a financial institution	8.7	15.9	9.9
Saved at a financial institution, 2011	7.9	14.3	11.5
Saved using a savings club or person outside the family	18.0	23.9	16.3
Saved any money	50.8	59.6	46.5
Saved for old age	7.5	9.8	8.3
Saved for a farm or business	15.3	22.7	16.7
Saved for education or school fees	20.4	22.9	16.6
Credit in the Past Year (% age 15+)			
Borrowed from a financial institution	5.0	6.3	8.6
Borrowed from a financial institution, 2011	3.1	4.8	11.7
Borrowed from family or friends	30.5	41.9	34.9
Borrowed from a private informal lender	2.4	4.7	6.5
Borrowed any money	46.4	54.5	52.5
Borrowed for a farm or business	8.5	12.8	12.2
Borrowed for education or school fees	9.9	12.3	10.9
Outstanding mortgage at a financial institution	3.4	5.2	4.1

Gender Action Plan

Reducing Vulnerability to Climate Change and Natural Disasters

As a semi-arid Sahelian country subject to various **hazards** such as low and variable rainfalls, locust invasions, and storms, Burkina Faso must deal with significant problems of land degradation, deforestation, and desertification. Climate change and landscape degradation, combined with slow economic development, have resulted in chronically high rates of food insecurity and undernutrition. Access to electricity and sanitation is poor, and insufficient investment in education and infrastructure makes it difficult to consolidate development gains. There is a critical need for productivity-enhancing agricultural interventions through better integration of land, fertilizer and water management.

Burkina Faso is subject to **vulnerability** caused by disaster and risks from flood or droughts, deteriorating natural resources, food insecurity and malnutrition, in addition to the pastoralist lifestyle, which involves increasing competition for water and pasture that sometimes lead to conflict. Food security in Burkina Faso is precarious: insecurity affects over 20 percent of the population (more than 3.5 million people). Periodic droughts lead to food crises, and government uses food reserves to transfer food from surplus to deficit regions. The situation can be exacerbated by the influx of refugees as a result of crises in neighboring countries, such as Mali.

In parallel with efforts to enhance productivity, the country therefore needs to ensure the sustainable development of its natural capital and ensure proper management of weather-related risks. Leveraging the Government's sustained commitment to environmental protection and sustainable land management over the last 30 years, it must foster behavioral change in land use and in management of forest, agro-forestry, and agricultural systems; slow land degradation to enhance climate resilience. A more effective disaster risk management processes is critical for addressing vulnerability to climate changes²². Therefore the country also need to strengthen the population's resilience to natural hazards through **investment in Early Warning Systems (EWS), housing, and financial services for the poor.**

Hydromet Information, adaptation, resilience to climate risks

Since the development of national adaptation program of action, significant efforts have been made to promote the planned adaptation. Despite these efforts, food security remains critical for the rural population. One reason for this is that the approaches and planning tools used are varied and variously promote the participation of local populations. Indeed, the level of participation of rural people in the planning, monitoring and evaluation of adaptive capacity is often not complete and inadequate. Participation is limited to either (1) the vulnerability analysis, leaving the choice to technicians for adaptation planning to be implemented by the rural populations, or (2) to the choice of tasks by communities, technicians having already investigated the communities' vulnerability. Consequently, coherence between the vulnerability analysis and adaptation is often suboptimal.

Under such conditions, it is difficult or impossible to implement the monitoring-evaluation system that will inform monitoring- evaluation systems of natural resources and population's adaptation. Two

²² World Bank, 2013, *Burkina Faso: Country Partnership strategy 2013-2016*, pp.14-15

questions are crucial: (1) Can stakeholders' involvement in the generation and use of meteorological information, tools for disaster risk management, monitoring and evaluation foster better resilience? (2) Are tools adapted to users?

We know that women often respond differently to corresponding incentive measures and public policy interventions; have different relationships with institutions (international organizations, national and local governments, and traditional authorities) and unequal access to, and control over resources²³.

For example, IUCN and IFPRI used the approach of sustainable livelihoods in the context of local adaptive strategy in five communities (Tougou, Pabio, Ramdola, Lemnogo-Mossi and Koubi-Thiou). Tools for vulnerability analysis and the vision-action-partnership were initially applied in a community in the CCAFS block Tougou (Tibtenga). The results were submitted to representatives of four other communities (Pabio, Ramdola, Lemnogo-Mossi and Koubi-Thiou) and development partners in the Yatenga. During the workshop, tools for vulnerability analysis and adaptive capacity planning were applied to help identify triggers of vulnerability. Finally, the same tools were applied separately for men and women groups to understand the differences related to gender²⁴.

Results show some differences between women and men in the analysis of vulnerability to climate hazards and adaptation strategies. Such differences lie on sex-based labor segregation and differences in the level of dependency of each group from related livelihood activities. Such a dependency influences perceptions for both men and women. For example, fuelwood was identified as an important resource for women, while pastoral lands were listed as most important for men. Men listed flooding as a major hazard for cattle and pastoral land. Drought and strong winds were identified as major hazards by both women and men.

Adaptation strategies implemented and / or identified by each group also differ slightly for example in the development of agricultural land associated with assisted natural regeneration that would fight against drought and strong winds (identified by both genders) and floods (identified by men). Based on their level of access to livelihood resources, women and men showed a relative difference in the analysis of the importance of resources for the implementation of adaptation strategies. Thus, in general, men give more importance to natural and physical resources, while for women, social and human resources are the most important. This difference is probably related to the fact that men have always received more training and information than women.

Gender-Specific Risks

Women and girls are at far greater risk of experiencing physical and sexual violence in emergency settings. Protection from violence is one of the minimum standards established as a principle for humanitarian aid. The types of violence against women and girls (VAWG) that are common in emergency settings include rape and other sexual assault, physical assault, psychological and emotional abuse, sexual exploitation, and trafficking. It is important to note that the type of response required will vary depending on the forms of VAWG being perpetrated. For example, trafficking of women and girls

²³ IUCN, 2016, *Roots for the Future*, p.261

²⁴ CGIAR, 2014, *Analyse participative de la vulnérabilité et planification de l'adaptation au changement climatique dans le Yatenga, Burkina Faso* Document de travail No. 64

might involve very different actors and responses (especially if it happens across borders) than increased incidence of rape within a specific location or an increase in physical intimate partner violence (IPV)²⁵.

In addition to the direct harm caused by violent acts, VAWG can also prevent women and girls from accessing services or securing shelters/safe spaces during an emergency, further increasing their likelihood of injury or death. It can also impact women's ability to access aid and other resources during recovery and reconstruction. Therefore, it is vital that disaster management projects include measures to prevent and effectively respond to VAWG.

Ample studies have shown that natural disasters, including tsunamis, hurricanes, earthquakes, and floods, disproportionately affect women and girls, who are at greater risk of violence and exploitation than men and boys in the face of uprooted housing and traditional support structures, disrupted access to services, and both structural and social obstacles to accessing food, relief, supplies, and latrines. In 2010, unsafe living conditions after the earthquake in Haiti contributed to sexual violence against women and girls (VAWG) in camps; and both psychological and economic violence increased during and prior to Tropical Storm Agatha in Guatemala. In Sri Lanka and other countries affected by the 2004 Indian Ocean tsunami, increased levels of intimate partner violence (IPV) and non-partner rape were documented in the wake of the disaster. A study conducted four years after Hurricane Katrina occurred in the United States found that the rate of new cases of VAWG among displaced women also increased and did not return to the pre-hurricane baseline during the protracted phase of displacement.

Box 1. Promising Practices: A multi-media public information campaign on post-disaster VAWG in Nicaragua

The post-Hurricane Mitch campaign, "Violence Against Women: A Disaster Men CAN Prevent," designed and promoted by the Puntos de Encuentro Foundation in Nicaragua, was a novel approach addressing post-disaster VAWG, especially intimate partner violence (IPV). This nationwide campaign cleverly applied the theme of rebuilding to personal relationships, drawing parallels between the hurricane and IPV. Campaign activities consisted of TV and radio announcements, educational materials, public presentations and training workshops, and promotional materials with the campaign slogan, including t-shirts, hats, calendars, and bumper stickers. One leaflet, for example, described seven reasons why VAWG negatively impacts the community, society, and development efforts, and provided men with anger management strategies and tips for peaceful conflict resolution.

A mixed-methods evaluation of the campaign, comparing men exposed to the campaign with controls, found that the greatest impact was an increase in men's belief in their ability to avoid violence: 15 percent more of the men exposed to the campaign believed this was the case, compared with the controls. The evaluation also revealed a greater belief in the perception that VAWG is as destructive as natural disasters and can hinder progress at the community level (15% increase among the men exposed to the campaign).

Source: Reyes, Ruben. (n.d). *Violencia contra las mujeres: un desastre que los hombres sí podemos evitar*: http://www.jerez.es/fileadmin/Documentos/hombresxigualdad/fondo_documental/Violencia_masculina/Violencia.Un_desastre_que_los_hombres_si_podemos_evitar._Ruben_Reyes_Giron..pdf

²⁵ World Bank, IDB, The Global Women's Institute, 2015, *Violence against Women and Girls (VAWG). Initiate, Integrate, Innovate*; Vawgresourceguide.org

Knowledge Gaps

Although documentation on gender differentials in entitlement, opportunities and risks is widely available through desk review, other issues remain unknown and require deeper investigation, such as differentials in vulnerability in each sub-category and village clusters are so far unknown. Gender-disaggregated data collection within disaster risk management is a recent phenomenon, including in post-disaster need assessment (PDNA) reports. These are some of the most pressing questions necessary to entangle the nexus between resilience, coping mechanisms, and behavioral change in early warning systems:

- How women, men and youth are affected differently by various emergencies?
- Are Governments' EWS and strategies taking into account different needs and social roles of women and men, before, during and after a natural disaster?
- Are statistics and plans emerging from disaster mitigation effectively disaggregated by sex and age?
- Are women, men and youth affected by natural disasters granted equal treatment, rights and access to services and resources?
- Do women, men and youth adapt differently to the new areas, livelihoods, prerequisites, problems and possibilities they encounter?
- Are plans and strategies for resettlement and relocation gender sensitive?
- Are women, men and youth, benefitting from community education, awareness-raising, and training?
- Are women and men able to participate in decision making processes?
- Are women and men in being affected differently by the presence of forced migrants, due to climate change and conflict?
- Are partnerships, consultations, and involvement of stakeholders during an emergency, gender sensitive?

To bridge knowledge gaps the following steps are suggested: for example (i) identifying key informants among government officials; (ii) hiring a local gender expert; (iii) consulting local female-led organizations.

Gender Action Plan

Designing a Gender Action Plan (GAP) requires a thorough plan for measuring results. A key piece of project creation is setting up a sturdy framework for monitoring and evaluation to determine important project milestones and targets as indicators of success and true progress toward equality in entrepreneurship.

The following five steps can be used to guide the design of a gender-sensitive monitoring and evaluation framework:

1. Provide a detailed, written description of project activities to be monitored. The first step in designing a gender-sensitive monitoring and evaluation (M&E) framework is to conduct the identification and design phases of an intervention using a gender-focused point of view. Project team will ensure that activities

include consultations with women’s groups and relevant stakeholders, that initial data collection gathers gender-disaggregated data, and that all preparatory assessments integrate gender issues.

2. Identify indicators to be measured, data sources and monitoring tools to be developed, and agree on frequency of data collection. The focus of this step is for the project team and all partners to agree on what specific indicators will be included in the results framework, the data sources, along with the tools that would have to be developed to collect data, and the frequency of data collection. A gender-sensitive monitoring framework would include a mix of indicators related to outputs (goods and services), outcomes (behavioral, institutional and societal changes) and impact (positive or negative, direct or indirect long-term effects).

3. Agree on evaluation methods. Evaluation methods should be based on program priorities and desired data. A combination of quantitative and qualitative approaches in the M&E framework is strongly recommended, specifically for projects promoting female entrepreneurship. Since some key dimensions are difficult to capture with quantitative data, such as changes in women’s assertiveness or self-confidence, qualitative data can be collected in focus group discussions with the beneficiaries and household members, or through direct observation of the team implementing the project.

4. Develop communication channels that govern the flow of monitoring data, and identify resources, constraints and opportunities available for monitoring. Project monitoring data must flow from the field to the project management team under set communications and reporting requirements. Such requirements will help the program team know who will be responsible for collecting, documenting, checking, and reporting on data collected at each stage of the project.

5. Bring it all together. The M&E framework outlines gender-disaggregated data to be collected during project implementation and to be used to determine impact on men and women at the end of the project. The framework should be integrated into the program’s work plan and should be updated if program objectives or activities change. Progress on gender-sensitive indicators should be reviewed regularly in order to make mid-course corrections to the program.

PDO	Gender Action Plan (GAP)	Gender-Sensitive Indicators
1 - Capacity building and institutional development	<ul style="list-style-type: none"> Equal opportunities are granted to men and women in accessing jobs in DRM in various types of technical and scientific expertise. Women’s organizations are involved in decision-making, and communities are consulted. Produce case studies of successful gender-sensitive Early Warning Systems (ESW) for training and to sensitize senior government and political leaders 	# of women trained in technical fields # of women’s organizations involved Gender-sensitive manual(s) prepared for government officials

	<ul style="list-style-type: none"> • Gender is mainstreamed in the legislation mandating the preparation of hazard and vulnerability maps for all communities. Hazard and vulnerability maps are based on the analysis of gender-disaggregated data. • Communities (equally women and men) are involved in the review and update of risk data each year. • Use gender-sensitive indicators and involve non-governmental organizations in collecting data and encourage the communities to contribute. • Allocate appropriate resources to gender mainstreaming across all agencies, designate a gender focal point to strengthen mechanisms of systematic coordination of gender action plan across agencies involved in ESW. • Ensure an adequate study sample size, which is important to make confident statements about gender-differentiated impacts; however, researchers should be careful about generalizing results for representative populations • Curricula are developed for schools to train children and youth to disaster risk preparedness. 	<p># Regions where CSOs are involved in promoting women’s role in disaster risk preparedness</p>
<p>2 - Improvement of hydromet and early warning infrastructure</p>	<ul style="list-style-type: none"> • Integrate indigenous knowledge (including women’s specific knowledge) and build community support around data collection and transmission • Train communities – both men and women - to collect data, use equipment and maintain basic infrastructure. Motivate the local population to participate by identifying champions/catalysts in behavioral change 	<p># Local communities sensitized to EWS</p> <p># Training in local communities (sex-disaggregated data on participation, involvement, leadership roles)</p>

	<ul style="list-style-type: none"> • Establish an effective hazard monitoring and warning service that consider the current abilities and needs of both men and women • Women and men are involved equally in the development of risk and hazard maps by opening up technical and management fields to women • In case of emergency, facilities and information are in place to prevent and address GBV, domestic violence, and child abuse. Specialized personnel are mobilized, funds are allocated to hire the personnel and buy the necessary equipment. • In case of population displacement or mass migration, facilities are in place to help unaccompanied minors and teen-agers access information. Shelters are identified for the vulnerable population (women and teen-agers head of household, lactating and pregnant women, families experiencing domestic violence, unaccompanied children, disabled persons) 	<p>Frequency of data updating on women and men’s capacity to respond to emergency</p> <p># Emergency shelters financed (per region) providing protection against GBV</p>
<p>3- Enhancement of service delivery and warnings to communities</p>	<ul style="list-style-type: none"> • Analyze women’s capabilities in understanding warnings, taking action and responding. Pay attention to difference in behavioral patterns across ethnic groups, casts and social classes. • Identify women’s communication channels for dual system data transmission and include them in the EWS, even though they look as less orthodox • Central library or GIS database include gender-differentiated information, tools and case studies. It is easily accessible and provides suggestions on how to address gender-specific challenges. 	<p>Gender-sensitive information included in Report(s)</p> <p>Report(s) prepared on best communication channels in emergency (radio, mobile, direct communication through CSOs, etc.) as preferred by sex</p> <p># Outreach initiatives and information campaigns</p>

- **Identify and profile end-beneficiaries** for a better accuracy of data collection and better targeting
- Develop **new products tailored on specific end-users** (e.g. small plot farmers, nomad or semi-nomad pastoralists, fishermen, petty traders, artisanal miners).
- Analyze behavior patterns of men and women, children and elders – time of the day, type of hazard exposure, financial and social vulnerability, repeated stress or shocks to which they are exposed
- Make sure that messages incorporate values, concerns and interest of women and men
- Studies can be carried out to evaluate messages' impact and resonance among women and men of different age groups, social class, etc.
- Gender-sensitive lessons should be incorporated into disseminations efforts.
- Warning dissemination channels ensure that both men and women receive information
- Women and men are both part of volunteer network trained and empowered to receive and disseminate warnings to remote households and communities
- Warning communication technology is accessible and reaches women and men
- Gender experts and women's groups are consulted to assist with identification and procurement of appropriate equipment for warning dissemination
- Gender-sensitive strategies are developed to build credibility and trust in EWS development

Gender Log Frame

Impact Statement:

The project will strengthen the adaptive capacity and climate resilience of vulnerable communities and the economy of Burkina Faso. This will be achieved by developing national hydro-meteorological and warning services capacity, which will in turn support a better adaptation planning for public and private sector users. The project will make sure that women and men equally access early warning information.

Outcome Statement:

The project will achieve the following outcomes:

1. Capacity building for government institutions in acknowledging gender differentials in responding to climate risks.
2. Improvement of hydromet infrastructure, which will include more women in the production and transmission of EWS to communities and users' groups.
3. Enhancement of service delivery and warnings to communities. In addition, the project will build capacity in responding to specific women's needs – given their higher vulnerability and mortality in case of natural disasters.

Output(s) Statement: Write the output statement here.

4. The project will provide training and capacity building programs for agencies' staff to enhance institutional and regulatory frameworks in integrating gender considerations into DRM activities
5. The Gender Action Plan will make technical fields in hydromet accessible to both men and women through a quota system for women. In addition, shelters for emergency response, communication equipment and hydromet information for extension services in agriculture will involve more women. This target will be realistically achieved over time, however the project aims at promoting women's inclusion through affirmative actions.
6. The project will improve flood and drought forecasting and warnings by (iii) developing new products for sector specific needs (agriculture, health, energy, water resources management, disaster risk management, etc.), (iv) strengthen "last mile" connectivity to ensure appropriate understanding and use of information, and (v) mobilizing and sensitizing communities through targeted and gender-sensitive campaigns.
50 percent of beneficiaries will be female.

Activities	Indicators and Targets	Timeline	Responsibilities
<p>Capacity building and institutional development;</p> <ul style="list-style-type: none"> Equal opportunities are granted to men and women in accessing jobs in DRM and in various types of technical and scientific expertise. Women’s organizations are involved in decision-making, and communities are consulted. Central library or GIS database include gender-differentiated information, tools and case studies. It is easily accessible and provides suggestions on how to address gender-specific challenges. Produce case studies of successful gender-sensitive Early Warning Systems (ESW) for training and to sensitize senior government and political leaders 	<p>20 women trained in technical fields every year. 50 percent of personnel operating in shelters should be female.</p> <p>50% of women consulted in each region (with separate FGD for women) At least ONE women’s organization consulted and trained in each region</p> <p>Gender-sensitive manual(s) and a gender strategy prepared for each government line A national gender strategy for disaster risk prevention is prepared</p>	<p>20 women by 1st year; 40 by 2nd year; 100 women by the end of the project. 25% of women operating in shelters by the 3rd year.</p> <p>Consultations in each hazard-prone are carried out in the first year;</p> <p>50 percent CSOs’ training by the 4th year</p>	<p>CONASUR: DGM: DGPC: DGRE: MTUMRS SAP (CNSA)</p> <p>CONASUR: National Council for Emergency Relief and Rehabilitation; SAP</p> <p>CONASUR: National Council for Emergency Relief and Rehabilitation</p>

<ul style="list-style-type: none"> • Recommendations for gender mainstreaming in the legislation are produced mandating the preparation of hazard and vulnerability maps for all communities. Hazard and vulnerability maps are based on the analysis of gender-disaggregated data. • Allocate appropriate resources to gender mainstreaming across all agencies, designate a gender focal point to strengthen mechanisms of systematic coordination of gender action plan across agencies involved in ESW. • Curricula are developed for schools to train children and youth to disaster risk preparedness. 	<p>10 percent of the budget in each sub-activity is earmarked for gender mainstreaming</p> <p>Budget are allocated Focal points are appointed</p> <p>A manual for school children is prepared. All teachers are trained.</p>	<p>By 18 months from the inception of the project</p> <p>By the 2nd year focal points are appointed.</p> <p>By 18 months from the inception of the project</p>	<p>CONASUR: National Council for Emergency Relief and Rehabilitation</p> <p>CONASUR: DGM: DGPC: DGRE: SAP (CNSA)</p> <p>CONASUR: National Council for Emergency Relief and Rehabilitation</p>
<p>Improvement of hydromet and early warning infrastructure</p> <ul style="list-style-type: none"> • Integrate indigenous knowledge (including women’s specific knowledge) and build community support around data collection and transmission • Use gender-sensitive indicators and involve non-governmental organizations in collecting data and encourage the communities to contribute. • Train communities – both men and women - to collect data, use equipment and maintain basic infrastructure. Motivate the local population to participate by identifying champions/catalysts in behavioral change • Establish an effective hazard monitoring and warning service that consider the current abilities and needs of both men and women • Women and men are involved equally in the development of risk and hazard maps by opening up technical and management fields to women 	<p>CSOs are involved in promoting women’s role in disaster risk preparedness:</p> <ul style="list-style-type: none"> • At least ONE CSO in each region is involved • Among participants are 50 percent are women • 30 percent of women in leadership position (Treasurer, President, National Representative, equipment operator) 	<p>Communities are informed and involved:</p> <p>30 percent of communities start collecting data by the 3rd year</p> <p>Women’s quota target are achieved by the 3rd year</p>	<p>DGM: DGPC: DGRE: SAP (CNSA)</p>

<p>Enhancement of service delivery and warnings to communities</p> <ul style="list-style-type: none"> In case of emergency, facilities and information are in place to prevent and address GBV, domestic violence, and child abuse. Specialized personnel are mobilized, funds are allocated. In case of population displacement or mass migration, facilities are in place to help unaccompanied minors and teen-agers access information. Shelters are identified for the vulnerable population (women and teen agers head of household, lactating and pregnant women, families experiencing domestic violence, unaccompanied children, disabled persons) <ul style="list-style-type: none"> Analysis of women’s capabilities in understanding warnings, taking action and responding to warnings including behavioral patterns across ethnic groups, casts and social classes. 	<ul style="list-style-type: none"> During consultations both women’s and men’s hazards and vulnerability are documented <p>2 Emergency shelters financed (per region) providing shelter also providing protection against GBV and domestic violence.</p> <p>Shelters will provide:</p> <ul style="list-style-type: none"> - medical support - legal advice - psychological support - temporary housing - prevention and awareness sensitization - social services for unaccompanied minors, elders, disables and other vulnerable groups <p>Gender-sensitive information included in report(s) and training</p>	<p>Existing emergency shelters are re-qualified by the 2nd year</p> <p>The remaining shelters are equipped including for GBV risk prevention by the 4th year</p> <p>Achieved by the 2nd year – see component 1</p>	<p>CONASUR and SAP (CNSA) in collaboration with the Ministry of Women, National Solidarity and Family Affairs</p> <p>CONASUR SAP (CNSA)</p>
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<ul style="list-style-type: none"> • Identification of women’s communication channels for dual system data transmission • Analyze behavior patterns of men and women, children and elders – time of the day, type of hazard exposure, financial and social vulnerability, repeated stress or shocks to which they are exposed • Make sure that messages incorporate values, concerns and interest of women and men • An evaluation is carried out to evaluate messages’ impact and resonance among women and men of different age groups, social class, etc. <ul style="list-style-type: none"> • Identify and profile end-beneficiaries for a better accuracy of data collection and better targeting According to the 2015 census, out of the 18M people living in Burkina Faso 50.4% are female and 11.8% are FHHs, which is an increase from 6.8% in 1999. It is possible that rainfall variations and exogenous weather shocks with consequent male migration have exacerbated this phenomenon. 	<p>Guideline(s) prepared on best communication channels in emergency (radio, mobile, direct communication through CSOs, etc.) as preferred by sex</p> <p># Outreach initiatives and information campaigns in target areas and among target groups (No. of campaigns established according to the marketing plan integrated into the Guidelines)</p> <p>- Vulnerability data are integrated in hazard maps</p> <p>- 50 percent of beneficiaries are women among users’ groups – classified by type of livelihood (pastoralists, farmers, fishermen)</p> <p>- 100 percent FHH in the project area are identified</p>	<p>Achieved by the 2nd year – see component 1</p> <p>- Awareness campaigns in the first 6 months through all media</p> <p>- Targeted campaigns via community radios – once a month.</p> <p>By the 2nd year all beneficiaries have been identified</p>	<p>CONASUR: DGM: DGPC: DGRE: SAP (CNSA)</p> <p>CONASUR: DGM: DGPC: DGRE: SAP (CNSA)</p>
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<ul style="list-style-type: none"> Develop new products tailored on specific end-users (e.g. Agency for Food Security, Agro-meteorological Services for the Ministry of Agriculture, Agency of Civil Protection, Ministry of Transport and Road Safety (CONASUR: DGM, DGPC, DGRE, SAP, MTRS) 	<p>100 percent <i>direct</i> beneficiaries;</p> <p><i>Indirect</i> beneficiaries: 10M people of newly connected consumers (60 percent of the total population in Burkina Faso), of which 50% are females.</p>		
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CONASUR: National Council for Emergency Relief and Rehabilitation

DGM: Directorate General for Meteorology

DGPC: The Directorate General of Civil Protection

DGRE: The Directorate General of Water Resources

SP/PST: Permanent Secretariat of the Transport Sector Program

SAP: Early Warning System of the National Food Security Commissariat (CNSA)

Gender documents for FP075

Attachment 6 – Gender Action Plan

1. The Agency of Hydrometeorology currently employs 251 female staff (just under 40%) out of a total of 708 staff (see Table 1 below). Out of these 251, there are the following senior management staff: 1 Chief of Department (out of 3), 1 Deputy Chief (out of 3), 1 Chief of Center (out of 8) and 1 Deputy Chief of center (out of 3). The rest are at various professional and technical levels including support personnel and workshop / technical managers. At senior management level (Director and Deputy Director) all three directors are male.

Table 1. Overview of Hydromet staff positions

№	Staff positions at the agency of Hydrometeorology	№ of staff (approved by government)	№ of working staff	Gender	
				Male	Female
1.	Director	1	1	1	
2.	Deputy Director	2	2	2	
3.	Chief of Department	4	4	3	1
4.	Deputy Chief of Department	4	4	3	1
5.	Chief of Center + Groups	8+31	8+25	7+14	1+11
6.	Deputy Chief of Center	6	4	3	1
7.	Head of Unit	24	22	19	3
8.	Head of Laboratory	3	3	1	2
9.	Head of Hydromet Stations	58	52	42	10
10.	Chief Specialists	42	41	18	23
11.	Lead Specialists	51	38	17	21
12.	Specialists	73	58	31	27
13.	Technicians	319	253	162	91
14.	Observers	108	105	87	18
15.	Workshop/Technical-Managers	23	20	4	16
16.	Support Personnel	75	68	43	25
	Total	832	708	457	251

Source. Hydromet March, 2017

2. The draft gender action plan (GAP) of the project is presented in Table 2 below, to be finalized upon project fact-finding. The project will ensure that among the beneficiaries in the project areas, women are trained and consulted in an equitable manner to support gender-sensitive design and provision of forecasting and warning services.

Table 2. Draft Gender Action Plan for a transformed Hydromet

Activity	Performance Targets/ Indicators	Responsibility	Time frame
Output 1. Water resources in Pyanj River Basin better managed			
1.1 Gender-sensitive training, outreach, and preparedness for flood disaster risk management (DRM) in Pyanj River Basin (PRB).	<ul style="list-style-type: none"> • At least 30% of trainees in PRB on flood forecasts and preparedness are women. (Baseline 2017: not applicable) • At least 30% of stakeholders consulted in PRB on flood forecasting and warning system design are women. (Baseline 2017: not applicable) • Maintain a roster of Hydromet DRM focal points, at least 30% of which are women. (Baseline 2017: not applicable) 	Hydromet, PMO, and PIC	Project close
1.2 Ensure proportionate representation of females at senior/mid-level managerial positions	<ul style="list-style-type: none"> • An average of 25% of staff positions at Chief and Deputy Chief of Department, Chief of Groups, Heads of Units, Laboratory, and Stations are held by women. (Baseline 2017: average 20%) 	Hydromet	Project close
1.3 Ensure gender-appropriate facilities within renovated / constructed Hydromet Campus	<ul style="list-style-type: none"> • Modernized campus is designed and constructed with adequate gender-appropriate facilities (e.g. sanitary, changing rooms, breast feeding rooms, refreshment areas). (Baseline 2017: not applicable) • At least one female staff representative for building facilities and maintenance is assigned. (Baseline 2017: 0) 	Hydromet, PMO, and PIC	Project close
1.4 Conduct administration and management training of Hydromet senior and mid-level staff.	<ul style="list-style-type: none"> • At least 25 qualified female staff from Hydromet are trained in administration and management including leadership, financial management, and commercial management. (Baseline 2017: 0) • Clear career path opportunities and career track profiles are provided to every staff member. (Baseline 2017: not applicable) 	Hydromet, PMO, and PIC	Project close
Output 3. Farm management capacity and water use skill improved			
3.1 Gender-sensitive consultation and training on weather products	<ul style="list-style-type: none"> • At least 30% of trainees in PRB on use of weather products are women. (Baseline 2017: not applicable) • At least 30% of stakeholders consulted in PRB on the design of weather products are women. (Baseline 2017: not applicable) 		Project close

Activity	Performance Targets/ Indicators	Responsibility	Time frame
Efficient and effective project management system			
Recruit the gender and social development experts for the project	<ul style="list-style-type: none"> Gender & Social Development Consultant is mobilized within 3 months of PIC contract signing. 	Hydromet, PMO	Q2 2018
Include gender indicators in the project monitoring system	<ul style="list-style-type: none"> Project's monitoring systems regularly populated with sex-disaggregated data. 	Hydromet, HR, PMO	Q4 2018
Ensure reporting of gender equality results	<ul style="list-style-type: none"> Quarterly progress reports and annual reports, as well as completion reports include progress of GAP implementation. 	Hydromet, HR, PMO	Q3 2018– Q2 2023

PMO = Project Management Office, PRB = Pyanj River Basin, PIC = Project Implementation Consultant, GAP = Gender Action Plan
Source: Asian Development Bank.

Attachment 13 - Poverty, Social, and Gender Assessment

Contents

1. Introduction
 - 1.1 Country Overview
 - 1.2 Project Overview

2. Socio-Economic Assessment
 - 2.1 Migration
 - 2.2 Poverty
 - 2.3 Water and Agricultural Resources

 - 2.4 Climate Change

3. Gender Assessment
 - 3.1 Legal and Institutional framework
 - 3.2 Gender in Agriculture and Water Resource Management
 - 3.3 Gender and Climate Change
 - 3.4 Project's Potential Benefits to Women

1. INTRODUCTION

This Poverty, Social and Gender Assessment (PSGA) has been prepared for the Institutional Development of the State Agency for Hydrometeorology of Tajikistan. The purpose of the PSGA is to assess the social and gender issues relevant to agriculture, water resource management, and climate change in Tajikistan, and identifies actions to address these issues. It builds on the previous PSGA prepared for the ongoing Water Resources Management in the Pyanj River Basin project. Based on analysis of most recent available data, this document assesses the needs, capacities, and constraints of affected people and groups, particularly women. An in-depth gender analysis is undertaken to examine the different roles, needs, and opportunities of women and men in relation to water resource management and climate change. This analysis will feed into the project Gender Action Plan (see Attachment 6).

1.1 Country Overview

Tajikistan is the smallest country in Central Asia and is one of the most vulnerable to food insecurity due to its limited arable land, underdeveloped agriculture, poor rural–urban connectivity, and limited capacity to respond to climate-induced shocks¹. Its mountainous terrain, which comprises 93% of its total land area, limits the availability of agricultural land, the major source of livelihood of its population. Compared with other Central Asian countries, Tajikistan has one of the lowest per capita availability of irrigated land.² While the country has limited productive agricultural land, the population is predominantly rural and largely dependent on agriculture. The proportion of the labor force in agriculture accounts for 75% of total employment.³ Almost 80% of the country's working poor live in the rural areas, and half of the working poor are in agriculture.⁴

The country has abundant water resources, but there are often shortages both for irrigation and for drinking water. Only about 2/3 of the population have access to safe drinking water, with the rate considerably lower in the rural areas. Poor irrigation is a major constraint to agricultural productivity. Water management is poor, and much of the infrastructure and networks for both drinking water and for irrigation are over fifty years old. Aging infrastructure results in high levels of leakage and system failure.⁵

In addition, high dependency on glacier-fed rivers for water supply and irrigation makes the country highly vulnerable to climate change. Tajikistan has over 14,000 glaciers, covering about 8% of the country's territory⁶. Melting glaciers could lead to severe decline in water supply, with potential adverse impacts on agriculture, household consumption, and energy production.

¹ ADB. 2016. *Sector Assessment (Summary): Agriculture and Natural Resources*. Country Partnership Strategy – Tajikistan 2016 – 2020. Manila.

² United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Poverty-Environment Initiative Phase II (PEI). 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

³ Mukhamedova, N.; Wegerich, K. 2014. *Land reforms and feminization of agricultural labor in Sughd Province, Tajikistan*. Colombo, Sri Lanka: International Water Management Institute (IWMI).

⁴ ADB. 2016. *Report and Recommendation of the President to the Board of Directors - Proposed Loan, Grant, and Administration of Grant and Technical Assistance Grant Republic of Tajikistan: Water Resources Management in Pyanj River Basin Project*. Manila.

⁵ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

⁶ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

1.2 Project Overview

Helping the country improve its capacity to manage water resources to boost food production and climate change adaptation capabilities is highlighted as a priority in the Asian Development Bank's (ADB) Country Partnership Strategy with Tajikistan, 2016-2020.⁷ In 2013, ADB supported the *Building Climate Resilience in the Pyanj River Basin Project (PRB)*.⁸ Building on this project, ADB approved the project *Water Resources Management in Pyanj River Basin* in 2016. This ongoing project aims to address issues of water resources management (WRM) at river basin, water supply, and water user levels in the Pyanj River basin in southern Tajikistan. The overall goal of the project is to increase agricultural production, food security, and water supply, and improve water use efficiency, in the Chubek Irrigation System in the Pyanj River basin.⁹

The project is being proposed for Green Climate Fund (GCF) to support the country's forecasting entity, the State Agency for Hydrometeorology (Hydromet), to help make it a sustainable and well-resourced institution that produces timely and accurate forecasting of extreme weather events particularly in the PRB. Currently, disaster risk mitigation and response in vulnerable communities, as well as broader climate change adaptation efforts, are hampered by low capacity in forecasting of weather, hydrometeorological, and climatic conditions. Hydromet faces many challenges such as limited budget, decaying infrastructure, and poor staff retention. The project will (i) modernize Hydromet's campus and associated facilities [Component A], (ii) support legal and organizational transformation and capacity building of Hydromet into a government entity with flexibility to set staff salaries and retain additional entrepreneurial revenue [Component B], (iii) undertake capacity building for improve forecasting and warning of extreme weather events [Component C], and (iv) support development and implementation of a viable business model including marketing of fee-based services [Component D].

2. SOCIO-ECONOMIC ASSESSMENT

Tajikistan ranks 129th out of 188 countries and territories in the United Nations Human Development Index, placing the country in the medium human development category.¹⁰ The country has made significant progress in economic development, and its economy has improved much compared to the 1990's. Economic growth after independence in 1991 was stalled by a 5-year civil war that resulted in the lowest level of economy, with a gross domestic product (GDP) of -20.2% from 1990-1994. The country gradually recovered in 1997 with a GDP of 1.7% and an 8.3% economic growth in 2000. Acceleration of the country's GDP was noted in 2010 with a GDP growth of 6.5%, 6.6% in 2011, and increased by 7.5% in 2012.¹¹

Growth rates during 2005–2014 were marked by increased susceptibility to volatile international commodity prices and trajectory of the Russian economy, which hosts up to 90% of the 1million Tajik migrant workers. The country has always been heavily reliant on exports of raw cotton and unwrought aluminum, which account for more than two-thirds of total exports, and remittances

⁷ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

⁸ ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Administration of Grant to the Republic of Tajikistan for Building Climate Resilience in the Pyanj River Basin Project*. Manila.

⁹ ADB. 2016. *Report and Recommendation of the President to the Board of Directors - Proposed Loan, Grant, and Administration of Grant and Technical Assistance Grant Republic of Tajikistan: Water Resources Management in Pyanj River Basin Project*. Manila.

¹⁰ UNDP. 2016. *Human Development for Everyone – Human Development Report 2016*.

¹¹ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

from Tajik migrant workers.¹² During 2005–2015, large price swings hit cotton and aluminum, affecting the whole economy. In addition, with the slowdown of the Russian Federation economy starting from 2014, remittances declined by 33.3% by December 2015. This fall in remittances, combined with weak global demand for Tajikistan’s main exports, slowed down GDP growth to 6.7% in 2014 and further to 6.0% in 2015.¹³

The economy has undergone substantial structural changes since 2000, with service sector expanding by over 60%, and around 2/3 of GDP now coming from services, primarily driven by construction, telecom and trade.¹⁴ With the increasing remittance inflows from 2005, the contribution of services to the total GDP rose to 79.4% during 2005–2014, while, the contribution of agriculture shrank to 21.7% during the same period.¹⁵ However, in terms of employment, Tajikistan remains agriculture-based. The share of agriculture in total employment increased from 44.7% in 1991 to 65.6% in 2014, while the share of services decreased from 34.8% to 30.3%, and the share of industry was reduced from 20.5% to 4.1%.¹⁶

While the official unemployment rate in the country is low at 2.4% in 2014, this counted only registered unemployment, or those registered to receive unemployment benefits, which is only a fraction of the likely actual total. The calculations based on the *2009 Tajikistan Living Standards Survey* show that overall unemployment is as high as 21%, with urban unemployment higher than rural.¹⁷ Limited employment opportunities, combined with high wage differentials between domestic labor markets and the Russian Federation and lenient entry policies, triggered the out-migration of workers.¹⁸

2.1 Migration

Tajikistan has an increasing number of migrant workers. From 2010 to 2011 alone, there was an increase of 2,733 migrants.¹⁹ As of August 2015, about 1 million Tajik workers have left for the Russian Federation.²⁰ Most of the migrant workers are males, with the vast majority working in the construction sector. Women traditionally work in housekeeping, caring and other service occupations. The share of women migrants, mostly married older women, and younger women with higher education²¹, rose from 2007 to 2009. Consequently, increase in caring, sales and service occupations among the migrants has been noted.²²

¹² ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

¹³ ADB. 2016. *Tajikistan: Promoting Export Diversification and Growth - Country Diagnostic Study*. Manila.

¹⁴ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

¹⁵ ADB. 2016. *Tajikistan: Promoting Export Diversification and Growth - Country Diagnostic Study*. Manila.

¹⁶ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

¹⁷ ADB. 2016. *Tajikistan: Promoting Export Diversification and Growth - Country Diagnostic Study*. Manila.

¹⁸ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

¹⁹ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

²⁰ According to the 2016 ADB country diagnostic study *Tajikistan: Promoting Export Diversification and Growth - Country Diagnostic Study (op. cit)*, accurate data on migration are scant, in part due to large numbers of illegal workers abroad. The Agency on Statistics under the President of Tajikistan estimated that 750,070 Tajik workers, including 86,773 women, were working abroad in 2011. Data from the Federal Migration Service of the Russian Federation estimates 978,940 Tajiks as of August 2015.

²¹ Khuseynova, Gulchekhra. 2013. “Social and economic impacts of labor migration on migrants’ households in Tajikistan: working out policy recommendations to address its negative effects”. *School of Public Policy Capstones*. Massachusetts: University of Massachusetts – Amherst. Available at http://scholarworks.umass.edu/cppa_capstones/26

²² EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

Since 1991 up to the present, labor migration from Tajikistan has been a common process. International Monetary Fund (IMF) estimated that by 2005, almost every family in Tajikistan has had a migrant worker travelling abroad²³. More than one million Tajik citizens worked abroad in 2012, mostly in Russia, and it is likely that actual figures are higher because most of the migration is seasonal and temporal, which is difficult to track accurately.

Remittances significantly contribute in reducing poverty in Tajikistan. The proportion of families whose income mostly depends on remittances from labor migrants stands at 83%. Households heavily depend on remittances, with much of it used for private consumption and used immediately, and are not invested or deposited as savings. Since the size of average remittance amounts remained relatively small, limited portions of inflows were channeled to productive sectors. Research on effects of the remittances indicates that they did not have positive effects on investments, but increased consumption expenditures.²⁴

Even with the fluctuations and considerable drop during world economic shocks, remittances flowing to Tajikistan account for a significant share in the GDP. In 2003, remittances and other transfers to households ranked as a second largest income source after wages²⁵. Remittance inflows from migrant workers rose from 6.4% of GDP in 2002 to a high of 49.6% in 2013.²⁶ In its 2015 *Migration and Development Brief*, World Bank ranked the country as the most remittance-dependent country in the world.²⁷ By that year however, remittances have already started to decline. In the 2017 World Bank report, Tajikistan registered a significant decline in remittances and slipped to sixth position. The decrease was mainly due to the downturn in the Russian economy, and the slight depreciation of the euro against the dollar.²⁸ The Russian Federation tightened regulations for reentry and by December 2015, 333,391 migrant workers were given reentry bans for 3–5 years.²⁹ This decrease is particularly painful for Tajikistan, since remittances are an important part of its overall economy. This demonstrates the economy's vulnerability to external vulnerability to external economic developments.

2.2 Poverty

The country experienced sustained reduction in income poverty rates for the past years, from 81% in 1999, 47% in 2009, down to 35.6% in 2013³⁰, and 31% in 2015³¹. Data from 2003 to 2009 showed that labor earnings, remittances, and pension payments were factors that reduced poverty. However, the benefits of growth have not been evenly distributed. Regional disparities

²³ As cited in Khuseynova, Gulchekhra. 2013. "Social and economic impacts of labor migration on migrants' households in Tajikistan: working out policy recommendations to address its negative effects". *School of Public Policy Capstones*. Massachusetts: University of Massachusetts – Amherst. Available at http://scholarworks.umass.edu/cppa_capstones/26

²⁴ ADB. 2011. Remittances and Household Expenditure Patterns in Tajikistan: A Propensity Score Matching Analysis. *Asian Development Review*. 28 (2). pp. 58–87.

²⁵ Justino, P. and Shemyakina, O. 2012. "Remittances and Labour Supply in Post-Conflict Tajikistan". *IDS Working Paper 388*. UK: Institute of Development Studies. Citing World Bank 2004.

²⁶ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

²⁷ World Bank. 2015. *Migration and Development Brief 24*.

²⁸ World Bank. 2017. *Migration and Development Brief 27*.

²⁹ International Organization for Migration (2016), as cited in ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

³⁰ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2010. Poverty Analysis (Summary)*. Manila.

³¹ Global Partnership for Effective Development Cooperation. 2016. Monitoring Profile: Tajikistan, October 2017. Available at http://effectivecooperation.org/wp-content/uploads/2016/10/Tajikistan_14-10.pdf?s, accessed November 9, 2017.

remain a cause for concern, with higher poverty incidence in rural areas. The incidence of rural poverty is estimated to be over 49%, hence, almost half the rural population lives in poverty. High poverty rates, combined with heavy reliance on agriculture and natural resources, increase vulnerability of the rural households to environmental degradation.³²

In terms of non-income poverty, progress has been slow. Food security and undernourishment remain critical issues. A 2014 study showed that despite improving food security in recent years, only 20 percent of Tajikistan's rural population is food secure, 52% are mildly food insecure, 24% are moderately food insecure, and 4% are severely food insecure.³³ The 2016 global food security index ranks Tajikistan at 92nd out of 113 countries in terms of food affordability, availability, quality, and safety.³⁴ The 2017 global hunger index of the International Food Policy Research Institute that covers the percentage of undernourished population, under-five underweight children, and under-five mortality rate, ranks Tajikistan 96th out of 119 countries, which is considered within the *serious* range.³⁵ Primary education enrollment reached universal levels and completion rates have increased, but gender discrepancies remain at the tertiary education level. Poverty situation in selected areas, especially in the rural communities, is characterized by inadequate and/or weak infrastructure, poor service facilities, and weak organizations. Access to safe drinking water has lagged and coverage rose from 58% in 1993 to 72% in 2012.³⁶

2.3 Water and Agricultural Resources

In Tajikistan and other parts of Central Asia, social and economic conditions are more closely related to water than in other locations. The country is rich in water resources, and this has shaped much of the country's socio-economic development, with extensive hydropower resources, economic reliance on water intensive agricultural crops (wheat and cotton), and water/energy intensive aluminum smelting. Agriculture, which accounts for a quarter of Tajikistan's GDP and export revenues and 39% of tax revenues, is the largest consumer of water, accounting for over 90% of the national total water consumption. Agriculture is dominated by two highly water intensive crops – cotton and wheat. The country is also a major producer of hydropower, which accounts for 98% of the country's energy balance.³⁷

However, despite having access to extensive water resources, the country faces numerous challenges. Much of the population is indirectly dependent on irrigation and drainage systems for food production, but the irrigation network is poorly maintained due to inadequate financial resources and weak management. Mostly, irrigation relies on large-scale systems built in the 1930-1980 period, and the aging infrastructure is in urgent need of rehabilitation and replacement. Lack of drainage is leading to salinization and land degradation, and about one third of irrigated arable land is not used because of the deterioration of infrastructure.³⁸

³² UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

³³ As cited in EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

³⁴ The Economist Intelligence Unit. 2016. *Global Food Security Index 2016 - An annual measure of the state of global food security*.

³⁵ International Food Policy Research Institute. 2017. *2017 Global Hunger Index – The Inequalities of Hunger*. Washington, DC / Dublin / Bonn

³⁶ ADB. 2016. *Country Partnership Strategy – Tajikistan 2016 – 2010. Poverty Analysis (Summary)*. Manila.

³⁷ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

³⁸ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

In terms of access to drinking water, while access rates have been increasing, currently, only about 2/3 of the population uses safe drinking water. Although donor and government investment efforts have been focused on improving access in urban areas and rural areas with the most acute supply issues, still over half the rural population (around 3.5 million) does not have access to safe drinking water, and there is virtually no access (0.2%) to sanitation facilities in rural areas.³⁹

These issues are exacerbated by the country's vulnerability to climate change. In 2015, the country experienced serious flooding caused by heavy rainfall and unusual melting of the glaciers. Higher temperatures cause increased melt and thus, increased river flows, floods, landslides and avalanches.⁴⁰

The original Water Resources Management in the Pyanj River Basin project seeks to improve WRM and address climate-related extreme weather risks, through improved water resources monitoring, climate-proofed infrastructure, and agricultural management. The project outputs include: improved WRM system in the Tajikistan and effective joint regional management of the Pyanj River Basin; modernized and climate-proofed Chubek Irrigation System water resources management infrastructure fully operational; and farm management capacity and water use skill improved.

The Pyanj River Basin is the largest river basin in the country. The PRB's WRM will affect the country's economy as it (i) covers the majority of Khatlon province, which has the largest population and agriculture production; (ii) includes the most food-insecure zone among the country's irrigated area; and (iii) is the country's poorest river basin (55% of the population is poor).

2.4 Climate Change

Climate change is highly likely to present a threat to the economy, well-being and the environment in Tajikistan. The frequency and intensity of floods has been increasing for the last few decades. About 95% of the country is vulnerable to environmental degradation, including the risk of floods, landslides, soil salinity, water and soil erosion, and desertification.⁴¹

A 2014 ADB study indicates that the melting of glaciers has accelerated since the Little Ice Age due to the gradual climate warming.⁴² The largest mountain glacier in the world (Fedchenko Glacier) is located in the Pamir Mountains in Tajikistan, and it has thinned by 1 meter per year, its surface area has decreased by 11 square kilometers, and it has lost about 2 cubic kilometers of ice. The intensive melting of glaciers could result in extreme decline in water availability in the country. Water shortages will negatively impact the country's agriculture and hydropower, and pose serious threats to energy and food security.⁴³

Climate vulnerability is particularly acute in the districts along the Pyanj River Basin (PRB), the primary tributary to the Amu River in the south of the country, which are among the country's poorest and comprise a wide range of geographical and climatic conditions.

³⁹ *Ibid.*

⁴⁰ ADB. 2016. *Sector Assessment (Summary): Agriculture and Natural Resources*. Country Partnership Strategy – Tajikistan 2016 – 2010. Manila.

⁴¹ ADB. 2012. *Addressing Climate Change and Migration in Asia and the Pacific*. Manila. Quoting Khakimov and Mahmadbekov, 2009.

⁴² ADB. 2014. *Climate Change and Sustainable Water Management in Central Asia*. Manila.

⁴³ UNDP, UNEP, PEI. 2016. *Tajikistan Water Public Environmental Expenditure Review*. Dushanbe.

Early warning systems and flood protection interventions are needed to help the communities prepare and adequately respond to extreme weather events. The lack of sufficiently timely and accurate hydrometeorological forecasting, particularly of floods, are still among the key challenges faced by the population. Future extreme weather events, which are expected to become more frequent and larger in magnitude due to climate change, may adversely affect infrastructure and livelihoods. Thus, strengthening capacity of hydrometeorological forecasting would help enhance and sustain the WRMPRB project outcomes and impacts, by supporting the climate-related disaster awareness and preparedness of the project beneficiaries.

3. GENDER ASSESSMENT

While Tajikistan registered dramatic growth rates for the past decade, significant gender disparities remain. Tajikistan ranks 65th out of 159 countries in the 2015 Gender Inequality Index, which reflects gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Maternal mortality has been reduced from 64 in 2008 to 44 in 2013, but it is still currently high at 32 deaths for every 100,000 live births. There was a marked rise in adolescent birth rate (births per 1,000 girls aged 15–19) from 28.4 in 2010 to 42.8 in 2014, although it slightly dropped to 34.1% in 2015. The percentage of women older than 25 years with at least some secondary education slightly dropped from 93.2% in 2010 to 89.9% in 2014, but it rose to 98.1% in 2015, as compared to 88.2 percent for their male counterparts. The proportion of women occupying seats in the parliament is still very low at 14.7%. Labor force participation remains skewed in favor of men at 77.5 compared to 59.4 for women.⁴⁴

3.1 Legal and Institutional framework

Tajikistan has set up a legal framework that enshrines principles of equality and non-discrimination. Article 17 of its Constitution explicitly states that men and women have equal rights (Article 17), which lays the legislative basis for the promotion of gender equality in the country. A number of specific laws related to gender issues have been passed, the most important being the 2005 Law “On State Guarantees for Equality between Men and Women and Equal Opportunities for Their Realization”. The main objective of this law is to provide protection against gender discrimination in all areas of life. The law highlights the duty of the government to provide equal opportunities for men and women through regulations, procedures and other measures against discrimination, including in the governing of the state. It also requires educational institutions to ensure equal conditions for men and women in obtaining general, secondary, vocational and higher education. This is significant because education remains one of the obstacles to gender equality due to the increasing number of young women leaving school prior to graduation.⁴⁵

The country has also adopted a number of other gender-related laws, policies, programmes and measures, including: the Presidential Decree of 1999 “On Strengthening the Role of Women in Society”; introduction by the President of a quota system for the education of girls and boys in schools in remote areas (1997, 2006); State Program on “Main Directions of the State Policy aimed at Promotion of Equal Rights and Opportunities for Men and Women for 2001-10”; 2002

⁴⁴ All the 2015 data are from UNDP’s 2016 Human Development Report. The older indicators are from ADB’s 2016 – 2020 CPS with *Tajikistan (Gender Analysis)*.

⁴⁵ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

Law “On Reproductive Health and Rights”; “Strategy on Poverty Reduction in Tajikistan for 2007-2009 and 2010-2012”; 2006 “State Program on Education, Selection and Appointment of Leading Cadres from Capable Women and Girls in 2007-2016; 2012 “National Strategy for Activation of Women for 2011 – 2020; and the “National Plan for the Implementation of Gender Policy.” The government incorporated separate gender equality sections into the Poverty Reduction Strategies (PRS) 2007-2009 and 2010-2012. Issues related to gender are also included in the 2007 “National Development Strategy of the Republic of Tajikistan until 2015”, the first time that gender was integrated into medium and long term socio-economic planning. However, the practical means for their implementation have, not been fully developed.⁴⁶

Recent amendments to the country’s Land Code enabled expansion of the norms of joint property provided by the civil and family legislations onto land use rights. This secures rural women’s ownership rights in case of divorce. The Civil, Family, Penal and Labour Codes also touch on issues related to gender equality in the country.

The national coordinator of the country’s gender policy is the Committee on Women and Family Affairs (CWFA), which was founded in 2001. Coordination task is implemented through the Gender Focal Points assigned in every line ministry, and who, in their turn, are supposed to report on ministry’s progress with regards to implementation of Government’s Gender Policy. The Committee is also part of the coordinating council on Prevention of Violence against Women, which consists of representatives from the Ministry of Justice, Ministry of Labour and Social Security, Ministry of Health, Ministry of Internal Affairs, court officials, representatives of the General Prosecutor’s Office and NGOs.

At the international level, Tajikistan ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1993, the Convention on the Political Rights of Women, and the UN Covenant on Civil and Political Rights (1999).

Despite these measures and the government’s commitment to advance gender equality, lack of harmonization of laws and regulations and weak institutional mechanisms hamper the full implementation of these laws and policies. Poor stakeholder coordination and incomplete gender mainstreaming in ministries and departments further pose challenges in the promotion of gender equality in the country.

3.2 Gender in Agriculture and Water Resource Management

Women make up a significant proportion of the agricultural labor force in Tajikistan, with estimates ranging from 31% to 85.5% of women active in the sector. ADB estimates that women account for 53% of the economically active population in agriculture,⁴⁷ but the figure could be higher if all the unpaid women working alongside their husbands were counted. This is attributed to land reforms and widespread out-migration of male Tajik workers, which have led to what is called the “feminization” of the agricultural production sector⁴⁸.

⁴⁶ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

⁴⁷ ADB. 2016. *Sector Assessment (Summary): Agriculture and Natural Resources*. *Country Partnership Strategy – Tajikistan 2016 – 2020*. Manila.

⁴⁸ Mukhamedova, N.; Wegerich, K. 2014. *Land reforms and feminization of agricultural labor in Sughd Province, Tajikistan*. Colombo, Sri Lanka: International Water Management Institute (IWMI).

However, women's agricultural work is characterized by seasonal, low-wage, and low-paid or unpaid positions, job insecurity, back-breaking conditions, lack of access to and control over productive resources, limited participation in decision-making activities and low technical and specialized knowledge. Women's tasks are largely restricted to field labor, such as weeding, sowing, transplanting, and harvesting, which do not require decision-making, whereas the selection of seeds, fertilizers, and plant protection materials is controlled by men.⁴⁹ Further, although both men and women are involved in livestock-raising, it is men who decide on the purchase, sale and other operations linked to its management.⁵⁰

Women are often responsible for managing drinking water resources and providing drinking water at home. They are therefore disproportionately affected by the deteriorating water infrastructure, which has resulted in many areas facing water shortages for irrigation and personal consumption, and many rural people and agriculture suffering the effects of rising water table and increasing soil salinity. Most rural households spend less than 30 minutes per round trip to collect drinking water, but it is common for women and girls to make 4 or 5 trips per day if carrying containers by hand and to travel several kilometers. Women are also in charge of storage and treatment, which is usually done by boiling, since they are the primary users of water for cooking, cleaning, washing clothes, bathing children, and making coal or dung briquettes for fuel.⁵¹ A survey conducted under ADB's 2016 CGA in Tajikistan (specifically in Sughd *viloyat*) revealed that most households source their water from irrigation canals, streams, or rivers, but they also use wells and springs, as well as collected rainwater.⁵²

Despite their significant involvement in agricultural work and water management, this has not resulted to women's empowerment. There have been observations that the agricultural sector is in fact one of the most exploitative sectors.⁵³ Gender imbalances in access to and control over productive resources, limited decision-making, and discrimination characterize agricultural work. In practice, women are denied access to local decision-making on water resource management, and are unlikely to participate in water user associations. Considering their new responsibilities as heads of households, women's limited involvement in community-based water management initiatives is not proportionate to their burden of livelihood maintenance, the rising trend of female-headed households, or their direct interest in improving water provision.⁵⁴

Despite many men being absent from rural areas because they have emigrated for work, they are overwhelmingly dominant in water users' associations (WUAs). Based on the findings of the PPTA team's Poverty, Social, and Gender Assessment for *the TA 8647-TAJ: Water Resources Management in Pyanj River Basin*, women's participation in WUAs is very low. The community consultations carried out in the project target districts revealed that, for instance of 7 Water Users Associations in Hamadoni district, none of them are managed by women. Women also do not represent the management of WUAs in any of the districts. Nevertheless, FGDs conducted in the Project target districts reveal that women are willing to participate in the Water Resource Management in their respective neighborhood.

⁴⁹ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

⁵⁰ World Bank. 2013. *Tajikistan Country Gender Assessment*.

⁵¹ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁵² *Ibid.*

⁵³ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁵⁴ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

Women also have limited presence as managers of farm lands. Fewer women than men are formal managers of *dehkan*⁵⁵ farms: in 2012, only 7.8% of all *dehkan* farms were legally headed by women.⁵⁶ In 2014, women headed 13% of *dehkan* farms, but the average size of women-headed farms is smaller than those headed by men. Furthermore, women managed only 6.4% of all planted crop lands on *dehkan* farms. It was also noted that female-managed land is often poorer than that granted to men, and that female managed *dehkan* farms have significantly smaller harvests across all crop categories, and smaller yields for every crop save cotton and corn, which are nearly equal for men and women.⁵⁷

In addition, women do not manage all of those *dehkan* farms that are listed in their names. A World Bank study found that state officials registered them with their wives' names in order to avoid the appearance of conflict of interest or manipulation of state allocation of land. The study further found that notwithstanding the fact that women may have good access to land, they do not play a significant role in decision-making about crop selection on cultivated land.⁵⁸

3.3 Gender and Climate change

As mentioned above, climate change poses a significant threat to the country and may reduce water supplies needed for agriculture, WSS and hydropower. Rural populations are especially vulnerable due to their dependence on farming and natural resources. Women farmers interviewed for ADB's 2016 Country Gender Assessment for Pakistan described unseasonably warm weather followed by heavy rains that ruined crops.⁵⁹

For rural women and female farmers in Tajikistan, aside from household and care responsibilities and employment for income, they also often grow food for family consumption. Kitchen gardens are a crucial for the family's food security, especially for households headed by females. Households headed by females are among the poorest and often have very limited capacity to cope with or recover from weather-related losses. As discussed above, women have limited participation in WUAs, hence, are less likely to participate in decisions about which crops to grow or how to invest income. Women also bear the burden of collecting scarce resources, and women and children are at risk for illness from unclean drinking water and unclean fuel.⁶⁰

Climate change adaptability is also affected by women's lower educational levels, lack of technical knowledge, and limited participation in decision making activities. For instance, during the 2010 Kulyab flooding, many women were adversely affected because they did not know how to react during an emergency, and only a few could swim.

Despite these gender disparities, women have great potential as agents for climate change adaptation. As discussed in an Oxfam report, rural women quickly "grasp the holistic nature of farming and offer examples and solutions that they are already engaging in to adapt to climate change."⁶¹ The report presented several immediate and long-term adaptation measures and

⁵⁵ Mid-sized, privately owned commercial farms that are distinct from household plots; also referred to as "peasant farms." *Dekhkan* farms can be individual, family, or collective farms.

⁵⁶ EPTISA Servicios de Ingenieria S.L. 2016. *Final Feasibility Report for ADB TA 8647-TAJ: Water Resources Management in Pyanj River Basin (Appendix 14 - Poverty, Social and Gender Assessment)*. Tajikistan.

⁵⁷ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁵⁸ World Bank. 2013. *Tajikistan Country Gender Assessment*.

⁵⁹ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁶⁰ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁶¹ Oxfam. 2011. *Climate Change: Beyond Coping. Women smallholder farmers in Tajikistan*. Oxford: Oxfam GB.

mitigation measures which were suggested by women. Several strategic projects that have successfully involved women demonstrate how they can be agents of change, including one which enabled them to start herb and vegetable seedlings in cold weather and extended the growing season; and one where women learned about food preservation.

ADB's portfolio for 2015–2017 included agriculture and natural resources, with projects on ensuring food security and improving WSS. In its project Building Climate Resilience in the Pyanj River Basin⁶² approved in 2013, a gender action plan (GAP) was developed to ensure that women will benefit from flood protection activities and rehabilitated water supply infrastructure.

3.4 Project's Potential Benefits to Women

Projects on agriculture, water resources management or water supply and sanitation, have the potential to significantly benefit women. The 2016 ADB Country Gender Assessment cites that when asked how improved water supply would affect their households, women mentioned "lessening their workloads, having more time for their children and leisure, improving household cleaning and family hygiene, and increasing their home-based agriculture capacity."⁶³ A 2013 gender assessment on rural drinking water program in Tajikistan⁶⁴ discussed multiple examples cited by women when asked about the effects of improved water supply on their families, including improved health situation of children, easier children care, easier maintenance of cleanliness in the house, savings for potable water previously paid to vendors, expansion of their gardens and cattle care, home-based preservation of fruits and vegetables, home-based procession of dairy products.

The original project envisaged that through installation of 12 water points for householder use along the main canal and three in each target interfarm canal, women's water-fetching chores will be lightened. Targets for women's participation in meetings were included to ensure women's meaningful participation in project consultations, and that their needs and preferences are considered. The project is also expected to narrow gender gaps in women's limited representation in WUAs, river basin organizations, and councils; and ensure that women farmers are not left out in the development of demonstration farms, production of high-quality seeds, and other training programs.

This project aims to further ensure women's meaningful participation in water resource management and climate change adaptation processes. A Gender Action Plan is developed (see Attachment 6) to ensure that the specific roles and needs of women relevant to climate change and disaster response are addressed. To address the key issues on women's leadership and access to resources, the following actions are included: (i) An average of 25% of staff positions at Chief and Deputy Chief of Department, Chief of Groups, Heads of Units, Laboratory, and Stations are held by women; (ii) Female staff have adequate gender-appropriate facilities in the new Hydromet campus buildings (e.g. sanitary, changing rooms, breast-feeding rooms, refreshment areas) and a female spokesperson for building facilities and maintenance; (iii) At least 25 qualified female staff from Hydromet are trained in administration and management including leadership, financial management, and commercial management; and (iv) Clear career path opportunities and career track profiles are provided to every staff member.

⁶² ADB. 2013. G0352 TAJ: Building Climate Resilience in the Pyanj River Basin. Manila.

⁶³ ADB. 2016. *Tajikistan Country Gender Assessment*. Manila.

⁶⁴ Krylova, Lena and Safarova, Nigora. 2013. *Gender Assessment: SDC Rural Drinking Water Program in Tajikistan*. Dushanbe: Swiss Agency for Development and Cooperation (SDC).

Another key action is the conduct of disaster risk management (DRM) courses with gender specific themes. To ensure equitable representation and consideration of women in DRM, the GAP targets to maintain a roster of male and female staff experts as focal points in Hydromet, with 30% women.

The project will improve women's participation in decision-making processes by increasing their membership in WUAs. The Gender Action Plan includes targets on: women's participation in stakeholder consultations to assess their needs and preferences, membership in WUASs; and participation in demonstration plot activities. The project will also provide an opportunity for the local people to earn income during the civil works (i.e. in the modernization of Hydromet's campus and associated facilities; modernization and rehabilitation of irrigation and drainage infrastructure and its climate proofing); construction of sediment excluding basin). The women consulted during the PSGA for the ongoing project affirmed that they could exceed more than 30% women who will participate in the project. As many of those consulted do not have any job, working in the construction will be beneficial, especially for the female-headed households whose husbands are migrant workers and seldom send budget for household need. Public Consultations conducted revealed that women are eager and ready to participate in the Project, both in the decision-making processes as well as part of the civil works. Women suggested they are currently actively involved in cleaning their on-farm canals even without the Project. Women said participating in the Project works will increase their income generation opportunity while improving overall agricultural land quality.

Detailed Gender Analysis

Project Number: 48409-002
October 2017

Proposed Loan and Administration of Loan and
Grant
Kingdom of Cambodia: Climate-Friendly
Agribusiness Value Chains Sector Project

I. BRIEF PROJECT BACKGROUND AND KEY GENDER CONCERNS

1. This report presents the detailed gender analysis undertaken during the preparation and design of the Climate-Friendly Agribusiness Value Chains Sector Project (CFAVCP) in Cambodia.

2. The proposed project will invest in pro-poor and inclusive agricultural value chains in three countries of the Greater Mekong Subregion (GMS) – Kingdom of Cambodia (Cambodia), the Lao People's Democratic Republic (Lao PDR) and the Republic of the Union of Myanmar (Myanmar).¹

3. The project's impact will be enhanced productivity, quality, value addition and rural household income in the project areas of Kampong Cham and Tbong Khmum provinces, and Kampot and Takeo provinces along the South-coastal transport corridor. The outcome will be more efficient resource utilization and climate resilience for competitive and inclusive agribusiness value chains, through the provision of (i) improved critical production and post-harvest infrastructure (ii) reduced energy costs by promoting renewable energy use and (iii) offering targeted agribusiness policy and capacity support services.

4. The approach to project preparation included identifying a small number of core / representative subprojects based on established criteria (e.g., contribution to food security, energy security, water security, environmental sustainability, positive social impacts) and through stakeholder consultations. Cambodia has experience in sector modality in terms of identifying and realizing subprojects during project implementation, and has (i) an agricultural sector development plan, (ii) reasonable institutional capacity to implement the plan, and (iii) suitable policies applicable to the sector. Furthermore, capacity building will be integral to the investment.

5. Under the PPTA three subprojects have been identified and feasibility studies were conducted. Gender analyses of the three subprojects were carried out and the findings which are presented below were used in developing GAP recommendations. The subprojects are:

- (i) Irrigation and Water Catchment Modernization and Rehabilitation: Trapeang Run Reservoir and Irrigation Scheme
- (ii) Drip Irrigation in Mango Production in Trepeang Krangung Commune, Tram Kok District, Takeo Province
- (iii) Cooperative Cassava Chip Drying and Storage for Trading, Tbong Khmum Province

6. The social development consultant team undertook participatory assessments in these three areas, and the gender analysis findings are presented in this report. The gender issues of the target population were analysed to better understand the context and conditions of the target beneficiaries in the subproject areas. In addition, the proposed subprojects were discussed with male and female beneficiaries in order to elicit their views, opinions and recommendations for the interventions.

¹ ADB. May 2015 'Proposed Loans and Grants Cambodia, Lao People's Democratic Republic and Myanmar: Climate-Friendly Agribusiness Value Chains Sector Project'.

A. Method used for preparing the gender analysis

7. Because of limited time allocated (1 person-month for International Specialist and 1.5 person-months for National Specialist), information concerning the beneficiary populations in the subproject areas was collected from:

- (i) secondary data including recent social survey reports and publications
- (ii) focus groups (both mixed gender and with women separately) with target beneficiaries
- (iii) key informant interviews with local Commune and village leaders and Commune Women and Children Focal Points
- (iv) interviews both face-to-face and by telephone with key informants
- (v) meetings with key Ministry staff
- (vi) meeting with ADB Social Sector Development and Gender Specialists
- (vii) meeting with International NGO, Oxfam.

B. Summary of key gender concerns

8. Women are key actors in the value chains especially for rice and cassava. They are producers, collectors/intermediaries and rice millers, and own and operate their own enterprises. Rural women generally have joint access and control over land and capital together with their husbands, and are solely responsible for managing finances for the household. There is equal access of men and women to markets. Both husband and wife jointly agree when, where and to whom to sell the crop, but it is the responsibility of the wife to contact the local (usually female) collector. Nationally women represent about 60% of agricultural cooperative members, and they run 65% of all enterprises, over a third of all fruit and vegetable processing enterprises and almost half of all wholesale agricultural raw materials enterprises. The vast majority of women's businesses are micro-enterprises (4 workers or less).

9. Women are aware of their own technical shortcomings and express an eagerness to learn new techniques, and they are aware that they have had fewer agricultural training opportunities than men, which may be partly explained with the current practice of addressing invitations for agricultural trainings and meetings to the heads of the household (thus mostly men). The use of visual teaching aids during information and training sessions was also found to be crucial in order to enhance farmers' understanding, especially women who continue to have lower literacy levels. During the PPTA consultations, some women expressed interest to learn how to drive two-wheel tractors and operate other agricultural machinery, which would allow them the opportunity to have paid work and also prepare them for future farm mechanization. Other major challenges faced by both women and men although more so by women include lack of access to year-round water, labor force for agricultural production, affordable credit and market related information.

10. Nationally 22% of all households are headed by women. Female-headed households with more than two children and no adult males are much more likely to be poor and the girls more likely to be working. Households headed by women are likely to be more vulnerable, have smaller land holdings than men, and more frequently suffer from labor shortages. For households headed by older women where adult children have migrated and left grandchildren in their care, their workload is very substantial. In addition to taking care of numerous small children, livestock, they also in many cases need to work as day laborers to make ends meet.

11. One of the main drivers of migration is reportedly household debt and concerns about repaying loans both formal and informal. Rural populations are now characterized by labor shortages for agriculture production, and by large numbers of households headed by older women taking care of numerous small children. Remittances from adult children are frequently inadequate for covering household expenditure, and so grandmothers also seek work.

12. While there are specific gender concerns in each subproject area which are described below, in all three subproject locations male and female farmers explained that the over-riding priority was for sufficient water for agricultural cropping purposes. Lack of year-round water is a major constraint in all three areas. Persistent low levels of trust between value chain actors such as farmer-producers and collectors / intermediaries hinders efficiency and innovation in the selected value chains.

II. GENDER IN NATIONAL CONTEXT (GENDER MAINSTREAMING IN CAMBODIA)

A. Institutional and legislative environment²

13. The Government of Cambodia's Rectangular Strategy Phase III 2014–2018 (RS III) provides the framework for policies and strategies addressing poverty reduction and promoting the economic empowerment of women. The objectives of RS III relate to economic growth, employment particularly for youth, and strengthening institutional capacity and governance. The four strategic rectangles of the RS III are (i) promotion of agriculture, (ii) development of physical infrastructure, (iii) private sector development and employment, and (iv) capacity building and human resource development. Gender equality is not explicitly mentioned in the overarching objective of RS III, but the document clearly refers to promoting the role of women in the economy, empowering women, and further mainstreaming gender in government initiatives as priorities.

14. The institutions to support women's economic empowerment include the Ministry of Women's Affairs (MOWA) and gender mainstreaming action groups (GMAGs) in each line ministry that prepare and implement sectoral gender mainstreaming action plans (GMAPs). In 2013, MOWA launched a Millennium Development Goal (MDG) Acceleration Framework Cambodia Action Plan focused on women's economic empowerment to contribute to the achievement of other MDGs in poverty reduction, health, and education. The plan prioritizes three areas of intervention: (i) providing training for jobs for women that are consistent with market demands; (ii) ensuring that women have the capacity to lead and grow their micro, small, and medium-sized enterprises and can move from the informal to the formal sector; and (iii) improving livelihoods in rural communities, especially for poor women. In 2014 MoWA launched the Cambodia Gender Assessment and 5 Year Strategic Plan for Gender Equality and Women's Empowerment (Neary Ratanak IV), which includes policy recommendations on Women's Economic Empowerment (including Agriculture), education, health, political participation, and climate change.

15. MOWA also manages a network of 13 women's development centers (WDCs) nationwide, which are vocational centers offering training programs in areas such as handicraft production, hairdressing, tailoring, and food processing. WDCs face a host of challenges and are not reaching their full potential as centers that promote women's economic empowerment. There is scope to improve training to be more responsive to the labor market and include entrepreneurial skills training, business development services, and current market information. There is considerable

² Fiona MacPhail. 2015. 'Promoting Women's Economic Empowerment in Cambodia', ADB.

interest in MOWA to introduce public–private partnerships at WDCs as a way of increasing their market and entrepreneurial orientation, and to ensure sustainable financing.

16. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has prepared the Gender Mainstreaming Policy and Strategy in Agriculture 2016–2020 which includes objectives relating to greater participation of women in the civil service; enhanced capacity to integrate gender; increased ability of rural women to access and manage resources; and building and promoting gender equality in access to extension services. With regard to the latter, specific mention is given to assistance with social land concessions, participation in the private sector, participation in village and community groups, and access to credit, and extension services. The CFAVCP GAP is designed to align to and support the operationalization of the MAFF Gender Policy.

B. Legal framework³

17. Cambodia has adopted a legal framework which enhances women’s legal position and can contribute to their economic empowerment. It has ratified 13 International Labor Organization conventions and is also a signatory to United Nations human rights covenants and conventions. These include the Convention for Elimination of All Forms of Discrimination against Women, which was ratified by Cambodia in 1992. In addition, Cambodia has its own labor law, adopted in 1997, and human rights are guaranteed by the Constitution. Anti-discrimination provisions are included in the Constitution, and Article 36 of the Constitution specifically recognizes the value of women’s work in the home as equal to that performed outside of the home.

18. Despite the presence of antidiscrimination legislation, there is no provision for ‘equal remuneration for work of equal value’, although ‘equal pay for the same work’ is included in the Constitution.⁴ Minimum wage legislation is in place and has been applied to the garment, textile, and shoe industries, the industries in which a large number of women are employed. However, the adequacy of the minimum wage has been questioned, not least by unions in these sectors. Many women working in the domestic, tourism, and entertainment sectors are not covered at all.

19. Rural women in principle have equal rights to land ownership following the provisions of the Land Law adopted in 2001. In practice, however, there are examples of gendered land grabbing (as well as land grabbing in general) in which men take over the legal title to land even where women have legal rights to it as well. It would seem that women are not aware of their rights and have little recourse to legal advice. Overall 70% of all land titles are issued jointly between husband and wife.

C. Gender realities today

20. Four emerging trends are of particular concern today in promoting women’s economic empowerment in Cambodia: (i) the predominantly young population and the growing number of labor force entrants, (ii) competition from more highly skilled labor in neighboring countries, (iii) increased volatility of employment with a high reliance on export markets, and (iv) vulnerability related to climate change. The gender issues related to these trends will affect the project both directly and indirectly with regards to availability of agricultural labor for production, and livelihood options.

³ Fiona MacPhail 2015 ‘Promoting Women’s Economic Empowerment in Cambodia’ ADB.

⁴ ADB & ILO 2013 Quarterly Briefing Note GMS TRIANGLE Project Oct-Dec Geneva.

21. A growing working age population intensifies the challenge of providing sufficient productive and decent work for job seekers in the country. Over 78% of the 14.7 million Cambodians live in rural areas, although urbanization is occurring as a result of rapid rural out-migration (CIPS 2013). The challenge of generating sufficient jobs will continue in the medium term: the working population is estimated to grow by an additional 1.3 million persons between 2013 and 2020 (calculated from CIPS 2013).

22. Employment creation for unskilled workers, and particularly for Cambodian women disadvantaged by their lower literacy relative to men and to men and women in neighboring countries, will be even more critical with deepening globalization and the recent Association of Southeast Asian Nations economic integration. While Cambodia's export-oriented and open development strategy has contributed to employment growth in the garment sector, the negative impact of the global financial crisis in 2008–2009 and ensuing volatility on women's employment underscores the necessity of diversification and of reducing reliance on external demand.

23. Global climate change is increasing vulnerability, especially for women with marginal access to land. Cambodia is particularly vulnerable to climate change, which is associated with more variable and extreme weather patterns. The devastating floods in Cambodia in 2011 and 2013 had particularly negative impacts on agricultural production, employment in the agriculture sector, rural households, and women. Many households are locked into a brutal cycle of debt caused by borrowing money as a coping strategy during natural calamities and emergencies.

24. In 2013, women accounted for 52% of the total working age population in Cambodia. (CIPS 2013). The working age population as a share of the total population increased from 62.0% to 65.6% between 2008 and 2013. The working age population is currently larger in urban areas at 70.5% compared with rural areas at 64.3%, primarily as a result of enormous rural–urban migration⁵

25. Labor force participation rates for both Cambodian women and men are the highest in the region, and unemployment is virtually non-existent.⁶ However, opportunities for decent work are scarce and underemployment is an issue. The share of women's vulnerable employment — the sum of own-account workers and unpaid contributing family workers — remains high at 70% compared to 59% of men in 2013. Agriculture remains by far the most important sector of the Cambodian economy in employment terms, remaining the main source of livelihood for nearly 53% of employed women in 2012, as compared with 49% of employed men. Services and industry comprised 29% and 18% of women's employment, respectively. 27.6% MAFF staff at national level, 18% at provincial level are women.

26. Women are just over half of the agricultural labour force, and produce 70% of the countries food, but are only 24% of household agricultural holding managers, 12% of agricultural extension officers and 10% of agricultural extension services beneficiaries. 60% of agricultural cooperative members and 34% of agricultural cooperative Board of Directors are women.

27. Although women own 65% of all businesses in Cambodia, the vast majority of women's businesses are microenterprises: 51% employ only one person, and 96% engage four or fewer persons. 37.6% of all fruit and vegetable processing enterprises and 46.5% of all wholesale agricultural raw materials enterprises are run by women.

⁵ Cambodia Inter-Censal Population Survey 2013.

⁶ Fiona MacPhail 2015 'Promoting Women's Economic Empowerment in Cambodia' ADB.

28. The text box below provides key gender and agriculture indicators at a national level, which provides a context and rationale for the gender actions and targets in the GAP and DMF.

Key Gender Issues at National Level

Percentage	Women Representation
51%	Agricultural labor force
75%	Women participate in agriculture
24%	Household agricultural holding managers
60%	Agricultural cooperative members
34%	Agricultural cooperative Board of Directors
65%	All enterprise owners (mostly micro-enterprises)
37.6%	All fruit and vegetable processing enterprises
46.5%	All wholesale agricultural raw materials enterprises
27.6%	MAFF staff at national level
18%	MAFF staff at provincial level
12%	Agricultural extension officers
10%	Agricultural extension services beneficiaries

29. The following table summarises key institutional level indicators at national and sub-national levels (specifically the 4 project provinces), such as women's participation in MAFF, in agricultural cooperatives as board members and committee members. At the national level women make up approximately a third of MAFF staff, agricultural cooperative board members and committee members, and they represent 60% of agricultural cooperative members.

Level	MAFF Staff	Agricultural Cooperative Board Members	Agricultural Cooperative Committee Members
<i>National</i>	27.6%	34%	30%
<i>Kampong Cham</i>	25%	22%	25%
<i>Takeo</i>	19%	29%	17%
<i>Kampot</i>	25%	40%	23%
<i>Tbong Khmum</i>	14.6	25%	25%

D. Gender and poverty

30. In 2012, 22% of all households were headed by women.⁷ In 2011, the difference in income poverty rates between households headed by women and those headed by men appeared very small. However, once household composition is taken into account, female-headed households (FHH) with more than two children and no adult males are much more likely to be poor and the girls more likely to be working. Households headed by women are likely to be more vulnerable; they are also likely to experience shocks differently than male-headed households, largely due to social norms and more limited economic opportunities and income. On average, households headed by women have smaller land holdings than men. 42% FHH compared to 80% MHH are literate, 31% FHH compared to 48% MHH have access to ploughs, 21% FHH compared to 29% MHH produce crops for sale.

31. Evidence of high malnutrition and anemia among women and a high incidence of domestic violence indicate women's inferior position and disadvantaged access to resources.

32. Poverty pushes many students out of school. Among children aged 6–17 years, 11.9% of girls and 10.5% of boys report that they are not attending school because the family is too poor. A higher percentage of girls than boys report that they are not attending school because they must contribute to household income or help with household chores.

E. Migration and disposable incomes

33. Almost 60% of rural migrant women move to Phnom Penh to work. Anecdotal evidence suggests that a significant driver of out-migration from rural areas is high levels of household debt caused by crop failures and emergency medical expenses. While women migrants have lower average earnings than male migrants, they traditionally send more money home than their male counterparts. Consequently, they are receiving less economic benefit in terms of what remains after remittances and in terms of quantity of direct earnings. From the World Bank's recent informal survey findings,⁸ the average monthly wage at factories was reported to be approximately \$162.5/month, which was nearly 50% more than the calculated monthly salary for hired agricultural workers at \$4.56/day, equivalent to \$109/month based on 24 days of work.

34. Official data suggest that average wages have increased by 67%, from \$72/month in 2005 to \$120/month in 2013. Though lower than the wages received by most women working at garment factories, this was still about 10% above the agricultural wage. The gap between the agricultural and construction wages, however, decreased in 2005. The ratio was approximately 1 to 3 in favor of construction.

F. Domestic violence

35. Based on women's focus group discussions in subproject areas, the incidence of domestic violence in rural households is common. It was explained that violence and physical and verbal abuse from husbands occur as a consequence of drunkenness, and arguments about financial problems caused by household debt and gambling. The wife may sometimes be accused of not being competent at managing household finances. In some cases, there is evidence that women

⁷ ADB 2014. 'Cambodia: Country Poverty Analysis.

⁸ The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

have even been abandoned because they are blamed for not being able to manage the household budget.

G. Land rights and land titles

36. Land titles are considered an essential prerequisite for farmers investing in on-farm improvements. Between 2001 and 2004, 78% of new titles were in the name of both men and women. Despite gender-aware land laws, it is difficult for women to register land in their own names alone because they tend to lack information, time, documentation, and the necessary levels of literacy. There are also social norms that discourage women from owning land individually. In practice, women's rights may not be fully recognized, nor are women as likely to be aware of their rights.⁹ Demarcation of land use and even administrative boundaries at the district and commune level is still vague.¹⁰

37. Approximately 20% of rural Cambodians are estimated to be landless and another 20-25% have less than 0.5 ha. It is estimated that almost half of all Cambodians currently cannot meet their daily nutritional requirements from their own agricultural production.¹¹ As cited in several rural communities, one of the reasons for land loss by farm households is distress sale caused by indebtedness.

H. Gender in agriculture

38. In general, women have a relatively high level of control over decisions related to agricultural production as decisions are made jointly with husbands. The control of farm household finances however is managed entirely by women. Because of out-migration, rural populations are now characterized by labor shortages and by households headed by older women taking care of numerous small children.

39. Mechanization and migration are changing the structure of rural labor, especially the contributions made by women's labor, family labor and hired labor.¹² Results from the World Bank's rural survey¹³ indicate that while women have historically played a key role in agricultural production, this major role is likely to change slightly moving forward. The anticipated change is not significant but indicates that households are facing difficulties associated with the shortage of labor. Some agricultural operations such as land preparation, transplanting rice seedlings, harvesting and post-harvesting operations have shifted from manual to mechanized operations.

40. Because machinery services are becoming more readily available in rural areas, women are increasingly using remittances to pay for hiring mechanized services and machinery operators. Machinery is typically operated largely by men, although some women in subproject locations expressed interest in learning to drive tractors and operating agricultural machinery, to save labor and acquire technical skills for higher income-generating opportunities.¹⁴

⁹ USAID. 2015 'Property Rights and Resources Governance, Cambodia.

¹⁰ Sar, Sovann. 2010. 'Social Aspects of Land Administration and Land Reform' Land Reform in Cambodia (4633), FIG Congress 2010; Facing the Challenges—Building the Capacity. Sydney, Australia, April 11-16 2010.

¹¹ De Silva, S., R. Johnston, and S. Sellamuttu, S. 2014 Agriculture, Irrigation and Poverty Reduction in Cambodia: Policy Narratives and Ground Realities Compared.' CGIAR Research Program on Aquatic Agricultural Systems. Penang, Malaysia. Working Paper.

¹² The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

¹³ As before.

¹⁴ Women FGDs during May – June 2016 in sub-project communes in Kampot, Takeo and Tbong Khmum.

41. Almost all World Bank survey respondents agreed that the migration of young rural adults would continue and the subsequent lack of farm labor would negatively affect future farm production and farm budgets. At the same time there was the belief that some households would benefit from migration through remittances, which could provide working capital for investments in agriculture and off-farm activities.

I. Climate change and weather shocks

42. High dependence on rainfall for agriculture makes Cambodian agriculture vulnerable to weather shocks. Male and female farmers reported the negative impacts of shorter rainy seasons, floods, and more frequent drought spells.¹⁵ Climate change is leading to more variable growing seasons and water deficits. Gender inequality intersects with climate risks and vulnerabilities. Poor women have particularly limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions, making them highly vulnerable to climate change. The nature of that vulnerability varies widely and climate change will magnify existing patterns of inequality, including gender inequality.¹⁶

43. Women farmers currently have limited capacity and opportunities to diversify agricultural practices and lessen dependency on climate sensitive and stressed natural resources; limited access to knowledge regarding new agricultural production and post-production techniques and technologies; and limited mobility to avoid disasters stemming from their domestic and agricultural responsibilities.¹⁷

44. Vulnerability is further heightened for women in agriculture, as they are often unpaid family workers with few options for coping with disasters. Climate change vulnerability of both the agriculture and fisheries sectors heightens the level of risk for women's livelihoods, as they have a significant involvement in post-harvest activities.

III. GENDER ISSUES IN PROJECT CONTEXT (AGRIBUSINESS VALUE CHAINS - PRODUCTION TO MARKETING)

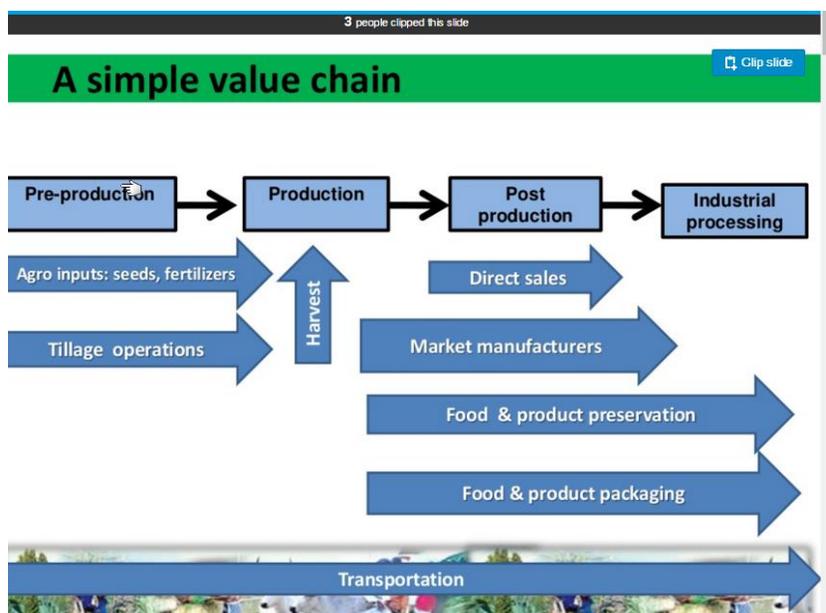
A. Women and value chain functions and market access

45. The following value chain diagram illustrates the main phases of crop production and marketing:

¹⁵ Thomas, T., T. Ponlok, R. Bansok, T. De Lopez, C. Chiang, N. Phirun, and C. Chhun. 2013. 'Cambodian Agriculture: Adaptation to Climate Change Impact.' IFPRI Discussion Paper 1285, Washington, DC.

¹⁶ Ministry of Women Affairs 'Standardized Guideline Mainstreaming Gender and Climate Change in Sectoral Ministries' Planning, Budgeting and Implementation' December 2015.

¹⁷ Ministry of Women Affairs 'Standardized Guideline Mainstreaming Gender and Climate Change in Sectoral Ministries' Planning, Budgeting and Implementation' December 2015.



46. Women are important value chain actors and provide labor inputs for pre-production, production and post-production tasks and functions, thereby creating significant 'value added'. A gender analysis showing where women are currently concentrated in the VC for each sub-project is useful for identifying opportunities for more targeted gender responsive value chain strengthening interventions. As mentioned earlier, women are involved in pre-production and production tasks such as manual tillage operations, purchasing agro-inputs and harvesting. As collectors, they are also responsible for direct sales of crops for industrial processing. Women are very involved in rice production (subproject 1) and cassava production (subproject 3), and less so for mango production (subproject 2) where production is in the hands of private contractors. Mango collectors are generally male.

47. From gender assessments carried out in the subproject areas, it was found that women own and operate their own enterprises in subprojects 1 & 3 and are crop collectors / intermediaries at village and commune levels, rice mill owners and operators at commune and district levels, and wholesalers and retailers.

48. As their collection operations have expanded over time, they have acquired trucks for transporting agricultural produce. Frequently it is the husband who performs the hauling and transporting functions of the crop collection enterprise. Financial operations and management is traditionally the responsibility of women.

49. The buying and selling of crops at commune level is normally a woman-to-woman transaction between the farm household and collector. Inside the household, both husband and wife decide on where to sell crops and to whom and it is then usually the responsibility of the wife to contact the collector and find out about the current market price.

50. When interviewed, female collectors explained that they had learned their skills from other family members, and they were motivated by the desire to educate their children and improve their family's living standards. Since they act as intermediaries, the price they can offer farmers

is dictated by their clients who own mills, plus a small mark-up for themselves. They are also frequently approached by village women for loans. In these cases, small, interest-free advances are given to those households they know well and consider trustworthy.

B. Access to credit

51. As mentioned above, women in Cambodia traditionally are responsible for household purchases, and control household spending. They are assuming greater responsibility for loan repayments – more so than their husbands, and take on responsibility for seeking out local sources of credit. The majority of micro-finance borrowers in rural areas are women. The main reasons for seeking micro-finance are for debt servicing, for purchasing agricultural inputs and paying for production costs. The lack of access to credit which is affordable and at low-interest is consistently cited as a major household problem and constraint.

C. Access to irrigation

52. Both men and women can be members of FWUCs for irrigation schemes although it is usually the husband who represents the household. In subproject 1 (reservoir modernization), there is no water users' association or agricultural cooperative in the commune. When farmers require water for cultivation, they seek permission from the village chief. The amount of available water is limited and water distribution is determined by the village chief. In subproject 2 (mango drip irrigation), there is a Farmer Water Users Group (FWUC) in the commune but it is only involved in water management of rice production, and the irrigation scheme is in need of repair. In subproject 3 (cassava production and storage), there is an agricultural cooperative. The irrigation scheme does not have adequate water control structures.

53. FWUCs currently play a very nominal role in Cambodia as they are still not authorized to collect irrigation service fees, and have little say in system management decisions.¹⁸ The FWUC sub-decree that would assign appropriate responsibilities and rights for irrigation infrastructure to respective FWUCs and allow them to collect irrigation service fees remains unapproved. ADB-financed TA is currently providing technical assistance to MOWRAM to find flexible solutions for fee collection, and the sub-decree would underpin the sustainability of large future irrigation investments.¹⁹ Capacity for O&M of irrigation schemes overall is also weak. In addition to a lack of financial resources, fundamental problems exist with assessment of O&M needs and priority, and capacity of government staff. Provincial Departments of Water Resources and Meteorology currently have limited capacity to maintain irrigation schemes.

D. Contract farming

54. There has been a gradual increase in direct engagement between agribusiness companies and small landholder farmers in recent years, stemming in large part from the country's general economic growth and Cambodia's integration into the global economy. While there are many different models for engagement between small landholder farmers and agribusiness companies, in Cambodia, the principle model has been contract farming where contracts are made either with individual farming households or with agricultural cooperatives and buyers for pre-agreed quantities of agricultural produce. The model is well suited to a system of

¹⁸ The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

¹⁹ ADB. 2014. 'Water Resource Management Sector Development Program, Ninth Quarterly Progress Report (February 1-April 31, 2014).' Asian Development Bank, Phnom Penh.

agriculture where there are many small landholder farmers and generally weak property rights and legal infrastructure, as exists in Cambodia.

55. Usually, local farmers grow and deliver a specified quantity of produce at a specified quality at an agreed date. In exchange, the company provides upfront inputs, such as credit, seeds, fertilisers, pesticides and technical advice, all of which may be charged against the final purchase price; and agrees to buy the produce supplied, usually at a specified price.

56. Globally, contract farming is most often adopted by agribusiness companies for relatively high-value produce such as fresh vegetables for export or supermarkets, dairy products, poultry, rubber, palm oil, sugar, tea, tobacco and cotton. For such commodities there are generally few competing buyers.²⁰ Typically, both farmers and companies benefit from the contract; the company ensures its raw supply, while farmers receive fixed prices, which reduces their income uncertainty. A guaranteed and fixed price structure is broadly negotiated between the parties based on prevailing spot market prices or as a percentage of world prices, and in some cases it is even indexed to stock market prices (e.g. tea, coffee, rubber).

57. In 2013, AMRU Rice initiated its first contract farming program in Cambodia. The model it adopts is the one that closely matches Government policy which is to promote partnerships with agricultural cooperatives (ACs). AMRU Rice has established direct partnerships with selected ACs in Preah Vihear province, for the supply of certified organic rice paddy. Contracts between AMRU Rice and ACs stipulate targets for quantity and quality of rice paddy supplied. AMRU Rice pays ACs directly for rice paddy and ACs then pay farmers less a service fee of 20-30 KR/kg. When interviewed farmers who participate in AMRU Rice's contract farming program reported that none of the farmers had title to the land that they farm. In addition, only about half of the farmer cooperative members (mostly women) interviewed knew that the ultimate buyer of their paddy was AMRU Rice.²¹

58. For this reason, the study on small landholder farmers' engagement with agribusiness concluded that even poorer, more marginal farmers could take advantage of contract farming opportunities.²² It is often cited that small landholder farmers are typically shut out of contracts because of their small landholdings. However, there is evidence to suggest that small landholder farmers benefit the most from contracts for producing higher value crops. In this case, agricultural cooperatives and other farmer organizations may play an important role in reducing agribusiness companies' transaction costs such as farmer training, input distribution, collection and quality control.

59. Results from the study indicate that perceptions amongst farmers were mixed regarding whether agribusinesses prefer making contracts with women or men. In practice, agribusinesses do not have a preference. Whilst it may be that across Cambodia, men have historically had better access to education, it is also traditional in rural households for women to control the cashbox. Whether contracts were signed with women or men was generally determined by role in

²⁰ In Cambodia, the government policy has heavily promoted the multipartite model of contract farming, and the policy focus has been particularly on rice. This would seem to be a departure from the norm internationally where rice is most often procured through spot market purchases. The adoption of rice contract farming in Cambodia appears to be a reaction to the country's lack of efficient and transparent spot market which is largely a result of the massive exports at harvest of rice paddy to Thailand and Viet Nam.

²¹ NGO Forum on Cambodia 2016. 'Small Landholder Farmer and Agribusiness Engagement: Implications for Corporate Reform and Impact on Rural Livelihoods in Cambodia'.

²² NGO Forum on Cambodia 2016. 'Small Landholder Farmer and Agribusiness Engagement: Implications for Corporate Reform and Impact on Rural Livelihoods in Cambodia'.

household and level of contribution to the activity, rather than an overt preference by the contractor. All farmers reported that in their experience access to contracts provided a net benefit. Additionally, some women reported that they were happy with their contract farming arrangement since it provided enough income so that their husbands and children did not have to seek work away from home, thus keeping their family together.

E. The participation of women in civil works

60. Gender disparities in employment remain extensive in Cambodia, primarily because of traditional attitudes about "appropriate" occupations for women and men. This is particularly true in the construction sector, where it is believed that women either cannot or do not wish to engage in manual labor. However, women are already engaged in manual labor in the agriculture sector, and there are many construction jobs that women can and wish to do in order to earn cash wages. Women's current involvement in similar infrastructure related work varies between 17% to 46%. Women who can read and write would also be well suited for record-keeping jobs during construction work. Targets for women in skilled and unskilled civil works are included in the GAP/DMF.

F. Mechanization and the participation of women in agricultural machinery operation

61. Output 2 of the proposed CFAVCP (climate smart agriculture and agribusiness promoted for key value chains) will focus on the development of public and private human resources and institutional capacity, and the support services to enable climate friendly agribusiness growth and management. Three activities identified include the following (i) deploying climate resilient varieties; (ii) strengthening capacity in climate friendly production practices and technologies; and (iii) promoting farm mechanization and extension. The DMF target indicates that the operation of agricultural machinery will be expanded and that women will represent at least 40% of the labor pool of individuals that can operate a range of agricultural machinery.

62. The Government of Cambodia's vision is to transform and modernize the country's industrial structure from a labor intensive to a skill-driven industry by 2023. In agriculture this is already taking place, by default with migration from the rural areas and labor shortage there is more reliance on mechanization: in 2005 one hectare of wetland rice required 73 working days, by 2013 that had reduced to 48 days. A similar pattern exists for maize from 41.8 days to 31.33 days. In turn the skill levels of those that remain in farming have increased, out of necessity as more farmers and traders become more mechanized. The downside is transplanting, harvest and post-harvest activities, which previously often involved manual tasks usually undertaken by women, are currently executed using machinery mainly with male operators, however, where female operators are given responsibility they tend to be more cautious in the operation with less damage to the machinery.

63. There are several private sector companies importing and distributing agricultural and processing machinery in Cambodia and their numbers are increasing. These imported products meet demand, but operation and maintenance of the machinery does not. Most of the complex machinery is imported which include, power tillers, rice mills, water pumps, combine harvesters, tractors, dryers and threshers. Machinery distributors are finding it increasingly difficult to recruit staff that have a sound mechanical engineering background. The repair and maintenance of the machinery is a major constraint and has substantial cost implications; maintenance costs are 20% and 28% of the total value of tractors and power tillers respectively, with only 20% of users being able to maintain their equipment.

64. The training of machinery contractor operators and the wider use of the operators will contribute to the reduction of GHG due to increased economies of scale in the agricultural operations making savings on fuel and machinery wear and tear. Increasing mechanization in agriculture is predicted to reduce the unskilled labour opportunities that are important to households with little or no land, and particularly for women. Tractors are being introduced to save labor in land preparation, and harvesting machines and threshers are being introduced. The latter two tasks in particular tend to be traditionally undertaken manually by women and so mechanization will reduce the demand for women's unskilled labor. At the same time, women would like the opportunity to learn how to drive two-wheel tractors and other agricultural machinery. This would allow them the opportunity to have paid work as drivers and also prepare them for future farm mechanization. Mechanization can also increase productivity and free up time for more value-added productive work.

G. Bio-digester use as a labor-saving intervention

65. Transformation in rural areas, particularly in the area of labor-saving technology, has also been rapid in recent years. While not widespread in subproject areas, labor-saving technologies such as bio-digester units for cooking and lighting are significantly reducing women's workloads. This is particularly true for households in areas of Cambodia involved in livestock production.

H. Women Farmers Network in Cambodia

66. In 2015 MAFF through its Gender and Children Project Support Unit, together with the international NGO Oxfam has promoted and encouraged women farmers to discuss the challenges they face and the opportunities they see as priorities. Five Women Farmer Forums have brought together around 551 women farmers who agreed on the formation of a women farmers network. The network has been established across five regions in Cambodia, covering 24 provinces. The regions were defined according to geographic zones as follows: Mekong Region (including Kampong Cham and Tbong Kmum), Northern Region including five northern provinces, Southern Region, Coastal Region and the Low-lying Region. Support to the network is provided by MAFF and civil society organizations.

67. The Women Farmers Network has established itself as a self-help forum and utilizes social media to maintain dialogue with its members. Its female farmers are aged between 25 – 50 years old. Oxfam has mobilized resources to assist the 48 members who are the elected province representatives (two women farmers from each province) and represent the national committee of the Network. The Network functions as a platform for dialogue about priority challenges women face as agricultural producers. As it is a 'women-only' forum, it sees itself as being able to provide space and encouragement to women to talk freely about the challenges they face. Issues discussed include access to water, dealing with extreme weather events such as droughts and floods, access to capital, access to markets for agricultural products and supplies. Women farmers have specific challenges related to difficulties in transporting agricultural produce to markets.

68. Many of the network members are also local leaders such as commune members, cooperative members or savings group members, and they are invited and encouraged to attend province-level MAFF workshops for capacity building and training of trainers. Technical information to women farmers in the network is disseminated through social media pages. The Network has links to local Community Innovation Centers – one of which is in Takeo. The Centers

aim to build capacity of young people and farmers and provide training in computer literacy and English classes.

69. Their most important priorities include the following:
- (i) Develop policies that could minimize loan interest rates for women farmers in order to invest in agricultural production
 - (ii) Formulate technical groups to help women farmers with business plans, agricultural plans and product processing. Train women farmers on record-keeping and on cost-benefit analysis.
70. Given that the Women Farmers Network was initiated by MAFF and that it is present and active in the target provinces of the CFAVCP, it is well-positioned to support extending outreach of project activities to women farmers at the local level.

IV. GENDER ISSUES IN PROJECT INTERVENTION AREAS

71. Commune Chiefs of the three subproject areas have provided some gender-specific data concerning the target beneficiary communities:

Subproject area	# households	% FHH	% ID Poor 1&2	Outmigration
Tani, Kampot	708	16%	11%	7%
Trapang Kra, Takeo	1034	15%	25%	9%
Seda, Tbong Khmum	975	7%	24%	7%

72. The sub-project areas have between 11% and 25% ID Poor rates, between 7 and 16% female headed household rates, and 7 to 9% outmigration rates.

73. Women and men differ in their roles and in their economic, educational, and health status. Heavy physical work is almost always men's responsibility. Women are exclusively responsible for managing household budgets. The health status of rural women is likely to be worse than men's and their workload is traditionally greater.

74. Findings from the participatory assessments indicate that there is joint access and control to productive resources such as land. The land title they possess is in both their names and joint agreement is necessary before land can be sold off. There is joint access to and control over capital, i.e. money. For accessing a loan, the bank requires both signatures on the loan agreements. Identifying different sources of loans is mostly done by women. The access to information, knowledge and education is still limited for both men and women. Women are less likely to be functionally literate. In general, invitations to commune-level extension training activities are made to the head of household, who is the husband. Women are only allowed to participate in organized extension training when the husband is absent and he has given his permission – by telephone if he has out-migrated from the village. Women have expressed keen interest in receiving practical information on rice variety selection and they also would like to visit field crop demonstrations. The use of visual teaching aids to enhance understanding has also been specified.

75. There is equal access of men and women to markets. Both husband and wife jointly agree when, where and to whom to sell the crop, but it is the wife who contacts the local (usually female) collector by telephone. There is a low level of knowledge of market information amongst households and the price is set by the local collector. It was recommended that future subprojects should disseminate market information to local farmers particularly women who interact with the collectors.

76. Regarding the beneficiaries' absorptive capacity for the proposed subprojects, the different ways men and women will participate was assessed. There is a good fit for the subprojects in the local society and culture. Both men and women were motivated to take part and gain benefits from the three subprojects. However, their knowledge, skills, and organizational resources differ. Women are aware of their own technical shortcomings but express an eagerness to learn new techniques, and they are aware that they have had fewer opportunities than their husbands to receive agricultural training. Women appear more eager to learn about the potential for income-generating activities and increasing household income. This is driven by the fact that household debt is a constant worry. Since husband and wife jointly control land and capital, the subprojects are unlikely to adversely affect women's access to and control of resources.

77. Regarding the capacity of institutions to address gender issues, anecdotal evidence from interviews and meetings held in subproject areas suggest that the Province-level Department of Agriculture has been less than effective in ensuring that services and capacity building are adequately delivered to women who now make up the majority of rural populations. This should be investigated further both at national level (MAFF-GCPSU) and at sub-national levels through the gender focal points. There are very few female extension agents, and invitations to agricultural training are rarely extended to household members other than the (male) head of household. Building capacity of female staff and female extension workers both at national and provincial levels is therefore considered essential. Low productivity in the target areas stems from weak extension services and farmers' lack of knowledge of optimal techniques and input use. Focus group discussions in the three subproject areas explained that because only heads of households are invited to meetings held by extension staff, women farmers have less access to extension services than men.

78. The Women Farmer Network might be able to contribute to project outcomes by sharing information on appropriate activities and offering support to women farmers. The Network could also be a more substantive partner in implementation and monitoring as it is a good fit for the CFAVCP and can act as a vector for reaching women for all the technical training and cooperative organization and management. The Network is also linked to the Savings for Change Groups which facilitate financial literacy, savings and small-scale lending at community level. At commune level, the presence of Commune Women and Children Focal Points, should ensure follow-up and feedback of women's concerns regarding project activities.

A. Agricultural production and Gender division of labor in the subproject areas

1. Subproject 1: Irrigation and Water Catchment Modernization and Rehabilitation: Trapeang Run Reservoir and Irrigation Scheme - Key beneficiaries:23

- Number of communes: 1
- Number of villages: 3 (Trapeang Run, Trapeang Raing and Ta Pream)
- Size of Population: 3191; number of females: 1711
- Total number of households: 708: number of female headed households:111
- Number of farming households: 689
- Total area of available land for farming: 563 ha
- Average land size per household: 1.30 ha / hh
- Number of ID-Poor 1 households: 21
- Number of ID-Poor 2 households: 59
- Number of ID-Poor 1&2 female headed households: 25
- Out-migration: 219 persons have out-migrated including 30 who have migrated to other countries.

a. Work profiles in agriculture and organization of paddy production

79. With respect to the production of paddy, women are involved in land preparation, clearing grass and weeds; broadcasting rice for seed beds, broadcasting fertilizer, transplanting seedlings, hand-harvesting paddy; threshing and winnowing; collecting and storing paddy and selling paddy to collectors. When selling paddy, both men and women decide and agree jointly on which price to accept. Paddy transportation is mostly done by men and some families hire labor for hauling and transporting paddy.

80. Only one village in the commune is currently able to cultivate three crops of rice a year because they have access to a year-round water supply. In the other villages, there is only one rice cropping season per year because of insufficient water. There is no water users' association or agricultural cooperative in the commune. When farmers require water for cultivation, they seek permission from the village chief. The amount of available water is limited and water distribution is determined by the village chief.

81. The majority of rice collectors / intermediaries in the locality of sub-project 1 in Tani Commune are women. They purchase paddy from local farmers on behalf of their clients the wholesalers – both Cambodian and Vietnamese, who set the purchase price. The collector in this locality is a local woman who lives in the commune and has learnt the trade from a family member. Her husband assists by transporting purchased sacks of paddy from the farms. During interviews with rice collectors, they explained that in order for their businesses to grow, they need access to more paddy. For this reason, they view the proposed irrigation modernization subproject as a positive development that will increase the volume of paddy production. The rice collectors who were interviewed explained that they do not lend money to farmers, but will provide interest-free advances to those farmers they trust.

82. The local female rice miller provides households with interest-free loans of \$75 – \$125 for 4 – 5 days before harvesting paddy. Households pay back the loan in kind. Each season, the rice miller explained she needed 10,000 dollars in order to purchase paddy from farmers. However,

²³ Commune Chief, July 2016.

she frequently does not have sufficient cash for her business and therefore borrows approximately 5,000 dollars from the local micro-credit institution. The rice miller buys paddy from commune farmers and collectors and sells milled rice in the commune and to a client in Viet Nam.

2. Subproject 2: Drip Irrigation in Mango Production - Key beneficiaries:²⁴

- Number of communes: 1
- Number of villages: 3 villages (Bos Taphang, Prek Taloy and Prey Kdourch)
- Total number of households: 1034 hh; total number of female headed households: 154
- Total population: 4527 persons; number of females: 2128
- Total number of farmers: all households
- Total area of land for farming: 4229 ha for rice; 4304 ha for crop production
- Average farm size: 1.5 ha
- Number of ID-Poor 1 households: 55 hh
- Number of ID-Poor 2 households: 201 hh
- Migration: 421 persons have out-migrated of whom 244 are female.

a. Work profiles in mango production and organization of production

83. Most mango farmers in the area have either used revenue from rice production or borrowed money from the bank or used remittances from their children in order to plant their mango orchards which are typically approximately 5-7 ha. Mango cultivation is costly for farmers and because they do not have sufficient capital, labor or knowledge of mango cultivation, it is a common practice for farmers to lease their orchards to private contractors – usually Cambodian companies after 3-4 years when the trees are established and beginning to bear fruit. The cost of a mango sapling is approximately 50 cents to one dollar. The labor cost for harvesting mangoes is KR 50,000 per day. Irrigation water for the orchard is usually from a pond or borehole.

84. Depending on negotiations with contractors, farmers might receive 5-10 dollars for leasing one tree. A typical rent for a 7 ha mango orchard with 4-year old trees is 6-7,000 dollars per year. The contractor then takes care of the orchard using his own hired (male) laborers – for weeding, fertilizing and applying insecticide to make sure the mango trees produce fruit. The orchard owner has no further responsibility or claim to the orchard. All the revenue from mango sales - typically to wholesalers in Viet Nam, goes to the contractor.

85. Contractors provide training to farmers in how to correctly plant mango trees. Local agricultural suppliers frequently provide demonstrations of the recommended agricultural products to use for mango cultivation such as pesticides and fertilizers. They provide a 5-day training for farmers and trainees are exclusively male. In the sub-project area there are many absentee mango farmers.

86. It is mostly men who do the heavy work in mango farming. About 50% of men in this locality also share responsibility for housework and men are responsible for looking after large animals such as cattle. Some men also help women take care of small children. For female-headed households where adult children have migrated and left grandchildren in their care, the workload is substantial. In addition to looking after the grandchildren, these women are the caretakers of livestock, and manage and undertake both paddy and crop cultivation including hiring day laborers. Some women are also directly involved in mango cultivation. Hired labor is

²⁴ Commune Chief, July 2016.

necessary because of family labor shortages as a consequence of migration, and migrants' remittances are used to pay day laborers.

87. There is a Water Users Group in the commune but it is only involved in water management for rice production.

88. When interviewed, a local mango contractor explained that he pays 5-10 dollars per tree for one year and he is able to sell a kilo of mango fruit for KR3,500 to the local mango collector. He said he was able to meet his running costs without having to borrow any money. The local mango collector explained that in order to purchase mangoes, he borrows money interest-free from his client in Viet Nam and the approximate amount borrowed is 10,000 dollars in order to purchase mangoes from his regular contractors. The Vietnamese client subsequently sells the mangoes to his client in China. In this instance, the collector does not act as a local moneylender, as neither local farmers nor contractors have ever approached him for advance payments or loans.

3. Subproject 3: Cooperative Cassava Chip Drying and Storage for Trading , Seda Meanchey Cooperative, Sedasean Chey Village, Seda Commune, Tmbae District, Tpong Khmum

a. Key beneficiaries:²⁵

- Number of communes: 1
- Number of villages: 6 villages (Seda Senchey, Krasang, Andong Lagneang, Beung Thmey, Chung Tasao and Sampor)
- Total number of households: 975 hh; total number of female headed hh: 66
- Total population: 4254; number of females: 2028
- Number of farming households: approximately 90% of total number of hh
- Total area of land for farming: 2106.7 ha including 1948 ha for rice production and 158.7 ha for crop production
- Average farm size: 1.5 ha
- Number of ID-Poor 1 households: 94 hh of which 33 female-headed households
- Number of ID-Poor 2 households: 138 hh of which 33 female-headed households
- Out-Migration: 298 persons have out-migrated – 156 inside Cambodia (of which 78 females) and 142 to other countries (of which 75 females).

b. Work profiles in cassava production and organization of production

89. Regarding cassava cultivation, the main division of labor between men and women is that women are responsible for planting cassava and men are tasked with digging holes for cassava planting and for harvesting. Men are also responsible for cassava transportation. Wage rates are different for male and female day laborers causing a great deal of dissatisfaction. Women who plant cassava receive KR 20,000 (\$5) per day and men who dig the holes receive KR 25,000 (\$6.25) per day. There is joint access to markets although in practice it is women farmers who negotiate with the cassava collector. Access to information, knowledge and education is limited and inadequate for both men and women although more so for women.

²⁵ Commune Chief, July 2016.

90. In this area, the local cassava collector is female and is 32 years old. She has three children and her husband is 40 years old. Both the husband and wife take care of the children. She has been a cassava collector for ten years. She learnt the skill from her sister. She is also one of the local moneylenders. Her husband is responsible for transportation of cassava and both are responsible for weighing cassava. Ten years ago they rented a truck and picked up the cassava from each farm individually, but now they have their own vehicle. Farmers also bring cassava directly to their store. In order to purchase cassava from farmers she borrows approximately 50,000 dollars to add to her own fund of 20,000 dollars. The collector's client is a buyer in Viet Nam who sets the price which has fluctuated in recent years and very low prices have created discontent amongst local farmers. Sometimes the wholesaler in Viet Nam also does not pay her on time.

91. The cassava collector is usually contacted by the female farmer. In previous years she was never asked to lend money to farmers but now farmers ask her for loans of about 50-500 dollars for three months. She lends money to those farmers whom she knows very well, and does not charge them interest. Some farmers are late in repaying. If a farmer asks for a loan of 1,000 dollars, she charges 30 dollars as interest per month. The Commune land title is security for the loan. However, for people that she knows well, she does not take the land title. She also gives loans to people outside the village. The main problem she faces is that some farmers do not pay back the loan, and do not sell them their cassava. She explained that in this area moneylenders are usually women.

V. RECOMMENDATIONS FOR THE GENDER ACTION PLAN

92. The Project is categorized as 'effective gender mainstreaming' and will involve activities that will contribute to gender equality and women's empowerment. The main activities contained in the GAP are described in this section. The GAP mirrors the DMF and has links to MAFF Gender Policy, particularly Objective 4 - increasing the ability of rural women to access and manage resources. The design features take into account local aspirations as identified by women during participatory consultation as well as government representatives during the national consultations. Women expressed the desire to be trained, to be kept up to date with agriculture developments, to participate in planning, demonstrations, decision-making and to be consulted on infrastructure design related to community-based subprojects.

93. In subprojects where there are civil works related to infrastructure (such as subproject 1), community-based construction committees will be established to provide a mechanism for community input to the planning, survey and design of that infrastructure, particularly with respect to canal alignments. Community representatives will disseminate information from construction engineers to their communities. Women's meetings at village level will be held to discuss designs, and feedback will be given to subproject planners and engineers. It is important that the community sign-off on the final design before it is submitted to the EA and ADB for approval.

94. Women will represent at least 40% of all participants in consultations, planning workshops, etc, Efforts will be made to bring meetings and trainings to the village level at appropriate times and to organise community based child supervision will be organised in order to facilitate women's participation in public events.

95. Contractors will target 25% women for skilled and unskilled labour, and regularly report on labour days disaggregated by sex. Contractors will uphold the Core Labor Standards, including not employing child labor. Men and women will receive equal pay for equal work.

96. Women will represent at least 30% of the total trained in infrastructure related construction/ rehabilitation (e.g. masonry skills for bio-digesters construction), and operation and maintenance (e.g. local irrigation schemes).

97. Women will participate in all promotional campaigns in all subproject areas will be implemented related to introducing energy-saving, clean (renewable) power supplies for households such as bio-digester units.

98. Stronger links between small farms operated by women in subprojects 1, 2 and 3 and the agro-processing and agribusiness industry are to be facilitated through productive partnerships (e.g., contract farming), training in business and other skills, and provision of market information. Priority will be given to women led or owned enterprises and cooperatives that meet at least one of the following criteria (i) at least 50% of senior managers are women, and/or (ii) at least 50% of enterprise ownership is controlled by women, and/or (iii) at least 50% staffs are women.

99. At inception, the project will conduct a gender analysis for each of the 4 targeted value chains and develop a set of clear policy and program recommendations to strengthen women farmers' involvement along the different value chains. This activity will also ensure that capacity is built within MAFF/ Gender & Children Project Support Unit (GCPSU) for gender responsive value chain analysis and develop methodology/guidelines that can be used in future analysis. The gender focals will participate in policy dialogue and integrate key recommendations from the gender analysis of value chains and key features of the MAFF Gender Policy into the Agribusiness policy and other related documents prepared under the project. Gender stakeholders (MAFF GCPSU representatives, gender focal points, and WFN) will actively participate in policy committees and meetings.

100. The project will involve women farmers and WFN representatives actively and meaningfully in each individual event for all capacity-building activities (trainings, demonstrations, study tours) supported by the project:

- (i) agricultural extension and technical capacity-building activities including those related to climate change adaptation and mitigation;
- (ii) trainings on O&M a range of agricultural machinery; and,
- (iii) management (incl. leadership, negotiation) and business skills trainings.

101. Women will have the opportunity to be trained to operate a range of agricultural machinery in all subproject areas, representing at least 40% of the increased labor pool over baseline by end of project.

102. In all subproject areas women's ability to prepare for climate-related disasters and build resilience to impacts will be developed. All women in target areas will have access to information on climate change mitigation, improving climate resilience and resource efficiency.

103. Agricultural extension activities related to irrigated rice production (subproject 1), mango production (subproject 2) and cassava production, processing and trading (subproject 3) in project intervention areas will work with the agricultural cooperatives and through the WFN to increase training of more female farmers and extension workers, the use of visual aids, varied information and communication technologies to improve extension outreach, and promotion of more active participation of women in farmer extension groups, as well as making child supervision services accessible, are measures to empower women and bring economic benefits.

A. GAP Implementation

104. The EA and IA, especially the PMU and PPMUs, will be responsible for GAP implementation and monitoring, and will work in close partnership with the WFN, MAFF GCPSU and Provincial Gender Focal Points. The principles underpinning the GAP are to ensure sustainable improvements in gender processes and outcomes at an institutional and policy level by building capacity as follows:

- (i) To mainstream gender into partner institutions such as: EA (MAFF), IA, at national and sub-national levels (i.e. Dept. of Ag extension, etc.), agribusinesses and cooperatives, FWUCs, MFIs, etc.; and
- (ii) Of existing gender responsive entities such as the MAFF GCPSU and WFN, to advocate for, facilitate and monitor expanding women farmers' access to services and opportunities through collaboration and partnership in all project activities.

105. The PMU will appoint a safeguards officer to be also responsible and accountable for gender, who will closely liaise with representatives from the MAFF GCPSU at national level and from WFN, agricultural cooperatives and gender focal points at provincial levels. The PMU will collect and analyze data disaggregated by sex where relevant and integrate gender sensitive indicators (from DMF and GAP) in the PPMS, and ensure regular monitoring and reporting (at least semi-annually to ADB) on the progress of GAP implementation.

106. Gender consultants (international 8 person-months; national 40 person-months) as part of the project implementation consultants team will build capacity of the gender focal points, the PMU and provincial implementing unit staff in gender analysis and mainstreaming, and support GAP implementation, monitoring and reporting. Work plans and budget to implement the GAP activities will be prepared annually.

107. The EA and the PMU will actively involve the MAFF GCPSU, the sub-national gender focal points (province, district, commune), and the WFN and the agricultural cooperatives as key partners in project implementation and monitoring, especially for the GAP activities and capacity development for gender mainstreaming in the agriculture sector. The project will partner with the WFN as facilitators/resource persons for agricultural extension and technical capacity-building, awareness-raising and information sharing targeted at farmers including provision of market information. WFN social media pages should be used as one of the ways to disseminate information to women farmers.

108. Adequate financial resources have been allocated to implement the GAP. Implementation of the majority of its activities should be covered by the budget allocated for implementation of the regular project activities under the corresponding outputs. An estimated amount of \$120,000 will be required to cover any extra costs implied by special arrangements made to facilitate and increase women's participation in the regular project activities (e.g. such as series of shorter training sessions at venue closer to their communities, child care stipend for WFN members as facilitators, etc.) and the costs related to the conduct of a gender analysis of the targeted VCs (international and national consultants; 3 person-months each).

Gender Action Plan

Document Stage: Draft for GCF Review
Project Number: 48409-002
October 2017

Cambodia: Climate-Friendly Agribusiness Value
Chains Sector Project

Gender Action Plan - CAM

Project outputs	Gender activities/actions	Performance indicators/targets	Responsible entities	Timeline	Cost estimates ¹
Output 1: Critical agribusiness value chain infrastructure improved and made climate resilient					
Gender Objectives					
1.1 Ensure critical agribusiness value chain infrastructure is responsive to the needs of women and men	<p>1.1.1 Involve women and Women Farmers Network (WFN) representatives actively and meaningfully in each individual event for all consultations and planning activities related to improvement and climate resiliency of critical infrastructure supported by the project.</p> <p><i>- This would mean paying attention to the following aspects: convenient time, adequate venue, information sharing with visual aids/illustrations, having female facilitators, child supervision arrangements, etc.</i></p>	<p>1.1.1 Women are 40% of participants– aggregate basis (point of reference: female population: 54% in subproject 1, 47% in subproject 2; and 48% in subproject 3; 30% female participation in similar activities currently)</p> <p>At least 50,000 females benefiting from rehabilitated climate resilient water management systems</p>	PMU MAFF (lead) and PPIUs; MOWRAM; MRD; WFN; design engineers	Q3 Y1 - Q4 Y4	Covered under PIC (other than civil works) budget
1.2 Enhance income generating opportunities for women	<p>1.2.1 Ensure women benefit from jobs created by the project related to infrastructure construction/rehabilitation as well as operation and maintenance.</p> <p><i>- This would mean that information about such employment opportunities will be communicated through adequate channels to reach out women in the communities.</i></p> <p><i>- Core labor standards will be complied with (equal pay for work of equal value, no child labor) for all civil works related to the project.</i></p> <p><i>- Other measures that are needed will be taken (e.g. child supervision arrangements even if informal) so that interested women can grasp such opportunities.</i></p> <p>1.2.2 Provide skills enhancement for women in infrastructure related construction/rehabilitation (e.g. masonry skills for bio-digesters construction), and operation and maintenance (e.g. small-scale irrigation schemes).</p>	<p>1.2.1 At least 25% of workdays created will be filled by women disaggregated by skilled/unskilled and type of work (point of reference: women's current involvement in similar infrastructure related work varying between 17% to 46%)</p> <p>1.2.2 At least 30% women FWUC members developed capacity to operate and maintain irrigation schemes.</p>	PMU MAFF (lead) and PPIUs; MOWRAM; MRD; contractors of civil works	Q4 Y1 - Q4 Y6	Covered under PIC civil works (irrigation, roads, warehouses, biogas, other infrastructure) budget.
1.3 Increase the uptake of bio-digesters	1.3.1 As part of the promotion campaigns about bio-digesters and other renewable energy solutions, raise awareness among women and men in the communities	1.3.1 At least 40,000 women (or 50% of beneficiaries) are beneficiaries of bio-digesters and	PMU MAFF (lead) and	Q4 Y1 – Q4 Y4	Covered under training and

¹ Whenever implementation of the gender activities/actions are part of implementation of the regular project activities, they will be covered under the corresponding budget for these project activities, of which up to 5% can be used to make special arrangements (e.g. trainings; different venue; child supervision) and/or develop targeted materials where and when needed to ensure women can fully participate in and benefit from the project activities, and more particularly to ensure gender targets included in this project gender action plan are met.

	<p>about the benefits for value chain improvement/climate change but also for greater gender equality (time saving, drudgery reduction, improved health).</p> <p>1.3.2 Involve women as active agents in the promotion campaigns on the use of renewable energy solutions.</p>	<p>compost huts installed (baseline: 5,721 women).</p> <p>1.3.2 Number and percentage of women active agents.</p>	<p>PPIUs; GDAH</p>	<p>Q4 Y1 – Q4 Y4</p>	<p>promotion materials budget (for biogas)</p>
Output 2: Climate smart agriculture and agribusiness promoted					
<p>Gender Objectives 2.1 Strengthen women farmers' (individual and member of cooperatives) involvement along climate-friendly agribusiness value chains</p>	<p>2.1.1 Involve women farmers (and the WFN) actively in the selection and multiplication of climate resilient crops varieties and build on their local knowledge in this area.</p> <p>2.1.2 Involve women farmers and WFN representatives actively and meaningfully in each individual event for all capacity-building activities (trainings, demonstrations, study tours) supported by the project: (1) agricultural extension and technical capacity-building activities including those related to climate change adaptation and mitigation; (2) trainings on how to operate and maintain a range of agricultural machinery; (3), management (incl. leadership, negotiation) and business skills trainings. <i>- This would mean paying special attention to the following aspects: adequate venue, timing, duration, way that invitation is being done (not to head of household as is currently being done), use of visual aids and other illustrated materials, use of female facilitators/demonstrators and extension agents, child care arrangements even if informal, etc.</i></p> <p>2.1.3 Strengthen linkages between women-led and/or owned farms/enterprises* and agribusiness industry</p> <p>For support provided to cooperatives: preferential support will be given to agricultural cooperatives with a majority of female members.</p> <p>2.1.4 Work with the WFN to identify context-appropriate ways to address burden of household and care work for women farmers, especially female headed households, which prevents them to increasingly participate and move up along the value chains.</p>	<p>2.1.1 Number and % of women farmers involved</p> <p>For 2.1.2 (1) and (3): Women are 40% of participants (aggregate basis) or at least 16,000 women farmers are trained in CSA and agribusiness development skills (point of reference: female population: 54% in subproject 1, 47% in subproject 2; and 48% in subproject 3 with almost all of them farming; 30% female participation in similar activities currently).</p> <p>For (2): (i) Number and percentage of women farmers trained in each event; (ii) women represent 40% of increased labor pool of individuals who can operate agricultural machinery over the baseline (baseline: 0).</p> <p>2.1.3 Number and type of activities conducted; at least 8,000 women farmers (or 50% of the women farmers trained) are SRP compliant with direct links to millers and exporters</p> <p>2.1.4 Practical solutions identified and integrated in the project.</p>	<p>PMU MAFF (lead) and PPIUs; CARDI; WFN PMU MAFF (lead) and PPIUs; MOWRAM; WFN</p> <p>PMU MAFF (lead) and PPIUs</p> <p>PMU MAFF (lead) and PPIUs; WFN</p> <p>PMU MAFF (lead) and PPIUs</p>	<p>Q4 Y1 – Q4 Y6</p> <p>Q1 Y2 – Q4 Y6</p> <p>Q4 Y1 – Q4 Y5</p> <p>Q1 Y2 – Q4 Y2</p> <p>Q1 Y2 – Q4 Y6</p>	<p>Covered under resilient varieties budget</p> <p>Covered under training budget for production practices and technologies and PIC (other than civil works) budget</p> <p>Covered under training budget for production practices and technologies and PIC (other than civil works) budget</p> <p>Covered under PIC (other than civil works) budget Covered under training</p>
<p>2.2 Ensure female staff</p>	<p>2.2.1 Ensure relevant female staff participate in capacity-building activities that are targeted at government officials</p>	<p>2.2.1 25% at national level and 20% at local levels women participants (aggregate basis).</p>			

benefit from capacity-building activities related to climate-friendly agribusiness value chains	at national and local levels with regard to climate-friendly agribusiness value chains. – <i>women staff should be prioritized for training.</i>				budget for production practices and technologies and PIC (other than civil works) budget
Output 3: Enabling environment for climate smart agribusiness enhanced					
Gender Objectives 3.1 Institutionalize gender mainstreaming in the climate-friendly agribusiness value chains sector	<p>3.1.1 At project inception, conduct a gender analysis for each of the 4 targeted value chains and develop a set of clear policy and program recommendations to strengthen women farmers' involvement along the different value chains. Ensure that capacity is built within MAFF/ Gender & Children Project Support Unit (GCPSU) for gender responsive value chain analysis and develop methodology/guidelines that can be used in future analysis.</p> <p>3.1.2 Integrate key recommendations from the above-mentioned gender analysis of value chains and key features of the MAFF Gender Policy into the Agribusiness policy and other related documents prepared under the project. <i>- This would also mean that gender stakeholders (MAFF GCPSU representatives, gender focal points, and WFN) participate in policy committees and meetings.</i></p> <p>3.1.3 Integrate a session on gender equality in climate-friendly agribusiness value chains (based on gender analysis report mentioned above) into the training and awareness raising activities for relevant project stakeholders (i.e. relevant departments in MAFF, agricultural extension agents, local leaders and government officials, GCPSU and Gender Focal Points, and WFN).</p> <p>3.1.4 Actively involve the MAFF GCPSU, the sub-national Gender Focal Points (Province, District, Commune), and the WFN and the Agricultural Cooperatives as key partners in project implementation and monitoring, especially for the GAP activities. <i>- This also entails partnering with the WFN as facilitators/resource persons for agricultural extension and technical capacity-building, awareness-raising and information sharing targeted at farmers including provision of market information.</i></p>	<p>3.1.1 Report prepared with clear recommendations based on gender analysis of the 4 value chains. (Baseline: 0)</p> <p>3.1.2 Key recommendations from gender analysis of 4 targeted value chains integrated in the draft Agribusiness Policy. (Baseline: NA)</p> <p>3.1.3 Number of sessions provided on gender equality in climate-friendly agribusiness value chains; target groups; number of people trained disaggregated by sex. (Baseline: 0)</p> <p>3.1.4 MAFF GCPSU, the sub-national Gender Focal Points (Province, District, Commune), the AC and the WFN are well aware of the GAP activities</p>	<p>International and national consultants under guidance of PMU MAFF</p> <p>PMU MAFF (lead); MOC</p> <p>PMU MAFF (lead) and PPIUs; MOWRAM; WFN</p> <p>PMU MAFF (lead) and PPIUs; MAFF GCPSU; sub-national Gender Focal Points; WFN</p>	<p>Q1 Y1 – Q3 Y1</p> <p>Q4 Y1 – Q2 Y3</p> <p>Q4 Y1 – Q4 Y6</p> <p>Q2 Y1 – Q4 Y7</p>	<p>\$ 64,000 under PIC (other than civil works) budget</p> <p>Covered under policy and standards budget</p> <p>Covered under PIC (other than civil works) budget</p> <p>Covered under PIC (other than civil works) budget</p>

<p>3.2 Enhance access to green finance for women involved in agribusiness value chains</p>	<p>- <i>WFN social media pages should be used as one of the ways to disseminate information to women farmers.</i></p> <p>3.2.1 Raise awareness among women farmers/ cooperative members, women-led and/or owned enterprises, and female staff in financial institutions using adequate channels about existing credit facilities, green financing including crop insurance and required formalities to access these</p>	<p>3.2.1 Number and type of activities conducted; types of communication channels and materials used; 15 female staff in financial institutions trained in CSA lending and green finance (or 30% of the staff trained are women); 10 (or 30% of the privately-owned enterprises trained) women-led and/or owned enterprises trained on green finance; 20,000 women provided with information on climate risk sharing instruments.</p>	<p>PMU MAFF (lead) and PPIUs</p>	<p>Q1 Y2 – Q4 Y6</p>	<p>Covered under training budget for green finance and PIC (other than civil works) budget</p>
<p>Project management gender related activities</p>					
<ul style="list-style-type: none"> • PMU to appoint safeguards officer to be also responsible and accountable for gender, who will closely liaise with representatives from the MAFF GCPSU at national level and from WFN, Agricultural Cooperatives and gender focal points at provincial levels. (Q2 Y1) • Prepare annual work plans to implement the activities of the GAP. (Q2 Y1 – Q4 Y6) • Gender consultants (national and international) to be recruited and build capacity of the GCPSU and gender focal points and PMU staff in gender analysis and mainstreaming, and support GAP implementation, monitoring and reporting. (Q2 Y1 – Q4 Y7) • Collect and analyze data disaggregated by sex where relevant and integrate gender sensitive indicators (from DMF and GAP) in the PPMS. (Q3 Y1 – Q4 Y7) • Ensure regular monitoring and reporting (at least semi-annually to ADB) on the progress of GAP implementation. (Q2 Y2 – Q4 Y7) 			<p>PMU MAFF</p> <p>PMU MAFF PMU MAFF and gender consultants</p> <p>PMU MAFF</p>	<p>See next to each activity</p>	<p>\$249,000 under PIC (other than civil works) budget covered under PIC (other than civil works) budget and government staff budget (M&E)</p>

GAP = Gender Action Plan; GCPSU = Gender & Children Project Support Unit; MAFF = Ministry of Agriculture, Forestry and Fisheries; PMU = Project Management Unit; PPMS = project performance monitoring system; PPMU = provincial project management unit; WFN = Women Farmers Network.

Note: Women-led and/or owned enterprises = enterprises with at least one of the following (i) at least 50% of senior managers are women, and/or (ii) at least 50% of enterprise ownership is controlled by women, and/or (iii) at least 50% staff are women.

Draft Gender Action Plan

January 2018

TA 9030 MON: Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Project

Contents

I.	PROJECT BACKGROUND	2
A.	Local Gender and Development Policies, Programs and Institutions	3
B.	Gender Issues	3
	1. Country Level Gender Issues	3
	2. Access to Adequate Housing and Basic Services at the Target Areas	4
	3. Decision making at the Household Level	6
	4. Women's Tenurial Rights	7
C.	Gender Profile of MUB and Local Project Implementers	7
D.	Benefits of Improved Basic Services	8
E.	Gender-specific Project Design Recommendations	10
II.	GENDER ACTION PLAN	10
A.	Implementation Arrangements	15
B.	Monitoring and Evaluation	15
C.	Indicative Budget	15

TABLES

Table. A16. 1. Population number and poverty status, gender disaggregated.....	4
Table. A16. 2. Access to land.....	4
Table. A16. 3. Subjective assessment of housing condition	5
Table. A16. 4. Number of employed people	6
Table. A16. 5. Average Income, sex disaggregated	6
Table. A16. 6. Decision Making at Plot Owner Households Level	6
Table. A16. 7. Number of MUB Staff, by Agency, and by Gender as of 2013.....	8
Table. A16. 8. Primary Groups and CDCs Gender Profile.....	8
Table. A16. 9. Project Design Recommendations	10
Table. A16. 10. Gender Action Plan	12

I. PROJECT BACKGROUND

1. The Asian Development Bank approved a project preparatory technical assistance (PPTA) for a proposed loan to Mongolia for the Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Project. This is a complex multi sector project requiring full scale due diligence in technical, economic, financial, social, resettlement, environmental, and institutional aspects. The indicative project impact is improved housing conditions in Ulaanbaatar ger areas. The project outcome will be the establishment of replicable, sustainable, and comprehensive solutions for affordable housing and ger areas redevelopment.

2. The project is expected to have four outputs: (i) mixed-use, mixed-income, and resource efficient Eco districts built in ger areas; (ii) mechanisms for delivery of affordable housing units stock established; (iii) urban redevelopment process and standards improved; and (iv) project management and institutions for urban redevelopment and affordable housing strengthened. The project will be implemented over a period of 7 to 8 years. MUB will be the executing and implementing agency for the project. It will be responsible for identifying, prioritizing, formulating, appraising, approving, and implementing subprojects in accordance with technical, financial, and economic appraisal criteria, including social and environmental criteria, agreed with ADB. The core subprojects will be appraised by ADB to serve as models. Subsequently, during project implementation, subprojects above an agreed threshold will be submitted to ADB for approval, while subprojects below the threshold may be fully processed and approved by MUB in accordance with the agreed upon criteria. A project steering committee will be established to provide strategic and policy guidance.

3. The project is a large-scale demonstration initiative that will leverage private sector investment to deliver affordable and green housing stock,¹ and redevelop ger areas into Eco districts² to decrease air and soil pollution and provide livable urban environment to the ger area residents. It will also establish policies, mechanisms, and standards for sustainable affordable housing and green urban redevelopment. The project was envisioned to address the widening housing demand-supply gap in the city, particularly for the benefit of the very low- and moderate-income households. The physical component will deliver 10,000 housing units (55% affordable, 15% social, and 30% market rate units) and redevelop 100 hectares of ger areas into Eco districts that will be: (i) mixed-use with ample public space and public facilities, (ii) mixed-income with about 70% of combined affordable and social housing units, and (iii) resource efficient and maximizing the use of renewable energy.³ The institutional and capacity component will provide: (i) established mechanisms for the delivery of affordable housing units; (ii) improved urban redevelopment process and standards; and (iii)

¹ Affordable housing (AH) is a shelter delivery system that is appropriate for the needs of a range of very low to moderate income households and priced (or subsidized) so that the households are also able to meet other basic needs. It also includes social housing such as rental housing that is subsidized and targets the lowest income households that cannot afford the down payments and subsequent loan amortization payments. Rental tenures can be converted into ownership through rent-to-own schemes.

² Eco district development is a highly integrated urban planning and development process at the neighborhood level, bringing local responses to build up citywide sustainability and green development.

³ The eco-components will focus on (i) reduction of energy consumption with low-consumption and well-insulated buildings; (ii) clean energy production from non-stored photovoltaic solar energy and solar system for hot water production; and (iii) building performance monitoring system.

strengthened project management, and institutions for urban redevelopment and affordable housing.

4. The project will integrate innovative planning to ensure maximum resource efficiency, social cohesion, and economic opportunities. Most of the redevelopment process and housing construction will be demand driven, facilitated by land swap or land pooling processes.⁴ Intensive community consultation and participation will be integrated into each stage of the project design and implementation. Financial and institutional arrangements will establish sustainable and inclusive housing finance mechanisms, such as micro-mortgages, rent-to-own schemes, contract savings schemes, subsidies, and grants. The project will blend public and private finance to ensure the comprehensive redevelopment of the selected areas. It will also strengthen the regulatory, financial, and institutional framework and establish sustainable solutions for affordable housing delivery in Ulaanbaatar.

5. The core subprojects are located in the Bayankhoshuu and Selbe subcenters that are targeted by the ADB financed Ulaanbaatar Urban Services and Ger Areas Development Investment Program – Project 1 which is currently being implemented by MUB. It is estimated that the core subprojects will cover roughly 10% or 10 hectares of the targeted 100 hectares. Due diligence, implementation, and safeguard frameworks will be formulated to guide the identification, preparation, and implementation of subprojects comprising the remaining 90 hectares.

A. Local Gender and Development Policies, Programs and Institutions

6. Gender equality has been one of the primary thrusts of the Government of Mongolia, and the policies which promote this objective and the protection of women and children are the (a) Gender Equality Law (2011), (b) Law on Combating Domestic Violence, (c) Labor Code, (d) Family Law, (e) Law on Social Welfare, and (f) Law on Social Insurance. In line with these policies the following programs are being implemented by the government: (g) National Program on Ensuring Gender Equality (2017-2021), (h) National Program on Combating Domestic Violence, (h) National Program on protection from trafficking in children and women with the purpose of sexual exploitation, (j) and Mid-term Strategy and Action Plan for Implementation of the Law of Mongolia on Promotion of Gender Equality (2013 – 2016). The National Committee on Gender Equality is the government body led by Prime Minister responsible in the implementation of gender equality, and is composed of 13 Ministries of Mongolia as its sub-council; and 9 districts, 21 provinces, and the city of Ulaanbaatar, as its subcommittees. One gender focal person is assigned at the MUB, and the social welfare workers at every khoroo are assigned as the gender focal persons.

B. Gender Issues

1. Country Level Gender Issues

7. According to National Statistics Office (NSO) of Mongolia, the proportion of women-headed households has decreased from 15% in 2008 to 9% in 2016. Data from Participatory Living Standards Assessment of the NSO have identified that a disproportionate number of women-headed households are living in poverty and that the proportion is growing. Women are limited to engage in livelihood or employment

⁴ People will have the option to trade their properties or assets for apartments or infrastructure.
Draft Gender Action Plan / October 2017

opportunities because of the tasks at home. Some women, who are employed or engaged in small enterprises, need to work longer hours than men do, just to manage tasks at home and at work. The Time Use Survey (NSO Mongolia, 2009) has noted that single parent households, which are usually women-headed, continue to become more vulnerable. In some cases, women are left alone to manage the household due to death of a husband or divorce. The proportion of poor women-headed households in urban ger areas living without adequate access to water supply and sanitation and other basic infrastructure and services is high (ADB and World Bank, 2005).

2. Access to Adequate Housing and Basic Services at the Target Areas

8. A Socio-Economic survey was conducted in June 2017 as part of PPTA and analyzed households' access to adequate housing and basic services in the 2 target areas. Among the surveyed total population, 46.7% and 51.4% are female respectively in Selbe-East (SBE) and Bayankhoshuu-West (BYW). Percentage of the women head households is 20.7% in SBE and 17.17% in Bayankhoshuu-1. Percentage of poor households to the total households is 33.1% in SBE and 26.3% in BYW, out of which households headed by females are 40.7% in BYW and 47.1% in SBE with an average household size of 3.69.

Table. A16. 1. Population number and poverty status, gender disaggregated

	SBE				BYW			
	Male	Female	Total	Female %	Male	Female	Total	Female %
Non-poor	153	143	296	65.3	138	143	281	73.3
Poor	96	76	172	34.7	46	52	98	26.7
Total	249	219	468	100.0	184	195	379	100.0

- **Access to land.** According to the Socio-economic survey, 21.79% of plot owner households and 21.74% of households who are residing in the areas without any right to access to land are female headed households. Please refer to Table 16.2 for details.

Table. A16. 2. Access to land

Land right	SBE			BYW		
	Total households	Female headed households	%	Total households	Female headed households	%
Owner/possessor/user	78	17	21.79	64	9	14.06
Renter, relatives	6	0	0.00	5	0	0.00
Residing without payment	46	10	21.74	30	8	26.67
Total	130	27	20.77	99	17	17.17

- **Access to houses.** 33.1% and 18.2% of households in SBE and BYW area live in ger while others live in detached houses with different quality and state built from bricks (16%), construction blocks (7%), log wood (9%), railway sleepers (45%) and others(10%). 80.7% and 82.8% of houses in SBE and BYW are owned by plot owner households while remaining portions are owned by residing non-owner households. Under the survey, assessment of housing condition was done by owner households as per Table 16.3. It shows that majority of Bayankhoshuu-1 households feel satisfactory in their house size, location, safety and comfortability while SBE households show a bit less satisfaction but still feel comfortable around those

indicators. However, 96.5% of total households in both areas responded to the question if they want to improve their houses with “yes”.

Table. A16. 3. Subjective assessment of housing condition

	SBE				BYW		
	Good	Average	Bad	No info	Good	Average	Bad
Area size	46.92	38.46	13.08	1.54	71.72	23.23	5.05
Location	72.31	16.15	6.92	4.62	89.90	8.08	2.02
Safety	71.54	18.46	5.38	4.62	81.82	17.17	1.01
Comfortability	63.08	26.15	6.15	4.62	83.84	15.15	1.01

- Water supply and sanitation.** Majority of both area households (96.15% in Selbe, 98.9% in Bayankhoshuu) access water directly from USUG or public kiosks; while the other households source water from private wells within the neighborhood. The households generally collect water from kiosks using plastic water containers on trolleys or carts, and travel an average distance of 220 meters in SBE and 180 meters in Bayankhoshuu-1 at least three times a week. The women and children are mostly tasked in collecting water.
- The pit latrines are the primary type of toilet facility for target areas. About 92% of the surveyed households are using this type of facility which is usually in their residential plots. The respondents expressed the difficulty and the discomfort of using the open pit latrines, especially during winter and particularly for women, children, and elderly. Lack of access to safe drinking water and basic sanitation facilities increases the risk of water borne diseases.
- Heating Services.** Most of the households use traditional and improved stoves for heating and very little portion of them use private electric heaters and other types of heaters. The use of raw coal in stoves has been contributing significantly to the high levels of air pollution in Ulaanbaatar, especially during the winter months. The survey reveals that 91.27% of the total households use raw coal for heating. Women and children are exposed to indoor pollution brought by the use of traditional stoves, and results to the high incidence of cough and other respiratory diseases over the recent years. The incidence of respiratory diseases such as bronchitis and pneumonia in Ulaanbaatar is moderately correlated with levels of exposure to sulfur dioxide, a by-product of burning of coal.
- Road Network.** The ger areas are characterized with mostly unpaved and dusty roads, which hamper the mobility of the residents. The children usually walk to schools and women carry or transport their water containers through these unpaved paths. For women coming from work, it is particularly risky to walk along these roads at night due lack of proper lighting and recorded incidences of crimes in the ger areas.
- Priority social and environmental issues.** The poor air quality, as a result of burning coal through use of traditional heating stoves, has been considered by majority of households (94.3%) as one of the environmental concerns which significantly impact children, women, and men. Also, next to poor air quality, access to safe and potable water (93.2%), soil erosion due to lack of proper road network (91.5%), lack of electricity (91.3%), no access to 24-hour health service

(89.4%), and inadequate facilities at the bus stop (88.8%), have been considered by majority of the households as priority social issues which need to be addressed. Comparatively, the respondents identified that the women are more at the disadvantage as a result of inadequate lighting along the sidewalks, and not enough market or commercial facilities available during the evening.⁵

- **Access to Job and Income Generation.** The socio-economic survey under the PPTA reveals that 22 % and 15.1 % of working age population are unemployed, out of which 52.4% in Selbe and 60.9% in Bayankhoshuu are women.
- Table 16.4 shows the number of employed people disaggregated into male and female in each target area. And next table shows the average income of 2 areas' population. It proves the fact that female receives lower income than male.

Table. A16. 4. Number of employed people

Sex	SBE	%	BYW	%	Total	%
Male	83	55.7	69	53.5	152	54.7
Female	66	44.3	60	46.5	126	45.3
Total	149	100.0	129	100.0	278	100.0

Table. A16. 5. Average Income, sex disaggregated

Sex	SBE		BYW	
	wage	allowance	wage	allowance
Male	669,855.4	234,593.8	690,770.3	240,650.0
Female	552,855.3	175,533.3	633,414.3	196,812.5
Total (average)	613,930.8	200,077.9	662,888.9	213,673.1

3. Decision making at the Household Level

9. As per the socio-economic survey (Table 16.6), 42.6% of the respondent households have identified that the husband and wife make decisions jointly on concerns such as (a) procurement of assets like land and house, (b) procurement of expensive items such as car, (c) children education; (d) work and business related; (e) movement and migration related and (f) participation in the project. 29.1% of the households have responded that household members make decision jointly on the above concerns. For the rest of households, the male household head generally makes the decisions on property purchases and ownership, work and business, movement and project involvement. The female spouse has minimal involvement on the above. The female spouse takes a lead role in the education of the children.

Table. A16. 6. Decision Making at Plot Owner Households Level

	Husband	Wife	Joint /husband and wife	Son	Dau- g- ter	Other male	Other female	Joint/ Household members	No answer
Purchase of assets like land and	11.97	7.04	40.85	0.70	0.70	2.11	0.70	30.28	5.63

⁵ Socio-Economic Survey in 2013 under PPTA USGADIP
Draft Gender Action Plan / October 2017

house									
Purchase of expensive items such as car	9.86	4.23	45.77	1.41	0.00	0.70	0.70	29.58	7.75
Children education	6.34	7.04	46.48	0.70	0.70	0.70	0.70	28.17	9.15
Work and business related	9.15	6.34	43.66	1.41	0.70	0.70	0.70	28.87	8.45
Movement and migration related	7.04	4.93	44.37	0.70	0.70	0.70	0.70	31.69	9.15
Participation in the project	9.86	7.75	34.51	1.41	1.41	0.70	0.70	26.06	17.61

10. The women, being mainly responsible for water-related tasks and other responsibilities related to household sanitation, health, hygiene, and heating, should be consulted on appropriate design features. Initial consultations with community representatives have also identified the concern among poor households, especially women-headed households', capacity to pay for the monthly bills for the improved services. The participation of women in community activities at the khoroo level is observed to be high, as noted in their number of women attendees in the initial consultations. Aside from the numbers, the women participants were observed to provide substantive inputs in analyzing the problems and issues and in coming up with recommended solutions. Equal involvement of women and men in the project activities will be ensured through the community planning and consultations throughout the period of the project.

4. Women's Tenorial Rights

11. Under the 1992 Constitution of Mongolia, women have equal rights on inheritance, land use, and ownership of livestock and other property. However, the land tenure and property rights of women are generally weakened by absence of clear legislation around property rights in the contexts of divorce and inheritance. According to the study conducted under the Millennium Challenge Account (MCA) Property Rights Project, property registration efforts were biased towards male land-ownership. The project has identified that women hold 49% of titles in Ulaanbaatar and 36 % of titles in eight regional aimag or provincial centers⁶. Considering that the Investment Program will encourage the land pooling for redevelopment, there may be a risk that the tenorial rights of women, particularly poor women-headed households with no proper legal title, certificate, or any proof of ownership of their plots, may be compromised.

C. Gender Profile of MUB and Local Project Implementers

12. Under the office of the Mayor of Ulaanbaatar, there are a four (4) Vice Mayors handling different sectorial agencies and one of them is female. It is observed that there are

⁶ [http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID Land Tenure Mongolia Profile.pdf](http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Mongolia_Profile.pdf)

more male officials at the top decision-making level of the MUB, and there are more female staff members or personnel at the technical and administrative positions of the MUB agencies.

Table. A16. 7. Number of MUB Staff, by Agency, and by Gender as of 2013

Agency-specific gender profile	Total number of staff	Number of Male	Number of Female
Property Department	300	147	153
Department of Economic Development	34	8	26
Ger Area Development Agency	17	11	6
Office of the road and transport	106	65	41
Transportation Agency	129	50	79
Agency of Education	37	16	21
Cultural agency	11	5	6
Health Authority	46	8	38
Labour office	14	3	11
Social welfare service	14	4	14
Social insurance office	400	71	329
Environment and green development agency	72	54	18
USUG	1470	614	856

Source: Municipality of Ulaanbaatar, 2013

At the target areas, the total number of kheseq leaders are 3 in SBE and SBW in Bayankhoshuu and all of them are female.

Under the Tranche 1 of USGADIP, the numbers of primary groups, CDCs and BCs are organized in the Selbe and Baynkhoshuu subcenters. Each primary group has an elected leader and secretary. These officers represent the primary groups at the khoroo level CDC. Bayankhoshuu has 5 khoroo CDCs while Selbe subcenter, which covers 2 districts has 3 khoroo level CDCs, two in Chingeltei district, and one in Sukhbaatar District. Aside from the CDCs, business or small and medium enterprise (SME) development councils (BCs) were formed which are composed of owners of business establishments within the target subcenters. The profile of the members of the PG and CDCs is presented in Table.

Table. A16. 8. Primary Groups and CDCs Gender Profile

Sub center	PG's organized as of July 2017				Khoroo CDC			Sub center CDC		
	No	Members	Female	Under Formation	No	Members	Female	No	Members	Female
Bayan-khoshuu	29	466	39%	8	5	58	41%	1	22	68%
Selbe	29	371	46%	7	2	58		0		

Source: UN-Habitat 2nd Quarterly Report, July 2017

D. Benefits of Improved Basic Services

13. Focus group discussions (FGD) with community representatives from Bayankhoshuu and Selbe subcenters were conducted under the GADIP to identify the perceived impacts of improved services on water supply and sanitation, sewerage, heating, road network, and other social and economic infrastructure and services.

- **Water Supply and Sanitation.** The anticipated impacts of improved water and sanitation include the following: (a) lesser time and energy spent to collect water, thus more time for other household tasks or time for productive/income-generating work; (b) secured and reliable supply of water; (c) reduced need to go to bath houses; (d) better hygiene practices, and; (e) more convenience especially for persons with disabilities or PWDs (i.e., PWDs need not go out for pit latrines, bath houses and/or collect water from the water kiosks). Other potential benefits include decrease in incidences of waterborne and other diseases related to unsafe drinking water and poor sanitation; and economic or business opportunities due to reliable water and sanitation services. The risk of women and children to infectious diseases and water-borne diseases, and consequently the medical costs on these diseases, will be reduced due to improved sanitation facilities at home and at schools. Proper household practices on sanitation, hygiene, and health will be communicated to the target area communities through a community awareness program involving information, education and communication campaign (IEC).
- **Sewerage system.** The improvement of the sewerage systems will lessen the risk of contagious or communicable diseases brought by improper collection, disposal, and treatment of domestic waste water and human waste. The construction of proper sewerage and treatment facilities will also reduce the risk and impacts of soil pollution brought by the use of open pit latrines. For the PWDs and elderly, it will lessen the inconvenience of disposing gray or discarded water outside their plots. The use of proper toilet facilities will also be more comfortable to the users compared to the existing open pit latrines.
- **Heating.** The provision of non-pollutive eco heating systems will lessen the exposure of the residents to indoor air pollution due to burning of coal. In reducing the use of traditional stoves and coal for heating, the incidences of respiratory diseases such as bronchitis and pneumonia, will also be reduced, especially among the children, elderly, and women who are more vulnerable. Other diseases brought by extreme cold temperature will likewise be reduced. This will also lessen the expenses for and time in purchasing coal, and in preparing or collecting fire wood. With adequate heating, it will also increase the comfort of the residents especially during peak winter months.
- **Road network.** With paved or concreted road networks, sidewalks, and adequate lighting, the mobility and access of the residents will be improved, especially access to basic services such as schools, clinics or hospitals, khoroo or government buildings, market or commercial establishments, and transport facilities. The lighting of the sidewalks or interior streets will also help in lessening the incidence of crimes, especially among women who are more at risk while travelling at night. The community representatives have also indicated that it will be more comfortable to walk once the roads are paved, and the problem of accumulating dust at home will be lessened. With proper pedestrian walkways and paved roads, children will be safe in walking and crossing the streets, and the mobility of the PWDs (i.e., in wheelchairs or in other mobility aid equipment) will be improved.
- **Social and Economic Infrastructure and Services.** From the household surveys and FGDs, the residents have identified the some of the positive impacts of the proposed priority social and economic infrastructure projects, namely, kindergarten buildings, khoroo buildings, bus station or terminals, market, and business incubators or vocational training centers. Community representatives have provided suggestions

on the design or features of these priority projects, as well as the potential impacts of such projects (last table).

E. Gender-specific Project Design Recommendations

14. In the planning, design and implementation of the proposed infrastructure subprojects under the project, the among the key issues to be considered are the (a) integration of gender-specific needs in project design and implementation, (b) affordability of housing and services among poor, especially women-headed households, (c) protection of women’s equal property rights and land tenure, and (d) ensuring participation of women in the project community activities. The initial consultations have identified the suggested design recommendations from the khoroo and kheseg leaders on the kindergarten, vocational training centers, business incubator facilities, and open spaces or leisure parks under Project 1 (following table). Also, the community leaders have specified the design recommendations for other priority projects, such as khoroo buildings, bus stations, market place or commercial complex, which may be considered later in the next tranches of the Program.

Table. A16. 9. Project Design Recommendations

Priority Social and Economic Facilities	Project Design Recommendations
Kindergarten	The facilities should be (i) connected to water supply (especially hot water), heating, sewerage, and electricity systems or network; (ii) accessible to the ger residents, (iii) have green spaces including a playground, (iv) small health clinic; (v) adequate number of toilets for male and female students and school staff, (vi) access features for person with disabilities (PWDs) (i.e., ramps, hand rails, toilet for PWDs, etc.), and (vii) parking area.
Leisure Center/Parks	Green areas, public parks, sports complex with courts (i.e. tennis courts), cultural halls, gym for the elderly and children, internet center, library, separate toilets/showers/changing rooms for male and female, access features for PWDs (i.e., ramps, hand rails, toilet for PWDs, etc.), and provision for small business kiosks/stalls.
Road Network	Designated footpaths or pedestrian walkways, street crossing marks, adequate street lights, street ramps for PWDs.
Bus Station	Construction of a bus station with (i) a comfortable enclosed waiting area with seats, trash bins, signage, road signs and directions, (ii) bus schedule information, (iii) separate toilets for male and females, footpaths or pedestrian walkways, (iv) street crossing marks or underground crossing (for improving mobility and safety of passengers, especially children), and (v) street lights.
Marketplace, Public and Commercial Complex	Construction of a market facility for wholesale products, built in accordance with building standards and to comply with the relevant food safety standards. Possible design features may include: (a) separate and adequate number of toilets for male and female, (b) diaper-changing station, (c) small health clinic, (d) information desk/booth for microenterprise loan services, business development services (i.e., referrals and actual conduct of training programs); and (e) day care room.

II. GENDER ACTION PLAN

15. The project is classified as effective gender mainstreaming (EGM) which requires a gender action plan (GAP). The GAP describes the proposed measures to be included in the project design in promoting gender equality and in mainstreaming gender in the four (4) main outputs of the project. The GAP outlines the main strategies to address the key gender concerns on a) access to houses, services and public spaces to be provided

by the project, b) affordability of poor women-headed households, c) protection of women's land tenure and property rights, and d) equal participation of women in the project community activities. The key gender mainstreaming strategies to be implemented include:

- community consultations on detailed design preparation and implementation with gender-specific design features for proposed housing, infrastructure and other elements of eco district development,
- develop support programs on affordable housing and MSME development microfinance loans to ensure access to improved services for poor women-headed households,
- implement IEC programs on land pooling, consolidation, and trading schemes; land registration and property ownership; water and heating tariff structure and tariff subsidy; and,
- ensure the presence of number of female staff members in PMO personnel, Project Steering Committee, CDCs, and BCs.

16. Addressing these gender concerns would entail close consultation and collaboration with women, from project design stage, implementation, operations, and monitoring and evaluation. The general strategy proposed under the project is to ensure that the design features of the proposed houses, services and public spaces will be gender-responsive, appropriate, and affordable to its target users. The project will also foster active involvement of women in the project, which will aim to maximize the opportunity for women to become empowered decision-makers in shaping the development of their community. Specific activities, targets or indicators, implementation arrangements, indicative budget, and timelines are shown in the following table.

Table. A16. 10. Gender Action Plan

Proposed Action	Targets and Indicators	Responsible Agencies	Timeline	Budget and Cost
Output 1: Resilient and low carbon urban infrastructure, public facilities, and social housing units built in ger area				
1. Identify and integrate gender sensitive features in the design of public facilities and social housing	<ul style="list-style-type: none"> Number of consultation meetings with at least 50% female participation Number and type of gender-sensitive design features 	<ul style="list-style-type: none"> Executing Agency Gender specialist Consultancy Service Provider for Community Engagement and Development Consultancy Service Provider for Detailed Design Development Consultancy Service Provider for Development activities 	2019-2020	50,000 USD
2. Train for and conduct participatory monitoring of construction works	<ul style="list-style-type: none"> Number and % of community members trained and participated in the monitoring with at least 50% female participants. 			
3. Integrate gender perspective in IEC on ecofriendly technology introduction	<ul style="list-style-type: none"> Number and type of IEC gender-sensitive materials Number of community members participated in gender-responsive IEC activities (sex-disaggregated) 			
4. Employment and income generation activities during project implementation and operation	<ul style="list-style-type: none"> xx person-months of employment opportunities created during project construction and xx person-month/year for O&M of facilities and infrastructure built, of which 30% are women (2017 baseline: 0) 			
5. Conduct gender-sensitive outreach and awareness campaigns to promote women's housing property ownership rights	<ul style="list-style-type: none"> Around 10 gender-sensitive outreach and awareness campaigns implemented promoting women's housing property ownership (2017 baseline: 0) 			
Output 2: Resilient and low carbon affordable and market housing units and economic facilities built in ger areas				
1. Identify and integrate gender sensitive features in the design of affordable and market housing and economic facilities	<ul style="list-style-type: none"> Number of consultation meetings with at least 50% female participation Number and type of gender-sensitive design features 	<ul style="list-style-type: none"> Executing Agency Gender specialist Consultancy Service Provider for Community Engagement and Development 		
2. Ensure access to improved houses and utility services for vulnerable households including female-headed	<ul style="list-style-type: none"> At least 30% of women-headed households have access to improved housing and utility services. 			

Proposed Action	Targets and Indicators	Responsible Agencies	Timeline	Budget and Cost
3. Conduct a gender sensitive training needs assessment of impacted households	<ul style="list-style-type: none"> 100% of women head will participate in the assessment 	<ul style="list-style-type: none"> Consultancy Service Provider for Detailed Design Development Consultancy Service Provider for Development activities 		
4. Implement gender sensitive support activities for start-up businesses and households to improve their capacities	<ul style="list-style-type: none"> At least 30% of women-led start-up businesses and women-headed households will get a relevant training 			
5. Employment and income generation activities during project implementation and operation	<ul style="list-style-type: none"> xx person-months of employment opportunities created during project construction and xx person-month/year for O&M of facilities and infrastructure built, of which 30% are women (2017 baseline: 0) 			
6. Conduct gender-sensitive outreach and awareness campaigns to promote women's housing property ownership rights	<ul style="list-style-type: none"> Around 10 gender-sensitive outreach and awareness campaigns implemented promoting women's housing property ownership (2017 baseline: 0) 			
Output 3: Policy reforms and capacity strengthened				
1. Enhance capacity of PMO staff	<ul style="list-style-type: none"> By 2018, at least 90% of PMO positions filled with trained staff, of which at least 40% are women (2017 baseline: 0) 	<ul style="list-style-type: none"> Executing Agency Gender specialist Consultancy Service Provider for Programme Management Support Community Engagement and Development Consultancy Service Provider for Detailed Design Development Consultancy Service Provider 		
	<ul style="list-style-type: none"> Establish a PMO with fully trained staff, at least 30% women representation 			
2. DBM PIU established and fully functioning	<ul style="list-style-type: none"> By 2018 with fully trained staff, at least 30% of whom are women (2017 baseline: 0) 		2018	
3. The PMO and IAs assign persons to be responsible specifically for the implementation and reporting of GAP and SDAP	<ul style="list-style-type: none"> Number of staff members of the PMO and IAs responsible for GAP and SDAP implementation and reporting 			
4. Social and gender specialists are recruited as part of the loan supervision consultant to support the implementation of the GAP and SDAP	<ul style="list-style-type: none"> Number of recruited social and gender specialists 			
5. Development of sex-	<ul style="list-style-type: none"> Sex disaggregated PPMS operational (2017 			

Proposed Action	Targets and Indicators	Responsible Agencies	Timeline	Budget and Cost
disaggregated program performance monitoring system (PPMS)	baseline: 0)	for Development activities		
6. Consultation and awareness raising on the project design and implementation	<ul style="list-style-type: none"> At least 50% of communities consulted on the project activities are women (2017 baseline: 0) 			
Financial Intermediation Loan Component				
1. Conduct a gender sensitive assessment of bank activities regarding housing finance	<ul style="list-style-type: none"> At least 50% of women representation 	<ul style="list-style-type: none"> Executing Agency Gender specialist Consultancy Service Provider for Programme Management Support 		
2. Improve access to green banking systems and mechanisms for the housing finance	<ul style="list-style-type: none"> At least 40% of female-headed households have access to green banking systems and mechanisms for the housing finance (2017 baseline: 0) 			

A. Implementation Arrangements

17. The executing agency (EA) and implementing agency (IA) for the project will be MUB. A Project Management Office (PMO) for the project will be established and will take the lead in the preparation, implementation, monitoring and evaluation of project-specific and program-wide Ger area redevelopment plans, and close coordination with the beneficiary communities, CDCs and BCs at the target areas and Khoroo and Kheseg leaders. Coordination with the National Committee on Gender Equality will be done as necessary to link activities of the project to the existing projects and programs of the committee. Gender specialists (international and local) will be recommended to provide technical assistance and capacity development support to the MUB-PMO in the conduct of gender analysis and preparation of ger area redevelopment plans at the project level.

B. Monitoring and Evaluation

18. The GAP will be incorporated in the overall monitoring and evaluation of the project, and indicators will be included in the project monitoring and evaluating systems and tools. Specific gender indicators are included in the overall design and monitoring framework (DMF) of the project, and the GAP will be an integrated into the Program's Facility Administration Manual and Loan Agreement. The monitoring of the GAP will be done using a participatory approach with the key stakeholders at the kheseg, khoroo, district, and municipal levels.

C. Indicative Budget

19. An indicative budget of US\$ 175,000 will be programmed for the implementation of the activities detailed in the GAP for the project, which will be incorporated or streamlined with the implementation of the SAP and CPP (Appendix 15.1 and 15.2). Engaging one (1) international gender specialist for 8 person-months, and one (1) national gender specialist for ten (10) person-months, over the 3 years of the project implementation period, is proposed.

Expense	Number	Person months	Rate US\$	Total US\$
1. Remuneration				
International Gender, Poverty and Community Development Specialist	1	8	11000	88,000
National Gender Specialist	1	10	2000	20,000
2. International Travel				
				20,000
3. Study, survey reports				
				47,000
TOTAL	9	218		175,000

Amount included in the technical assistance (Appendices 9 and 11) expert n°4 PMO-Support: Social Mitigation Plan + Gender Action Plan = \$600,000

Uganda Gender Assessment

- **What is the maternal mortality rate, infant mortality rate, educational status of girls and boys, adult literacy rate (disaggregated by sex), poverty rate, labour force participation rate (disaggregated by sex), employment rate (disaggregated by sex), unemployment rate (disaggregated by sex), political participation rate (disaggregated by sex), life expectancy (disaggregated by sex) in the country of intervention and/or the project/program footprint area?**

Uganda was ranked 73 out of 86 in the 2012 Social Institutions and Gender Index with a score of 0.383802; 46 out of 136 in the 2013 Global Gender Gap Index with a score of 0.7086; 110 out of 148 in the 2012 Gender Inequality Index with a score of 0.517. All indices are on a 0-1 scale. For the SIGI and the Gender Inequality Index, 0 points to complete equality and 1 to complete inequality. For the Global Gender Gap Index, the opposite holds true.

Maternal mortality rate	343 per 100,000 live births (World Bank)
Infant mortality rate	38 per 1,000 live births (World Bank)
Adult Literacy Rate	Male: 85.3%, Female: 71.5% (CIA World Factbook)
Employment to Population Ratio	Total: 83%, Female: 81% (World Bank)
Unemployment Rate (% of respective labor force)	Male: 2.7%, Female: 1.9%
Life Expectancy	Male: 54 yrs, Female: 56.9 yrs (CIA World Factbook)

Political Participation:

Women have the same rights to vote and stand for election as men in Uganda. Following the 2011 elections, there were 23 female Ministers in the President's 75-member cabinet. The speaker of the National Assembly and the Inspector of Government (IGG), who headed the leading government anticorruption investigative body, were women. There were 135 women in the 386-member National Assembly. The law requires elections for seats reserved for special interest groups: 112 for women, five for organized labour, five for persons with disabilities and five for youth. Within the Ministry of Local Government (MoLG) there are 103 men and 42 women only. Moving to specific MoLG units, the Local Government District Inspection Department demonstrates the highest gender imbalance, with men represented six times more than women. Conversely, both the Directorate of Local Government and the Policy Analysis Unit are fully gender balanced. Moreover, despite 59.4 % of all the people attaining a Diploma and Graduate level of qualification are women, women make up for only a small fraction of those achieving a Middle Management salary (20%). Source: [WikiGender](#)

- **What is the division of labour among women and men in the project/program footprint area and/or the country of intervention?**

According to the [World Bank](#), 48.8% of the total labor force in Uganda are women.

- **What is the participation between women and men in the formal/informal economy in the country of intervention or in the project/program footprint area?**

Uganda is an agriculture-based economy regarded as a food basket in the Eastern African region. Agriculture accounts for approximately 22.9 % of GDP. 81 % of the female labour force and 67 % of men work in the sector. Despite the main role played by women in agriculture, it is estimated that only 7 % of them own and control the use of land. Women's rights tend to be limited to access, whereas men are more inclined to enjoy the ownership rights and ultimately control the proceeds from the land. Uganda received a score of 1 (complete inequality) in the 'access to land' SIGI 2012 dimension. Women working in agriculture are more likely not to be paid than those working in non-agricultural work (36 % compared with 4 %). Source: [WikiGender](#)

- **Will services and technologies provided by the project/program be available and accessible to both women and men?**

Yes. Women comprise over 50% of agricultural workforce in Africa and play an integral role in pursuing pathways out of poverty. ARAF aims to invest in companies that empower smallholder farming households (both men and women) to improve their productivity, livelihoods and climate resilience.

- **What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?**

Although our aim is to ensure equal opportunity to both men and women in the community, we are mindful of local societal dynamics that vary region by region. For instance, in cases where men are the head of the household, the decision making power rests with them while women are in the support role and vice versa. Generally, it has been observed that men have stronger influence with external stakeholders and functions such as securing inputs, credit or selling to the market, managing logistics, etc. while women primarily focus on farm and household management along with the male members of the family.

The domains that contribute most to women's disempowerment in agriculture are lack of leadership in the community and time burden, with control over resources making the third largest contribution to disempowerment. 49 % of women lack access to or decision-making ability over credit, more than one-third does not have a manageable workload, and more than 33 % are not members of any group. More than 21 % lack sole or joint decision-making authority over income. Men report relatively less disempowerment in decision-making over income and have less time poverty and relatively greater achievements in community leadership than women. Source: [WikiGender](#)

ARAF recognizes the cultural nuances involved in our focus communities while encouraging a greater role of women in decision making. In terms of their needs, ARAF will address the needs of farming communities regardless of gender with improvement in livelihoods, productivity and climate resilience being the primary measures of success.

- **Has the project/program recognized the distinct vulnerabilities of women and men and developed specific response strategies for each target group?**

ARAF's focus is unlocking untapped potential for the farming household as a whole. Due to this approach, collective vulnerabilities such as hunger, poverty and climate are of more relevance to the program. Our response strategies are also aimed at addressing these vulnerabilities for both the men and women of the household.

Specifically, ARAF aims to focus on three key areas to empower women in agricultural value chains:

- **Women-focused Financial Inclusion Services:** According to CGAP, among adults in developing economies living below the \$2-a-day poverty line, women are 28 percent less likely than men to have an account at a formal financial institution. Financial inclusion for

smallholder households (women in-particular) can prove to be a game-changer for the sector. ARAF Technical Assistance (TA) Facility will be leveraged to experiment with innovative models and approaches that improve financial inclusion of women in farming households as well as relevant financial literacy to ultimately enhance their decision making power in agriculture.

- **Digital Literacy Campaigns:** ARAF recognizes digital platforms as a key strategy pillar to improve access and visibility across the supply chain. To tilt markets in favor of smallholders, we must enable mechanisms that help farming household leverage digital platforms to strengthen their connection to the market, benefit from affordable credit, reliable extension and quality inputs. According to GSMA, African women are currently 13% less likely than African men to own mobile phones which makes the need for women-focused digital literacy campaigns an important area of empowerment. ARAF TA Facility will be leveraged to fund campaigns that increases the uptake of mobile phones and associated services while accelerating the impact of digital literacy campaigns.
 - **Women Extension Agent Programs:** While improved digital literacy and financial inclusion can significantly improve women's agricultural decision making power, greater participation in extension networks can also enhance women's role and influence in the sector. While over 50% of the agricultural workforce are women, extension networks are predominantly managed by men. ARAF aims to leverage women social networks and enhanced expertise (through digital literacy and financial inclusion) to strengthen extension models that aim to reduce information asymmetries in the farming population. ARAF TA Facility will be used to design and implement programs that encourage greater participation of women in agricultural extension programs.
- **Are the specific knowledge and skills of women and men, especially from vulnerable groups, being utilised to contribute to project/program outcomes and solutions?**
 - Yes, Acumen has developed an approach that leverages the knowledge and skills of women and men in the work that we do. For ARAF, we see a greater role of women both on the investing side as well as the investee side. We will encourage greater women participation at the board level and ensure equal opportunity at the investing team and investee level. We will comply with Gender Equality Standards as defined by the ILO and IFC respectively.
 - We have demonstrated our commitment by engaging in activities that can educate the impact investing space in recognizing the role of women in tackling poverty. For example, between 2014 - 2015, Acumen teamed up with the International Center for Research on Women to look at our portfolio and how our companies engage women as customers and employees. We *published Women and Social Enterprises: How Gender Integration Can Boost Entrepreneurial Solutions to Poverty* and launched the report during the Women's World Forum in Deauville in October 2015 and at an event with Acumen's community in New York. The qualitative research and report provide a glimpse into how Acumen's portfolio companies are currently thinking about gender and a framework with which to deepen how we integrate gender considerations into the work that we do. We learned that women are a significant proportion of our investee's customer base and about how our companies are already benefitting women. We also discovered a need to better understand the role that women play throughout our business models – as low-income customers, employees, managers, etc.
- **Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations through equitable actions? If so, what are these opportunities and actions?**
 - ARAF will encourage greater women participation at the board level and ensure equal opportunity at the investing team and investee level.
 - We will comply with Gender Equality Standards as defined by the ILO and IFC respectively.

Ghana Gender Assessment

- **What is the maternal mortality rate, infant mortality rate, educational status of girls and boys, adult literacy rate (disaggregated by sex), poverty rate, labour force participation rate (disaggregated by sex), employment rate (disaggregated by sex), unemployment rate (disaggregated by sex), political participation rate (disaggregated by sex), life expectancy (disaggregated by sex) in the country of intervention and/or the project/program footprint area?**

In the [Social Institutions and Gender Index 2014 Edition](#), Ghana has high levels of discrimination against women in social institutions. It has lower discrimination in son bias and higher discrimination in restricted access to resources and assets. *Read the full country profile and access the data here: <http://www.genderindex.org/country/ghana>*

Maternal mortality rate	319 per 100,000 live births (World Bank)
Infant mortality rate	43 per 1,000 live births (World Bank)
Adult Literacy Rate	Male: 82%, Female: 71.4% (CIA World Factbook)
Employment to Population Ratio	Total: 73%, Female: 71% (World Bank)
Unemployment Rate (% of respective labor force)	Male: 5.4%, Female: 6.2%
Life Expectancy	Male: 64.1 yrs, Female: 69.1 yrs (CIA World Factbook)

Political Participation:

Currently (as at 06 December 2016), Ghana has only 31 of its 275 parliamentarians as women with less than 30% being Ministers of State and District Chief Executives. This can be attributed to factors such as leadership roles which are still seen as being more masculine, indicating societies should be led by men, thereby relegating women into the background of political decision making in Ghana. In addition, the unequal playing field created by political parties disadvantage women. Women also do not have the required resources for political campaigns and electoral processes coupled with an uninformed public about women's human rights and contribution to development. Source: [UNDP](#)

- **What is the division of labour among women and men in the project/program footprint area and/or the country of intervention?**

According to the [World Bank](#), 50% of the total labor force in Ghana are women.

- **What is the participation between women and men in the formal/informal economy in the country of intervention or in the project/program footprint area?**

Agriculture accounts for about 20% of Ghana's GDP and employs more than half of the workforce, mainly small landholders. Almost 50% of agricultural workforce are women – mostly employed informally. Gold and cocoa exports, and individual remittances, are major sources of foreign exchange. Expansion of Ghana's nascent oil industry has boosted economic growth, but the fall in oil prices since 2015 reduced by half Ghana's oil revenue. Production at Jubilee,

Ghana's offshore oilfield, began in mid-December 2010. The country's first gas processing plant at Atubao is also producing natural gas from the Jubilee field, providing power to several of Ghana's thermal power plants. Source: [WikiGender](#)

- **Will services and technologies provided by the project/program be available and accessible to both women and men?**

Yes. Women comprise over 50% of agricultural workforce in Africa and play an integral role in pursuing pathways out of poverty. ARAF aims to invest in companies that empower smallholder farming households (both men and women) to improve their productivity, livelihoods and climate resilience.

- **What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?**

Although our aim is to ensure equal opportunity to both men and women in the community, we are mindful of local societal dynamics that vary region by region. For instance, in cases where men are the head of the household, the decision making power rests with them while women are in the support role and vice versa. Generally, it has been observed that men have stronger influence with external stakeholders and functions such as securing inputs, credit or selling to the market, managing logistics, etc. while women primarily focus on farm and household management along with the male members of the family.

ARAF recognizes the cultural nuances involved in our focus communities while encouraging a greater role of women in decision making. In terms of their needs, ARAF will address the needs of farming communities regardless of gender with improvement in livelihoods, productivity and climate resilience being the primary measures of success.

- **Has the project/program recognized the distinct vulnerabilities of women and men and developed specific response strategies for each target group?**

ARAF's focus is unlocking untapped potential for the farming household as a whole. Due to this approach, collective vulnerabilities such as hunger, poverty and climate are of more relevance to the program. Our response strategies are also aimed at addressing these vulnerabilities for both the men and women of the household.

Specifically, ARAF aims to focus on three key areas to empower women in agricultural value chains:

- **Women-focused Financial Inclusion Services:** According to CGAP, among adults in developing economies living below the \$2-a-day poverty line, women are 28 percent less likely than men to have an account at a formal financial institution. Financial inclusion for smallholder households (women in-particular) can prove to be a game-changer for the sector. ARAF Technical Assistance (TA) Facility will be leveraged to experiment with innovative models and approaches that improve financial inclusion of women in farming households as well as relevant financial literacy to ultimately enhance their decision making power in agriculture.
- **Digital Literacy Campaigns:** ARAF recognizes digital platforms as a key strategy pillar to improve access and visibility across the supply chain. To tilt markets in favor of smallholders, we must enable mechanisms that help farming household leverage digital platforms to strengthen their connection to the market, benefit from affordable credit, reliable extension and quality inputs. According to GSMA, African women are currently 13% less likely than African men to own mobile phones which makes the need for women-focused digital literacy campaigns an important area of empowerment. ARAF TA Facility will be leveraged to fund campaigns that increases the uptake of mobile phones and associated services while accelerating the impact of digital literacy campaigns.

- **Women Extension Agent Programs:** While improved digital literacy and financial inclusion can significantly improve women's agricultural decision making power, greater participation in extension networks can also enhance women's role and influence in the sector. While over 50% of the agricultural workforce are women, extension networks are predominantly managed by men. ARAF aims to leverage women social networks and enhanced expertise (through digital literacy and financial inclusion) to strengthen extension models that aim to reduce information asymmetries in the farming population. ARAF TA Facility will be used to design and implement programs that encourage greater participation of women in agricultural extension programs.
- **Are the specific knowledge and skills of women and men, especially from vulnerable groups, being utilised to contribute to project/program outcomes and solutions?**
- Yes, Acumen has developed an approach that leverages the knowledge and skills of women and men in the work that we do. For ARAF, we see a greater role of women both on the investing side as well as the investee side. We will encourage greater women participation at the board level and ensure equal opportunity at the investing team and investee level. We will comply with Gender Equality Standards as defined by the ILO and IFC respectively.
- We have demonstrated our commitment by engaging in activities that can educate the impact investing space in recognizing the role of women in tackling poverty. For example, between 2014 - 2015, Acumen teamed up with the International Center for Research on Women to look at our portfolio and how our companies engage women as customers and employees. *We published Women and Social Enterprises: How Gender Integration Can Boost Entrepreneurial Solutions to Poverty* and launched the report during the Women's World Forum in Deauville in October 2015 and at an event with Acumen's community in New York. The qualitative research and report provide a glimpse into how Acumen's portfolio companies are currently thinking about gender and a framework with which to deepen how we integrate gender considerations into the work that we do. We learned that women are a significant proportion of our investee's customer base and about how our companies are already benefitting women. We also discovered a need to better understand the role that women play throughout our business models – as low-income customers, employees, managers, etc.
- **Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations through equitable actions? If so, what are these opportunities and actions?**
- ARAF will encourage greater women participation at the board level and ensure equal opportunity at the investing team and investee level.
- We will comply with Gender Equality Standards as defined by the ILO and IFC respectively.

Nigeria Gender Assessment

- **What is the maternal mortality rate, infant mortality rate, educational status of girls and boys, adult literacy rate (disaggregated by sex), poverty rate, labour force participation rate (disaggregated by sex), employment rate (disaggregated by sex), unemployment rate (disaggregated by sex), political participation rate (disaggregated by sex), life expectancy (disaggregated by sex) in the country of intervention and/or the project/program footprint area?**

In the [Social Institutions and Gender Index 2014 Edition](#), Nigeria has very high levels of discrimination against women in social institutions. It has lower discrimination in son bias and higher discrimination in restricted civil liberties. Read the full country profile and access the data here: <http://www.genderindex.org/country/nigeria>

Maternal mortality rate	814 per 100,000 live births (World Bank)
Infant mortality rate	69 per 1,000 live births (World Bank)
Adult Literacy Rate	Male: 69.2%, Female: 49.7% (CIA World Factbook)
Employment to Population Ratio	Total: 54%, Female: 46% (World Bank)
Unemployment Rate (% of respective labor force)	Male: 4.4%, Female: 5.8%
Life Expectancy	Male: 52.4 yrs, Female: 54.5 yrs (CIA World Factbook)

Political Participation:

Women make up about 49 per cent of the Nigerian population and nearly one out of four women in sub-Saharan Africa is a Nigerian. While this presents potential human resources that can be harnessed to enhance economic productivity; the disparities in social and economic opportunities between men and women have never been starker. Nigeria has the lowest number of female parliamentarians in sub-Saharan Africa and ranks 133rd in the world for female political representation. Women own 20 per cent of enterprises in the formal sector and 11.7 per cent of Board Directors in the country are women.

Source: [LSE](#) Blog

- **What is the division of labour among women and men in the project/program footprint area and/or the country of intervention?**

According to the [World Bank](#), 42.4% of the total labor force in Nigeria are women.

- **What is the participation between women and men in the formal/informal economy in the country of intervention or in the project/program footprint area?**

Nigeria is the most populous country in Africa and the eighth most populous country in the world. One of the world's largest producers of crude oil, Nigeria is heavily dependent on its crude oil export, contributing to growth rates of 9.0% in 2008 and 8.3% in 2009. Oil exports account for over half of federal government revenue and over 90% of export earnings, but these revenues have traditionally been squandered through rampant corruption and mismanagement. Nigeria has

had the highest external debt among regionally comparative countries, through the years with a peak in 2005 at 8.82 billion.

Overall:

- The agricultural sector is still the largest employer in the country; and
- 70.9% of men and 74.8% of women in the total civilian employed labor force report being self-employed.

The Nigerian workforce exhibits high levels of gender inequality:

- Nigeria has one of the lowest rates of employed women, as percent of the total population, among selected countries with similar gross national income; and
- The highest percentage of men in the workforce is among those aged 45-49 (99.2%) compared to just 67% of women in this same age group.

Source: [BC Research](#)

- **Will services and technologies provided by the project/program be available and accessible to both women and men?**

Yes. Women comprise over 50% of agricultural workforce in Africa and play an integral role in pursuing pathways out of poverty. ARAF aims to invest in companies that empower smallholder farming households (both men and women) to improve their productivity, livelihoods and climate resilience.

- **What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?**

Although our aim is to ensure equal opportunity to both men and women in the community, we are mindful of local societal dynamics that vary region by region. For instance, in cases where men are the head of the household, the decision making power rests with them while women are in the support role and vice versa. Generally, it has been observed that men have stronger influence with external stakeholders and functions such as securing inputs, credit or selling to the market, managing logistics, etc. while women primarily focus on farm and household management along with the male members of the family.

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- **Has the project/program recognized the distinct vulnerabilities of women and men and developed specific response strategies for each target group?**

ARAF's focus is unlocking untapped potential for the farming household as a whole. Due to this approach, collective vulnerabilities such as hunger, poverty and climate are of more relevance to the program. Our response strategies are also aimed at addressing these vulnerabilities for both the men and women of the household.

Specifically, ARAF aims to focus on three key areas to empower women in agricultural value chains:

- **Women-focused Financial Inclusion Services:** According to CGAP, among adults in developing economies living below the \$2-a-day poverty line, women are 28 percent less likely than men to have an account at a formal financial institution. Financial inclusion for smallholder households (women in-particular) can prove to be a game-changer for the sector. ARAF Technical Assistance (TA) Facility will be leveraged to experiment with innovative

models and approaches that improve financial inclusion of women in farming households as well as relevant financial literacy to ultimately enhance their decision making power in agriculture.

- **Digital Literacy Campaigns:** ARAF recognizes digital platforms as a key strategy pillar to improve access and visibility across the supply chain. To tilt markets in favor of smallholders, we must enable mechanisms that help farming household leverage digital platforms to strengthen their connection to the market, benefit from affordable credit, reliable extension and quality inputs. According to GSMA, African women are currently 13% less likely than African men to own mobile phones which makes the need for women-focused digital literacy campaigns an important area of empowerment. ARAF TA Facility will be leveraged to fund campaigns that increases the uptake of mobile phones and associated services while accelerating the impact of digital literacy campaigns.
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- **Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations through equitable actions? If so, what are these opportunities and actions?**
 - ARAF will encourage greater women participation at the board level and ensure equal opportunity at the investing team and investee level.
 - We will comply with Gender Equality Standards as defined by the ILO and IFC respectively.

Gender Analysis/Assessment and Gender Action Plan Templates

Part I: Gender Analysis/Assessment: Template (Project/Program Level)

What is a gender analysis/assessment?

Gender analysis/assessment refers to methods used to understand relationships between men and women, their access to resources, their activities, and the constraints they face relative to each other. A comprehensive gender analysis/assessment entails the examination of the different roles, rights, needs, and opportunities of women and men, boys and girls in a given project/program context. It is a tool that helps to promote gender – relevant entry points, policies and identify opportunities for enhancing gender equality in a particular project/program. In the case of climate change projects/programs, a well done gender analysis/assessment helps to identify multiple causes of vulnerability, including gender inequality. It also helps to identify and build on the diverse knowledge and capacities within communities/households that can be used to make them more resilient to climate related shocks and risks.

When is a gender analysis/assessment used?

Gender analysis needs to take place early in the planning process so that an understanding of gender roles and power relations is built into the project. All projects/programs should include an analysis of gender and include data on gender issues within the overall situation analysis.

This template provides key questions to consider while developing a gender analysis/assessment for a particular project/program. Be sure to tailor these questions to the context of your project/program. Also, be certain to include quantitative data (i.e. sex – disaggregated) and qualitative data while developing the gender analysis/assessment.

Gender analysis/assessment questions that need to be addressed at the project planning/preparatory stage:

- What is the maternal mortality rate, infant mortality rate, educational status of girls and boys, adult literacy rate (disaggregated by sex), poverty rate, labour force participation rate (disaggregated by sex), employment rate (disaggregated by sex), unemployment rate (disaggregated by sex), political participation rate (disaggregated by sex), life expectancy (disaggregated by sex) in the country of intervention and/or the project/program footprint area?
- What is the legal status of women in the country of intervention?
- What are commonly held beliefs, perceptions, and stereotypes related to gender in the project/program footprint area or the country of intervention?
- What is the division of labour among women and men in the project/program footprint area and/or the country of intervention?

- What is the participation between women and men in the formal/informal economy in the country of intervention or in the project/program footprint area?
- What is the situation of women and men in the specific sector of intervention or in the project/program footprint area?
- In terms of the proposed project/program, will there be any anticipated differences in men's and women's vulnerability and adaptive capacity to climate change? If so, what are these?
- Are there existing gender inequalities that may be exacerbated by climate change impacts in the proposed project/program footprint area?
- What are some of the inequalities that exist between different social groups in the project/program footprint area? How do these inequalities affect people's capacity to adapt to climate change?
- What roles women and men are anticipated to play in the context of the project/program? What will these entail in terms of time commitment and need for mobility?
- What resources (economic, financial, physical, natural, other assets) do women and men have access to? Who manages or controls access to these resources?
- Do women and men from vulnerable communities have equal access to information and opportunities necessary to participate and benefit fully from the anticipated outcomes of the project/program?
- Do women have equal access to education, technical knowledge, and/or skill upgradation?
- Will services and technologies provided by the project/program be available and accessible to both women and men?
- To what extent do women and men from vulnerable communities participate in decision – making processes? What type of decisions are made by women? What are the constrains (social, cultural, economic, political) that restrict women's active participation in household and community level decision – making processes?
- Are there any opportunities to promote the leadership of women in local governance/political systems and formal/informal institutions? If not, what are some of the constrains that hinder women from assuming leadership roles?
- What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?
- Have the needs of specific (and vulnerable) sub-groups been taken into account by the project/program (e.g. children, girls, women and men with disabilities, the elderly, widows)?
- Has the project/program recognized the distinct vulnerabilities of women and men and developed specific response strategies for each target group?
- Are the specific knowledge and skills of women and men, especially from vulnerable groups, being utilised to contribute to project/program outcomes and solutions?
- Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations through equitable actions? If so, what are these opportunities and actions?

When should information from the gender analysis/assessment be considered?

The information gathered from the gender analysis/assessment should be considered in all stages of the project cycle: design, formulation, implementation, and monitoring and evaluation. In each of these stages, project/program managers should keep a 'gender lens' in mind, looking at ways the project/program can address gender inequalities that emerge from the project/program; ensure the differential needs of women and men are addressed; ensure women and men have equal access to resources, services, and capacity development; ensure equal participation of women and men in management arrangements and as beneficiaries, partners and key stakeholders; and ensure women's equal participation in decision – making processes.

Part II: Gender Action Plan: Template (Project/Program Level)

Most often than not, projects/programs financed by the GCF will require the development of a gender action plan (GAP). A project/program-specific GAP is a tool used to ensure gender mainstreaming is explicitly visible in project/program design and implementation. The project/program GAP is not a separate component. It mirrors the project outputs and is an integral part of project/program design. GAPs include clear targets, quotas, gender design features and quantifiable performance indicators to ensure women's participation and benefits. Key aspects of the GAP are incorporated into project/program assurances to encourage buy-in from AEs and other partners.

The GAP presents:

- Preparatory work undertaken to address gender issues in the project/program;
- Quotas, targets, design features, included in the project/program to address gender inclusion and facilitate women's involvement and/or ensure tangible benefits to women;
- Mechanisms to ensure implementation of the gender design elements;
- Gender monitoring and evaluation indicators.

Below is presented a template of a GAP that the Mitigation and Adaptation and Private Sector Facility Divisions at GCF could share with AEs/other partners for their use. As the following template shows, the GAP should contain impact, outcome and output statements, gender – responsive activities, gender – performance indicators and targets, timeline, and responsibility lines. Guidance on what impact, outcome, output statements, gender – responsive activities, gender – performance indicators and targets should look like are provided in the GAP template.

Impact Statement: Improved quality of life and incomes, and resilience to the negative impacts of climate change of vulnerable communities, including women, girls, and female-headed households.

Outcome Statement: 5 million women and girls using interventions that geared towards improved quality of life, incomes and resilience to climate change through crops/products/services by ARAF companies.

Output(s) Statement: Women and female headed households with improved access to information, knowledge, agricultural inputs, finance and/or markets through aggregator and digital platforms.

Activities:	Indicators and Targets:	TA Budget	Timeline:	Risks and Assumptions:	Party responsible
<p>(1) Using Lean DataSM, track and analyse social performance of individual ARAF companies and portfolio-level analysis, with a gender lens</p> <p>Note: the gender metrics will be a subset of the social performance measures collected using Lean Data work with each ARAF company</p>	<ul style="list-style-type: none"> • 5 mn women and girls reached through ARAF over 12 years. • 25 - 50% of ARAF households living below \$3.1 per person per day. X% female-headed ones. • X number of women/men employees of ARAF investee companies. <p>Outcome indicators disaggregated by gender:</p> <ol style="list-style-type: none"> X% of women or FHH reporting a positive change in quality of life due to ARAF company X% of women or FHH reporting improved incomes due to ARAF company X% of women or FHH reporting increased resilience to climate changes due to ARAF company X% of women or FHH reporting Net Promoter Score of Y or higher In X% of the HHs, women did most of the work related to crops/products/services In X% of the HHs, women make most of the decisions related to crops/products/services In X% of the HHs, women make most of the money-related decisions about crops/products/services 	<p>\$2M</p>	<p>We will understand baseline levels in the first year and set appropriate indicators and targets to track for the lifetime of our investment, usually 7-8 years in agriculture, for each company once we have this information.</p>	<p>ARAF will invest in a variety of business models. We will use Lean Data to track social performance and collect regular farmer feedback for companies on an annual basis. Our approach to measurement will be customized for each company to ensure relevance of questions, indicators, and targets. We will use the first year of the investment to develop these.</p> <p>'Indicators and Targets' has a starting list of output and outcomes measures we will use. We have tried setting targets wherever possible and left 'x' where it is too early to establish/arrive at a reasonable figure.</p>	<p>Accredited Entity (Acumen)/ARAF investee</p>
<p>2) Provide post-investment support with a gender lens. Priority areas include:</p> <ol style="list-style-type: none"> financial inclusion of women in farming households (Estimated TA Budget: \$0.2 mn) uptake of mobile phones and associated services while accelerating the impact of digital literacy campaigns (Estimated TA Budget: \$0.2 mn) programs that encourage greater participation of women in agricultural extension programs (Estimated TA Budget: \$0.1 mn) 	<p>Key targets for TA gender support are as follows:</p> <ul style="list-style-type: none"> • 25% more women reached with formal financial services in the target population than the assessed national/regional average • 25% more women adopt mobile phones and use digital services in the target population than the assessed national/regional average • 20% more women participating in agricultural extension programs in the target population than the assessed national/regional average 	<p>\$0.2M</p> <p>\$0.2M</p> <p>\$0.2M</p>			
<p>We will use Lean Data to track the success of these post-investment interventions, wherever possible.</p>					

Gender documents for
FP079

This funding proposal has been withdrawn by the accredited entity, on the ground that further due diligence is required, with a possibility of resubmission for consideration of the Board at a subsequent Board meeting.

Gender documents for
FP080



GENDER ASSESSMENT AND ACTION PLAN

ZAMBIA RENEWABLE ENERGY FINANCING FRAMEWORK

1. Introduction

This gender assessment provides a summary of the gender equality situation in Zambia with a specific focus on women's financial inclusion in the energy sector. The assessment identifies potential entry points to promote women's participation as business leaders and owners in renewable and clean energy.

2. Background

Zambia has a population of 16.5 million people, growing at a rate of 2.9% per annum with females accounting for 50.7 percent of the total population and males accounting for 49.3%. Majority of the population lives in rural areas accounting for 60.5%. Of the total number of households 77.5% are headed by males with 22.5% headed by females. Due to rapid population growth, which is estimated to be 2.8% per annum, Zambia has a high population of young people (45.4% of Zambians are below the age of 15 years).

Zambia's National Development Plans set out ambitious goals including those on gender equality. Gender responsive sustainable development is one of the principles that underpin Zambia's Vision 2030. Zambia continues to grow steadily in the recent past however, this growth has not translated into significant reduction of poverty. The majority of the population continues to live in poverty, with pervasive inequalities between women and men. Women still dominate the informal and low value-add sectors of the Zambian economy and are mainly employed in family agriculture. On the enterprise side, women entrepreneurs are also most present in low value adding sectors, and dominate the informal economy. Zambia is therefore unfavorably ranked in global and regional Gender equality measurements. In the most recent Gender Inequality Index (GII), Zambia scores value of 0.526, ranking it 124th out of 157 countries. Zambia is also ranked third highest country with cases of child marriages in the SADC region, according to Girls Not Brides with 42 percent of women aged 20-24 years married by the age of 18, many of whom live in rural areas among the poor and marginalised communities. Zambia therefore has a higher gender inequality than the average in Sub Saharan Africa and other medium human development countries.

3. The Gender Policy Framework in Zambia

The new constitution signed into law in February 2016 sets out a new affirmative framework for a largely 30% equality rule for elective and appointive positions while recognizing equal rights and the establishment of a Gender Equality Commission. Other progressive laws include the Gender Equity and Equality Act (GEEA) of 2015 which seeks to domesticate some of the women's rights and gender provisions in regional, continental and international instruments to which Zambia is party to. The National Policy on Gender formulated on 2014 is the key framework for the implementation of gender equality commitments. This policy lists the strategy and actions to be implemented by government ministries and agencies in 15 different fields to achieve gender equality, which includes the area of energy access. Progress has also been made in regard to women's human rights. The Penal code was revised in 2005 making punishments for sexual violence more severe. However, enforcement of these laws and policies remains a challenge.

4. Education and Health

Net enrollment rate for girls in primary education is similar to that for boys, however the dropout rates for girls increase as they advance into higher grades mainly due to pregnancy. The Zambia Demographic and Health Survey reports that 28.5% of girls aged 15–19 have ever been pregnant or had a live birth. However, the number of girl dropouts increases with higher grades and the net enrolment ratio for boys in the 10th through 12th grades is much higher than that for girls (33.5% for boys and 25.6% for girls). Although financial difficulty is the principal reason given for dropping-out overall, pregnancy is the overwhelming reason for girls. 58% of girls who drop out in the 10th through 12th grades cite pregnancy as the reason. These rates are higher in rural areas, where 37% report ever being pregnant.

The prevalence rate of HIV among women of 15.1% is much higher than the 11.4% for men and may be attributable to customs which are disadvantageous for women. Maternal mortality is estimated to be 398 deaths/100,000 live births. Approximately 4.2 million rural Zambians do not have access to safe water, and women and girls generally take on the work of finding and collecting water- a chore that can take up to six hours a day. The time and energy spent collecting water is an opportunity cost to girls' education and women's economic activities

5. Women's Participation in the Economy

The African Union Gender Scorecard on Zambia shows that there are dimensions where Zambia has made impressive progress in the advancement of gender equality. These include women's health, their participation in business, and access to credit. However inequalities still persist in some areas. Labour force participation rate for women is 78.3%, against 95.0 % for men. The overall labour force participation for women in Zambia is relatively high compared to other African countries, but most of these women are engaged in agriculture for self-consumption and their labour in such an informal sector cannot be said to generate sufficient income for livelihood improvement. Most of these women are involved in crop production for home consumption and their farming activities do not produce any tangible income. Those who are able to produce surplus for sale are faced with challenges of markets.

In addition to agriculture, many women, especially those in the urban areas are involved in micro and small businesses which are characterized by informality. An employment survey In Zambia in 2014 reported that 84% of female employment is in the informal sector with majority of women running unregistered businesses. This informality means that they have limited access to information, training and finance that would help them grow their businesses. Whilst financial inclusion for women is increasing in Zambia, this remains at the basic levels of access to bank accounts and micro loans.

Pervasive inequalities are observed in land ownership as indicated by a score of 2 out of 10 on the African gender scorecard. Another area where slow progress is observed is the participation in politics where women only account for only 12.7% of members of the Lower house of parliament.

Figure 1. Zambia Gender Score Card 2015



Source: ECA Zambia Profile 2016

6. Challenges and Entry Points for Mainstreaming Gender

The participation of women in the energy sector value chain in Zambia is very limited, especially as entrepreneurs or business leaders in renewable energy. In terms of energy access, the majority rural population is especially energy poor – over 90% of rural Zambians are without access to energy. Poor women are especially constrained considering their role in the provision of cooking energy and productive uses of for energy for rural enterprises. Yet evidence shows that women’s experiences and knowledge are critical in addressing climate change. They have extensive knowledge on weather patterns, ecosystems and management of natural resources. Four entry points for mainstreaming gender are elaborated below.

i. ***Women’s entrepreneurship in clean energy***

Both the Zambia National Energy Policy (2008) and the National Gender Policy (2014) recognize the intersection of gender, energy access and energy systems development. However both policies do not elaborate specific actions to advance gender equality in the energy sector. Development of clean and climate resilient energy systems requires the participation of all stakeholders including women who are often missing in the energy industry. There is limited documentation of the participation of women in the renewable sector in Zambia, however it is assumed that the participation is minimal. Notwithstanding the low participation of women, there are emerging women in the sector as the case of Likonge Makai highlighted in the box above.

Case study: Likonge Makai Young Female Clean Energy Social Entrepreneur

Likonge Makai received her Master’s in Energy Systems in Nepal at Kathmandu University. Her enterprise focusses on effective, affordable and efficient energy to allow even the poorest people in remote rural areas Zambia to have access to clean and sustainable energy. She founded Lichi Community Solutions Ltd., a non-profit organization. She is currently working with rural communities that do not have grid power, helping them gain access to electricity. Some of the projects by LiCHI include setting up of energy kiosks powered by solar photovoltaic panels that serve many purposes. One of the kiosks consists of six 300-watt, north-facing solar panels, a charge controller, four 12-volt, sealed lead-acid batteries arranged in series-parallel to create a 24VDC bus, a 2000 VA inverter, a battery monitor and a data broadcast and monitoring system developed by KWH for remote monitoring. The kiosk offers mobile phone charging at a rate of 2 ZMW (US\$0.20) per charge. Other electronic devices such as radios are recharged at 5 ZMW (US\$0.50) per charge.

Despite their low participation, women have a significant role to play in the energy sector including as from policy makers and executives of private sector partners, to utility managers and employees of power plants and distribution systems, to renewable energy entrepreneurs and customers of electricity services. With support for skills development and training, it is expected that there will be an increase in the number of women adopting clean energy technologies and growth in the number of women entrepreneurs in the energy sector.

ii. ***Women’s Access to Climate Financing***

Access to finance is a major challenge for women businesses across all sectors of enterprise. The limited access to financing means that women entrepreneurs in Zambia are more likely to be in, and remain in the informal economy and low value added activities. Specific constraints facing women, include their lower levels of asset ownership and traditional forms of collateral to collateral to obtain credit. The figure below summarises barriers to the growth of women’s businesses.

Figure 2: Challenges to Women’s Entrepreneurship

Issue:	Impact:	Origins:
Meta		
Dual legal system that discriminates against women.	Limits access and legal redress in starting and growing a business.	Social norms that influence women’s ability to access the same legal rights as men.
Women do not have the same opportunity to enter ‘non-traditional’ business sectors.	Limits women’s ability to enter certain sectors that may offer higher value added businesses	Socio-cultural norms and lifecycle factors that limit the sectors in which women operate.
Macro		
Lack of voice and influence	Limited ability to influence enabling policies through social dialogue.	Social norms which influence women’s ability to speak out, organize, and limit their mobility.
Access to relevant business development services	Low growth, and uncompetitive business practices which perpetuate a lack of decent work.	Delivery channels and range of BDS not tailored to women’s needs. Demand side weaknesses from women entrepreneurs.
Access to vocational skills.	Stuck in low value activities which perpetuate a lack of decent work.	Social norms that lead to poor attitudes to non-traditional skills training (both by women and TEVET Institutions).
Limited business skills and technologies	Low growth, uncompetitive business practices, and lower levels of innovation.	Lower levels of education and skills training. Modern technologies require capital investment.
Micro		
Access to lucrative markets	Low growth and sustainability.	Less social and financial capital than men and limited time mobility due to women’s multiple roles.
Access to finance beyond microfinance	Low growth and tenuous working capital.	Access to collateral and attitudes of Financial Institutions in lending to women entrepreneurs.
Vulnerability to graft and gender based violence	Lower profits, less mobility and risk-taking behaviour.	Masculine domination as a societal norm; limited negotiation strategies by women.

The Bank of Zambia has made significant strides in spearheading financial inclusion for women. In 2001 the Bank developed a Gender policy with a commitment to promote and enhance gender equity and equality in the governance of the Bank and the financial sector to contribute to sustainable development. Building on this one of the objectives in the Bank of Zambia’s current Strategic Plan (2016 – 2019) is “to entrench gender mainstreaming within the Bank of Zambia and the financial sector, to contribute to gender equality in Zambia”. This strategic plan therefore provides a framework against which gender can be mainstreamed in the project.

The Bank of Zambia has worked with the International Labour Organization (ILO) to train several of its senior level staff in the Bank Supervision Department on a tool which provides a methodology for a gender-based service quality check. It aims to facilitate business support agencies, financial institutions and government departments to conduct a systematic assessment of the extent to which they target and serve women entrepreneurs, their needs and their potentialities. The Bank of Zambia staff trainers have in turn trained selected officers in the commercial banks in the country. To date, three cohorts have received the training. Additionally, the trainers have

conducted checks at four banks in Zambia to determine the gender-responsiveness of the banks in their product and service offering.

It is therefore important to work to improve women's access to financial resources to help them make the transition from micro-scale, informal operations to larger businesses that are recognized within the formal sector. With accessible financing opportunities, it is easier for women to get involved in new energy-related businesses, for example by producing and marketing more efficient stoves; selling and installing solar-home products- like in the case of Lichi Community Solutions; managing village-level power systems (including micro hydropower generators, wind turbines and multifunctional platforms); constructing and marketing biogas digesters; or producing biodiesel fuels from locally grown crops.

iii. Women's employment

Many Zambian women especially those in the urban areas are involved in micro and small businesses which are characterized by informality. An employment survey In Zambia in 2014 reported that 84% of female employment is in the informal sector with majority of women running unregistered businesses. This informality means that they have limited access to information, training and finance that would help them grow their businesses. The informal nature of women's businesses also means they are unable to tap into the business opportunities Even though data is currently not available, it is recognized that women's employment in the energy sector is low, with similarities with the construction sector. Women represent only 6% of the 3,069 National Construction Council graded contractors, but they tend to be in lower value activities at the National Council of Construction's (NCC) Grades 5 and 6. Some of the challenges contributing to the low participation of women in the sector include the arduous registration process for businesses, skills base for women in the sector, and the lack of social capital that allows women's movement and interaction in male dominated sectors. The project will therefore support apprenticeship for young women in the energy sector related occupations.

iv. Knowledge building

There is a dearth of data and knowledge on the participation of women and other vulnerable persons in the area of clean energy. The project will therefore support a process to build a body of knowledge on women in energy in Zambia.

7. Conclusion

The participation of women into all levels of the energy value chain will lead to more effective clean energy initiatives, unlock greater return on investments, and expand the prospects of reducing emissions.

Gender Action Plan

Activities	Indicators and Targets	Timeline	Responsible organisations	Costs ¹
Impact statement: Improved business opportunities and investments by women and disabled people in Zambia in renewable energy initiatives.				
<p>Outcome 1: Increased participation of women and disabled people in clean and renewable energy By 2020</p> <p>Outcome Indicators:</p> <p><i>Indicator 1.1:</i> Number of women and disabled people trained in renewable energy and project finance among financial institutions and investors in Zambia. <i>Target: 30</i></p> <p><i>Indicator 1.2:</i> Number of women and disabled people participating to RE investment teams <i>Target: 10</i></p>				
<p><i>Output 1.1</i> Network of women in energy created</p> <p><i>Indicator 1.1.1</i> Number of women who join the Zambia network of women in energy <i>Target: 100</i></p> <p><i>Output 1.2</i> Capacity building of women and disabled people in RE</p> <p><i>Indicator 1.2.1</i> Number of women and disabled trained on RE technologies and business development related to renewable energy transactions <i>Target:30</i></p>				
<p><i>Activities will include:</i></p> <ul style="list-style-type: none"> - <i>Diagnostic study on women in renewable energy in Zambia</i> - <i>Development of a women in renewable energy database (virtual)</i> - <i>Launch of the women in renewable energy network</i> - <i>Annual newsletter of the Women in RE newsletter highlighting achievements of women in the sector</i> 	<p><i>One diagnostic report finalised</i></p> <p><i>Virtual database developed, and updated annually</i></p> <p><i>Number of women who join the Women in RE network</i> <i>Target: 100 women</i></p>	<p><i>By 2019</i></p> <p><i>By 2019</i></p> <p><i>By 2020</i></p>	<p><i>Consultant recruited for RE capacity building</i></p>	<p><i>US\$30,000</i></p>

¹ All budget will be an integrated part of the TA grants co-financed by AfDB and GCF.

- <i>Training in renewable and clean energy technologies</i>	<i>Number of women and disabled persons (male and female) trained in clean energy technologies Target: 30 (20 women; 10 disabled of which at least 5 will be female)</i>	By 2020	<i>Consultant recruited for RE capacity building</i>	<i>US\$15,000</i>
- <i>Training of women and disabled persons in business development services</i>	<i>Number of women and disabled persons(male and female) business development services Target 30(20 women; 10 disabled of which at least 5 will be female)</i>	By 2020	<i>Consultant recruited for RE capacity building</i>	<i>US\$15,000</i>
- <i>Dialogue and advocacy with financial institutions and beneficiary companies for internships for women in RE related institutions</i>	<i>Number of young women with internships in institutions working on RE or RE financing Target: 10</i>	By 2020	<i>Consultant recruited for RE capacity building</i>	
Outcome 2: Increased capacities of financial institutions in Zambia on gender responsive climate finance <i>Indicator 2.1 : % of financial institutions in Zambia implementing Gender responsive programmes by 2020</i> <i>Target: 50%</i>				
Output 2.1 Training programme for financial institutions on gender responsive climate finance <i>Indicator 2.2.1 : Number of staff in financial institutions trained on gender responsive climate finance</i> Target: 20 Output 2.2 A body of knowledge on gender responsive climate financing <i>Indicator 2.3.1 : Number of knowledge products developed.</i> Target: 3				
<i>Activities will include: Support to financial institutions to develop products for climate finance</i> - <i>Training loan and credit officers from across financial institutions in gender responsive climate finance</i> - <i>Development of guidelines for gender responsive climate finance</i>	<i>Number of credit and loan officers in financial institutions trained on gender responsive climate finance Target: 20 (at least 50 % female)</i>	By 2020	<i>Consultant recruited for ESIA and Gender capacity building</i>	<i>US\$ 30,000</i>

<ul style="list-style-type: none"> - <i>Tracking performance of Financial institutions on gender responsive climate financing</i> - <i>Support to financial institutions to review financing criteria to target participation of both men and women owned companies in RE financing</i> 	<p><i>% Increase in number of women owned businesses that receive financing for RE initiatives</i> <i>Target: 10 % increase by 2020</i></p>			
<p><i>Documentation of case studies and emerging good practices on gender responsive climate finance</i></p>	<p><i>Number of knowledge products developed on gender and Renewable Energy.</i> <i>Target: 3 by 2021</i></p>			<p><i>US\$ 30,000</i></p>

LINE OF CREDIT FOR SOLAR ROOFTOP SEGMENT FOR COMMERCIAL, INDUSTRIAL AND RESIDENTIAL HOUSING SECTORS

Accredited Entity ("AE"): National Bank for Agriculture and Rural Development ("NABARD")

Executing Entity ("EE"): Tata Cleantech Capital Limited ("TCCL")

Gender Assessment and Action Plan

Gender Assessment:

Renewable energy (RE) and more specifically rooftop solar energy can play an important role in providing access to energy for Indian population who either do not have access to electricity or liquid fuels or can access cleaner and cheaper sources of energy. Shifting the energy sector mix can lead to new economic opportunities and strengthened livelihoods for women and men, as well as improved health, safety, and quality of life. As an additional key contribution, rooftop solar energy projects can contribute to the global imperative of reducing greenhouse gas emissions.

While these projects have the potential for broad and far reaching benefits, they are found to be more effective when gender equality is taken into account. To take gender into account requires identification and assessment of a project's potentially different impacts on men and women involved and ensuring equitable benefit sharing. This requires, for example, identifying the roles women and men play and the activities in which they are involved in their households and communities in order to pinpoint how they may be impacted by rooftop solar energy projects. It also means understanding women's and men's different knowledge, experiences, needs, and interests along the rooftop solar energy value chain.

Women's economic empowerment is a key ingredient in overall development. While men are already involved in energy projects, women are not always involved equitably. Energy sector investments can contribute direct economic benefits to women through formal sector employment and by providing them with opportunities to improve their livelihoods through small-scale enterprises, skills development, and training. Such investments can also have indirect positive effects on the education, health and nutrition of women and their households, for example through the provision of lighting and heat. However, all actors along rooftop solar energy value chain do not automatically benefit. For example, discriminatory gender norms may limit women's mobility and thus their ability to work outside the home or community, attend training activities, or engage in selling, installing, and maintaining rooftop solar energy equipment / facilities. These norms also

make it less likely for women to be considered, or qualified for, the types of jobs developed through rooftop solar energy projects. On the other hand, there is potential to create and strengthen women's livelihoods across rooftop solar energy value chains.

This gender assessment and action plan is prepared with the objective of integrating gender into this program of financing rooftop solar energy program. Integration is targeted through the following aspects of Gender equity:

- Employment and procurement by TCCL's rooftop solar energy loan clients
- Enhancing capacity to finance rooftop solar energy projects
- Enhancing skill availability and placement for operation and maintenance of rooftop solar energy projects

Gender equity in local procurement of services for development of Rooftop Solar projects

Construction, operation and maintenance provide several entrepreneurship opportunities or expanding existing enterprises, that can service needs of TCCL's loan clients to develop, operate and maintain rooftop solar energy generation. Men can often more easily access capital (e.g., by leveraging land title or other assets), compared to women who are more commonly involved in informal, small enterprises and without the land rights needed to serve as loan collateral.

In India, women-owned enterprises contribute 3.09 percent of industrial output and employ over 8 million people. Approximately, 78 percent of women enterprises belong to the services sector. Women entrepreneurship is largely skewed towards smaller sized firms, as almost 98 percent of women-owned businesses are micro-enterprises. Access to formal finance is a key barrier to the growth of women-owned businesses, leading to over 90 percent of finance requirements being met through informal sources. TCCL can encourage and track its rooftop solar energy loan clients, to engage women-owned or women-led enterprises for procuring services required to mainly operate and maintain their projects, specifically in residential locations.

Gender Assessment - employment to finance, develop, operate and maintain rooftop solar energy facilities

Need for capacity building to finance rooftop solar energy

There is a strong correlation between the gender composition of companies' customer base and the gender composition of their workforce across various industries. As women's workforce

participation rises, they will gain further purchasing power through increased lifetime disposable income. The proportion of business-to-consumer (B2C) and business-to-business (B2B) clients who are women is expected to rise. Tapping into the female talent pool is increasingly regarded as a prominent and promising area for workforce planning. Female talent is a key feature of future workforce strategy. Similarly, women's rising labour force participation and economic power as consumers is increasingly recognized as a key driver of change across several industry sectors and one that is highly correlated with expected employment growth—an unambiguously positive trend in a somewhat turbulent landscape of technological, demographic and socio-economic change.

While national cultures and policies shape women's participation in national workforces, sectoral cultures and practices also play a significant role. Today's leaders have inherited company and industry cultures in which women participate to varying degrees. Across all industries, women currently make up on average 33% of junior level staff, 24% of mid-level staff, 15% of senior level staff and 9% of CEOs. Having invested in women as they enter in junior positions, employers appear to frequently lose their investment by failing to retain talent up the ladder. The industries with the lowest junior level intake also expect more dramatic drop-offs along the talent pipeline, with low intake at the junior level translating to similar underperformance later on. The participation of women in line and staff roles highlights some of the additional barriers to progressing to top level positions. Women are under-represented in line roles in the Mobility, Information and Communication Technology, Energy and Basic and Infrastructure sectors, with line roles more likely to equip women with the skills and experience that would prepare them for senior positions.

Companies expect some improvement, spread unevenly across different industries. Workforce strategies employed to promote gender parity will be successful in retaining and promoting the majority of incoming female talent, against past experience. Companies are focusing primarily on progressing women through the pipeline to avoid losing already developed or developing talent. Few industries are targeting strong increases when it comes to hiring women into junior and entry level roles. Across all industries, companies reported that they found women harder to recruit, with the reported ease (or in this case, difficulty) of recruiting women directly proportional to the existing gender composition of the industry. Persistent gender wage gaps are reported across all industries, even in industries where female participation is comparatively high.

NABARD and TCCL can demonstrate leadership in deploying policies that can bring in better gender equity by addressing barriers to the same. NABARD and TCCL are committed to creating a safe and conducive work environment that enables employees to work without fear of prejudice, gender bias and sexual harassment. Accordingly, a policy has been framed with the intention of preventing Sexual Harassment at workplace, that includes prohibition and redressal of sexual harassment should it occur. The policy takes complete cognizance of the latest legislation by the Government of India “The Sexual Harassment at Workplace (Prevention, Prohibition and Redressal) Act 2013 and its notified rules whose primary objective is to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for the matters connected herewith or incidental thereto. Similarly, TCCL also adopts leave policies and other benefits to encourage employees take care of their changing family roles in the society.

Need for gender equity to construct, operate and maintain rooftop solar energy facilities

India seeks to produce 100GW of solar photovoltaic power by 2022, through rooftop (40GW) and large-scale (60GW) projects. The CEEWNRDC study projects that doing so would require 237,980 FTE jobs in rooftop solar and 58,697 in ground mounted solar. Combined jobs between ground mounted and solar is the greatest in the construction and commissioning phase.

In many areas, women can find work in the construction, operation or maintenance of rooftop solar energy facilities. Women may also find formal or informal (intermittent or contract) employment in this sector. To help both men and women seek employment opportunities in this sector, government of India is promoting development of skill development centers. While new investments in rooftop solar energy projects provides new employment opportunities, experience shows that men’s labor force participation sees increases first, particularly in traditionally male-dominated occupations (e.g., construction, transport), compared to employment for women. Women account for only 20-24% of total jobs in the renewable energy sector worldwide. While in India there is no specific data available, women’s participation in these employment opportunities is typically constrained by discriminatory gender norms and stereotypes about suitable employment for women. Women are also underrepresented in attainment of the advanced degrees and technical skills needed for energy employment at higher skill levels.

Gender Assessment in Skill availability for rooftop solar segment

Rooftop solar systems offer tremendous advantages such as lower transmission and distribution losses, lower investment amounts, lesser number of clearances, public participation and higher employment and entrepreneurship opportunities. One of the most critical component of aggressive rooftop solar deployment is the availability of highly skilled and qualified installers. It is estimated that India will need approximately 10,00,000 solar technicians by 2022 to meet its targets. National Certification Programme for Rooftop Solar Photovoltaic Installer is framed keeping this requirement in mind. This can not only train and certify rooftop solar photovoltaic technicians, but also open doors towards successful entrepreneurship in this segment. Typical skill sets required for a rooftop solar technician is:

- Understand the basics of electricity and solar energy,
- Survey a rooftop solar PV installation site,
- Understand all equipment related to the rooftop solar PV system,
- Design a rooftop solar PV system as per Customer's requirements as well as appropriate codes and standards,
- Prepare the necessary technical documents related to the design, installation and operation of the rooftop PV system,
- Install a rooftop solar PV system based on the relevant designs and drawings,
- Operate and maintain a rooftop solar PV system including identification and troubleshooting of faults,
- Ensure safety while installation and operation of the rooftop PV system,
- Undertake project management for installation of a rooftop solar PV system,
- Understand necessary formalities with authorities for applications, submissions, approvals, interconnections, inspections, certifications, commissioning, etc.,
- Prepare preliminary techno-commercial proposals for Customers, and
- Communicate professionally and act responsibly with Customers and Suppliers/ Sub-contractors.

Over the past few years, the number of women entering the job market has been consistently growing in India. An increasing number of women, especially from metro cities, wish to get back to their jobs after maternity leave. Career-centricity among women is at an all-time high. In rural areas too, vocational education initiatives are ensuring women can have a career of their choice.

However, there are a lot of challenges, such as literacy rate. According to 2011 Census, there is wide gender incongruence in literacy rate in India: 82.14% for men and 65.46% for women. Further, the 2015 McKinsey Global Institute report called 'The Power of Parity' highlighted a strong link between gender parity in society and gender equality at work. Gender disparity at work is a universal phenomenon. But the degree of disparity varies from region to region. According to this report, women are half the world's working-age population, but generate only 37% of the GDP. In India the share of regional output generated by women is only 17%.

There are many reasons for gender inequality in society and, along with other measures, it is imperative to take corrective steps to improve economic participation of women in a big way. Such a change cannot happen overnight. A lot of steps at different levels are necessary to bring about desired changes. While it is important to have proper policies in place to increase women's economic participation, it is also necessary to open up skill development opportunities for women in different sectors to make them job-ready.

One of the root causes for slower growth in women education is the attitude of parents towards their role in society, along with poverty. However, this is changing by the day. As compared to a decade ago, women participation in, say, organised manufacturing labour force has increased. Likewise, is the case with women's contribution in small-scale industries. Vocational training in the fields of stitching and other embroidery work has led to the creation of thousands of jobs for women.

Now, skill development initiatives are focusing more on young women in the age group of 16 to 20 years. This means a large group of women who are homemakers and who may be keen to enter the world of work get neglected. They can be brought into active workforce with appropriate skill training. Many women choose to be homemakers because of the responsibility of taking care of young children. But they cross that stage when children grow up and are relatively independent. At this stage, because they got married at a young age, they are still quite young, may be in the early thirties, and can easily start working. Their need to stay at home decreases substantially. However, at this stage, the confidence to start working is generally low; such women may also lack the skills that are needed in an ever-changing job-market. Depending upon their basic qualification, a variety of skill development courses of appropriate durations can be made available to make them job-ready or ready for self-employment.

Skill training programmes in rooftop solar energy sector in partnership with industries can serve as a model for companies interested in improving gender parity in workforce. Depending upon the need of the industry for workforce, and their skilling needs, it is possible to design and offer customized courses. In fact, the existing skills training courses can be offered or customized courses can be designed if companies decide to promote women's participation and recruit homemakers who are a bit older than the fresh students. It is possible to offer similar work integrated training programmes for them, and the gap between the skills needed and the skills available can be bridged to a large extent. For the companies, one of the advantages of recruiting a little older group of women is that they come with more maturity and life experiences, which may be helpful in job situations. They may also be able to concentrate better on their work since they are over with the critical period of child bearing and childcare. A judicious mix of youngsters along with homemakers in a batch can be beneficial.

The industry partnership with skills training institutes can go a long way in developing skilled manpower in general and in increasing women's economic participation in particular, if we use the right kind of approach to tackle the issue. TCCL can both directly through its CSR programs or encourage its loan clients to sponsor both men and women in such upcoming institutes that can provide training and placement of skills for construction and O&M of increasing rooftop solar energy facilities, to build better gender equity.

Gender Action Plan:

Gender gaps related to finances, training, employment and entrepreneurship need to be redressed.

Activities	Indicators and Targets	Timeline	Responsible organizations
<p>Impact: Increased number of rooftop solar energy related business enterprises managed by women and men</p> <p>Outcome: Improved access to rooftop solar energy finance by women and men</p> <p>Means of Verification: Gender disaggregated data against appropriate indicators to measure enhanced benefits to women from rooftop solar energy loans</p>			
<p>Output 1: Ensure local procurement of services by women led enterprises is enhanced by loan clients</p>			
<p>Strengthen gender equity in procurement of materials / services required for construction and operation & maintenance of rooftop solar energy facilities of loan clients</p>	<ul style="list-style-type: none"> • Statistics on procurement of materials / services by loan clients of rooftop solar energy, to be disaggregated by gender (with specific definitions of women led enterprises) • Aim for 50% of all procurement by loan clients for rooftop solar energy is from women led enterprises 	<p>At all points wherein loans are disbursed and monitored with social terms</p>	<p>TCCL & NABARD</p>
<p>Output 2: Ensure hiring and employment of women is enhanced by loan clients</p>			
<p>Strengthen gender equity in employment required for operation & maintenance of rooftop solar energy</p>	<ul style="list-style-type: none"> • Statistics on hiring and employment of staff by loan clients of rooftop solar energy, to be disaggregated by gender 	<p>At all points wherein loans are disbursed and</p>	<p>TCCL & NABARD</p>

Activities	Indicators and Targets	Timeline	Responsible organizations
	<ul style="list-style-type: none"> Aim for 50% of all O&M staff in loan clients of rooftop solar energy to be women 	monitored with social terms	
Output 3: Ensure capacity building on rooftop solar energy finance competencies is equally shared between genders			
Establish gender equity in talent identification and recruitment for rooftop solar energy financing	<ul style="list-style-type: none"> Statistics on deployment of professional competencies on Credit and Risk analysis on rooftop solar energy financing, to be disaggregated by gender Aim for 50% of all credit and risk analysis professionals to be women 	At all points wherein deployment of professional expertise is conducted	TCCL & NABARD
Output 4: Training and placement of skills for construction and O&M of rooftop solar energy facilities is equally shared between genders			
Establish gender equity in training and placement of skills required for construction, operation & maintenance of rooftop solar energy generation facilities	<ul style="list-style-type: none"> Statistics on training and placement of skills required for construction, operation & maintenance of rooftop solar energy generation facilities, to be disaggregated by gender Aim for 50% of all trained and placed professionals to be women 	At all points wherein training and placement of professionals at recognized skill centers for rooftop solar energy generation is sponsored by loan clients	TCCL & NABARD