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BUILDING RESILIENCE IN THE FACE OF CLIMATE CHANGE WITHIN TRADITIONAL RAIN-FED AGRICULTURAL AND PASTORAL SYSTEMS IN SUDAN

GENDER ASSESSMENT AND ACTION PLAN

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1. Introduction

This gender assessment aims to provide an overview of the gender situation in Sudan with a specific focus on building resilience within traditional rain fed agricultural and pastoral systems, identify gender issues that are relevant to the project, and to examine potential gender mainstreaming opportunities. The assessment was based upon available data from studies conducted by the Government of Sudan, donor agencies, and multilateral development banks. The direct beneficiaries will be approximately 211,773 people in 138 villages across 9 states who will benefit from subsistence farming, as well as an additional 2,571,853 people who are expected to benefit from the learning generated from this project.

The impacts of climate change are not gender-neutral. Women and men, as well as boys and girls, have specific knowledge of managing natural resources and thus identify different measures to adapt to and cope with changes in their natural environment. To understand the implications of the adverse effects of climate change on the different roles and responsibilities of men and women, and to identify their respective needs to address them, the project interventions will utilise gender-sensitive approaches, and strengthen women's participation in decision-making. Women contribute directly to preserving and managing forests that provide different services and resources contributing to human and animal food security, fuel and medicine, while men are predominantly responsible for extracting timber and non-timber forest products for commercial purposes (Aguilar et al., 2007). Women are also responsible for water and firewood collection and play an essential role in ensuring food security through food productions, food preparation, food storage, as well as sale of agricultural animal and forest products (Ibnouf, 2009). With political and economic factors such as conflicts and seasonal and permanent migration of men from rural to urban areas, women have also taken over farming responsibilities previously carried out by men (Care International, 2012). As such they are differently involved in the utilisation and management of all natural resources that the project interventions will target, i.e. water, livestock, soil and forests.

This gender analysis is presented as an approach, of how the project aims to give gender considerations in the preparation, implementation and monitoring and evaluation. This gender approach is in line with the GCF Gender policy and in line with Sudan's National Women Empowerment Strategy 2007 (GCF, 2014; MSWWCA, 2007). As the GCF is currently developing a gender template, this approach builds on the GCF Gender and Climate Change Toolkit (GCF, unknown) to ensure gender considerations are in line with the Fund's standards and requirements. Further, in developing and implementing the gender approach the project will draw from, and build on good practices and lessons learned from Sudan's past and ongoing experiences in developing and implementing climate change adaptation projects and programmes, most notably the National Adaptation Programme of Action (HCENR, 2007), the National Adaptation Plan (HCENR, 2016), and the Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems (HCENR, 2014).

The proposal has three interlinked project outputs:

1. Resilience of food production systems and food insecure communities improved in the face of climate change in Sudan.
2. Improved access of water for human, livestock and irrigation to sustain livelihoods in the face of climatic risks.
3. Strengthened capacities and knowledge of institutions and communities on climate change resilience and adaption.

In incorporating gender consideration, the project will contribute to achieving the five objectives as laid out in the GCF's gender policy, namely:

- Ensure that by adopting a gender-sensitive approach, the Fund will achieve greater and more sustainable climate change results, outcomes and impacts, in an efficient manner;
- Ensure that women and men will equally benefit from activities supported by the Fund;
- Address assessed potential project/programme risks on women and men associated with adaptation and mitigation activities financed by the Fund;
- Contribute to reducing the gender gap of climate change-induced social, economic and environmental vulnerabilities; and
- Build women and men's resilience to climate change (GCF, 2014).
- Lessons learned and recommendations from past assessments and studies on gender equality undertaken by the Government of Sudan, UN agencies, development partners, civil society organizations and academic organizations, and information available from programs and projects currently being implemented;
- Stakeholder consultation, recognizing that detailed community consultations on particular activities are expected to be carried out in the implementation phases of the project; and
- Integrating gender and other vulnerability considerations to the proposed indicators, targets and activities, and identifying opportunities for greater leadership and participation in decision making by these particular groups in Sudan.

2. Resilience of the subsistence farmer communities and their response to the increasing threat of climate variability in Sudan

This project aims to ensure that gender-considerations are integrated in the design, implementation, and monitoring and evaluation of the project. As such, this approach outlines how the project aims to ensure gender-considerations by:

- Defining objectives, impacts and activities that incorporate gender dimensions;
- Identifying main challenges and barriers faced by women and men that have been further exacerbated by climate change;
- Ensuring that the activities identified will include actions to mainstream gender in climate change mitigation and adaptation; and
- Building the capacity and raise awareness of institutions to address gender issues that are related to climate change (GCF, unknown).

In Sudan, vulnerability in disasters is most often identified around women. The risk of climate change magnifies women's relative poverty. 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. Sudanese women are also very often underrepresented in decision-making in resource management and other issues on how best to manage the climate threat. When a disaster strikes, men and women are treated in the same manner. Any assistance in the form of disaster preparedness trainings provided from the Government or NGOs do not have a specific gender aspect.

In order to build resilience and adaptive capacity of the most vulnerable communities, the project is aiming to achieve the following key objectives:

- Build adaptive capacity by introducing drought-resistant varieties of crops, access to water for small scale irrigation and domestic using and promoting climate resilient animal production practices;

- Enhance overall resilience of vulnerable communities as first responders of climate change-induced hazards in ways that strengthen government actions intended to increase local resilience to non-climatic risks (e.g., conflicts, lack of infrastructure, overgrazing, soil nutrient depletion);
- Integrate specific proposed climate change adaptation interventions that prove successful into national and state policy development planning frameworks,
- Develop and implement a monitoring, knowledge management and communication strategy in support of wide adoption and upscaling of proposed interventions

3. Gender inequality and social inclusion in Sudan

Since 2011, the economy of Sudan has been recovering due to the division of South Sudan and the loss of nearly 75% of their oil resources. Gender inequalities in Sudan exists and due to years of conflicts and security circumstances, women are often disproportionately affected. One of the prevalent factors for human development in Sudan is violence against women and girls and the weak institutional framework addressing this issue.¹

The Government of Sudan is committed to gender equality through its National Policy for the Empowerment of Women (2007), formulated by the Ministry of Social Welfare, Women and Child. The policy includes the following six areas where the advancement of women and their capabilities will be prioritized:²

- Health and Environment;
- Education Policies;
- Economic Empowerment;
- Human Rights and Legal Knowledge;
- Political Participation and Decision Making; and
- Field of Peace and Conflict Resolutions

3.1. Gender Inequality Indices

Through the years, several indices have developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).³ GII is a composite measure that shows inequality in achievement between women and men in reproductive health, empowerment and the labour market while with a measures 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.

Sudan has a GII of 0.628 (2013) and ranks 140 out of 145 countries assessed. The GDI value of 2013 is unknown.⁴

The Organization for Economic Cooperation and Development (OECD) developed the Social Institutions and Gender Index (SIGI), a composite index that scores countries (i.e., 0 to 1) 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

¹ <http://africa.unwomen.org/en/where-we-are/eastern-and-southern-africa/sudan>

² <https://webapps01.un.org/nvp/indpolicy.action?id=1621>

³ United Nations Development Programme. Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

⁴ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>

women in social institutions across 160 countries. The 2014 SIGI value for Sudan is 0.555 suggesting that discrimination against women is very high.⁵

3.2. Poverty

In Sudan, 46.5% of the population lives below the poverty line. There are significant gender inequalities in poverty levels and in the incidence of poverty between urban and rural areas. Due to inefficient development plans and strategies, low public expenditures on basic services, erosion of land and natural resources, the level of poverty in Sudan has been amplified.⁶ The Government of Sudan has recognized the importance of pro-poor spending, defined as “spending that benefits the poor more than the non poor” (Ministry of Finance and National Economy).⁷

In rural areas, water and firewood fetching are the responsibility of women and girls. With the impacts of climate change further exacerbating, thereby increasing erratic rainfall, drought and desertification, the amount of time women and girls spend collecting water and firewood is likely to increase (HCENR, 2012). Efforts need to be directed in reducing time poverty and strategies for reducing women's workload, including a more systematic focus on reducing women's workload (HCENR, 2016).

3.3. Health

The overall health system in Sudan does not have clear policies to address issues such as equitable access to quality health care of all population segments. Access to basic medicines has been estimated in the range of 30% to 40%. While efforts have been made to reduce the overall maternal mortality ratio (MMR), the Sudan Household Health Survey (SHHS) in 2016 showed an MMR of 1107 out of 100,000 births.⁸ A National Health Strategy has been developed and adopted in Sudan in order to resolve some of the challenges. The strategy contains the policies outlined in Table 3-1.

3.4. Education

There are substantial differences in the level of education between men and women in Sudan. The Gender Parity Index, used for measuring the relative access to education of males and females was 0.8 as of 2006. The index is calculated by determining the population of official school age for each level of education and by dividing the number of students enrolled in each class by the official school age and multiplying the result by 100. In 2010, the female population with at least a secondary education was 12.8%, in comparison to 18.2% for males.

Completion levels of primary, secondary, and upper secondary education in 2010 among population aged 3-5 years above primary graduation age, in percentage is presented in Table 3-2. It is clear that primary completion rate is the lowest amongst women in the rural areas, having the poorest wealth status. Lower secondary education completion rate is similarly low for females and individuals living in rural areas, and part of the poorest and second wealth quintile. Upper secondary completion rate shows to be the lowest amongst the three levels of education. Males have a slightly higher completion rate and the gap between poverty levels of urban and rural residence is significantly high. The poorest and the second wealth quintile are partaking the lowest completion rate.

⁵ OECD. Social Institutions and Gender Index 2014. Country Profiles <http://www.genderindex.org/country/sudan>

⁶[http://www.sd.undp.org/content/dam/sudan/docs/UNDP_Sudan_CPAP\(2013-2016%20%2025%20July\)_Signed-1.pdf](http://www.sd.undp.org/content/dam/sudan/docs/UNDP_Sudan_CPAP(2013-2016%20%2025%20July)_Signed-1.pdf)

⁷The Republic of Sudan. National Population Council (NPC/GS) Ministry of Welfare and Social Security. Sudan Millennium Development Goals Progress Report 2010

⁸ *idem*

Table 3-1: Key goals and policies of Sudan's National Health Strategy (Source: Federal Ministry of Health, Republic of Sudan)

Goal	Policies
1	<ul style="list-style-type: none"> • National Nutrition Policy and Strategic Plan (http://www.fmoh.gov.sd/English/Health-policy/doc/Nutrition%20Policy_final.pdf) • Basic Nutrition Package (http://ghiqc.usaid.gov/aidstar/docs/650-09-21/annex_f.pdf) • National guidelines for Management of Acute Severe Malnutrition • Nutrition Emergency Package • Food Fortification Strategy
4	<ul style="list-style-type: none"> • Child health policy • EPI Mid Year Plan • EPI Five years Strategic Plan • National plan for Child Mortality reduction
5	<ul style="list-style-type: none"> • NRHP, RH 5 Year strategy (2006-2010) • upgrading midwifery training: Adoption of Skilled Birth Attendants care provision at the community - Declaration on MPS (Provision of village midwives • Strengthen the community involvement) • National plan for MM reduction
6	<ul style="list-style-type: none"> • National HIV/AIDS Policy (http://www.fmoh.gov.sd/English/Health-policy/doc/National%20Policy%20HIV.pdf) • 5 year HIV/AIDS control strategic plan • RBM strategy • TB-DOTS strategy • National Malaria Management Guidelines
8	<ul style="list-style-type: none"> • Community Based Initiatives (CBI) strategy • Partnership for health 5 years plan

3.5. Political participation

The Comprehensive Peace Agreement (CPA) recommends a quota of 25% for women at all levels of government in Sudan. However, no specific recommendation of how women would benefit from the 25% quota had lead to the criticism of the CPA being "gender blind".⁹

- [...] a minimum quota of 25 per cent for the representation of women in the civil service, legislative and executive at all levels of government, as provided for by the SPLM/A constitution. One senior male member of the SPLM/A delegation laughed and asked me where the women would be found to fill these positions. The 25 per cent quota was eventually accepted in the larger group, where there were at least three women, but then the all-male SPLM/A drafting committee reduced this figure to 5 per cent. The SPLM/A Chairman raised this to 10 per cent as a compromise. Later on we learned that it had been dropped altogether when government negotiators refused a quota for women in power sharing on the grounds that they had not been fighting women.⁴⁹

In Article 32 of the Interim National Constitution (INC) of the Republic of Sudan (2005), it has been stated that women's rights shall be promoted, however, no specific quota of women's representation in the politics has been allocated.¹⁰ In the National Elections Act (NEA) of 2008, the women's quota

⁹ The Politics of Women's Representation in Sudan: Debating Women's Rights in Islam from the Elites to the Grassroots. CMI Report, 2010. Available here: <https://www.cmi.no/publications/file/3643-the-politics-of-womens-representation-in-sudan.pdf>

¹⁰ *ibid*

Table 3-2: Completion levels (%) of primary, secondary, and upper secondary education in 2010 (Source: MICS 2010)

Education level	Sex		Residence		Wealth quintile				
	Male	Female	Urban	Rural	Poorest	Second	Middle	Fourth	Richest
Primary	73.5	63.9	86.2	59.4	35.7	44.5	65.5	86.2	96.5
Lower secondary	59.4	51	74.4	43.7	19.2	26	47.2	71.2	90.1
Upper secondary	35	30.2	51	22.3	6.1	7.7	18.3	43.7	72.4

has been specified as 25% of the total number of any Legislative Assembly and nominated by a political party.¹¹

3.6. Labour Force Participation

The Fifth Sudan Population and Housing Census (2008) estimated the total labour force as 52.4%, out of which 72.2% were allocated to men and 31.3% to women. The estimated labour participation rate was 10.08% for the total population, out of which 6.08% for women and 15% for men.¹² Women are employed in the agriculture sector (49.48%), the service sector (22.45%), industry (2.27%) and other activities (25.8%). Women engaged in agriculture are mainly involved in the traditional subsistence sector (78% - 90%), with only 10% being involved in the modern sector.¹³ Men constitute the majority of total employment in all sectors (67.67%), in comparison with women (32.33%). As of 2008, only 10% of all women were high skilled and 24% were employed in white collar while 76% in blue collar professions. Overall, women are more likely to be unemployed than men, they often take care of children and the housework leaving them with less opportunities for professional development and decision-making processes.

3.7. Access to Resources

In Sudan, women lack the same legal rights as men to own land assets;] however, women and men have the same legal rights and secure access to non-land assets although this does not apply to all groups of women (OECD, 2019).

In the rural areas, women contribute significantly to the household economy and food security with differences among regions. For instance, they participate in household farming by contributing to crops cultivation in back yard farms (*Jubrakas*), which provide households with early income and food prior to the harvest of field crops (HCENR, 2014; 2016). Achieving food and nutritional security by enhancing food productivity, especially in times of scarcity is essential for women in Sudan.

Project interventions targeted at diversifying the sources of communities' incomes increases their resilience to the adverse effects of climate change and contributes to women's economic empowerment. In many rural areas, project interventions have encouraged women to also engage in non-farm enterprises like traditional food processing, petty trading, poultry rearing, and traditional apiculture etc., where most of their earnings are dedicated to family well-being (HCENR, 2016a;b).

Various events such as recurrent droughts, budget cuts, declining developmental investment in rural areas, as well as civil conflicts in some targeted areas in the Darfur and Kordofan area, as well as

¹¹ National Election Act 2008, Article 3

¹² Labour Market and Unemployment in Sudan, United Nations University - MERIT

¹³ Karshenas, Massoud (2001). "Agriculture and Economic Development in sub-Saharan Africa and Asia". Cambridge Journal of Economics. 25 (3): 315–342. doi:10.1093/cje/25.3.315.

migration of men to cities in search of better employment opportunities, has resulted into a relatively large number of women-headed households in the targeted states (MEFPD, 2013). As such, the project will pay a special attention to women and women-headed households as beneficiaries by ensuring access to resources, production inputs, financing opportunities as well as improved agricultural technologies (HCENR, 2016a;b).

3.8. Gender Based Violence

Sudan is not a signatory to the Convention on the Elimination of All form of Discrimination against Women (CEDAW).¹⁴ There is a legal framework in place to protect women from some, but not all forms of violence including intimate partner violence, rape or sexual harassment (OECD, 2019). It is telling that 34 percent of women aged 15–49 years consider a husband to be justified in hitting or beating his wife for at least one of the specified reasons: if his wife burns food, argues with him, goes out without telling him, neglects the children, or refuses sexual relations (OECD, 2019). Further, the example of Female Genital Mutilation (FGM) points to possible challenges at community level in relation to socio-cultural norms and practices and attitudes and how they affect women’s and indeed men’s lives and the lives of their families.

While there is a legal framework in place to protect women and girls from FGM, some customary, religious and traditional laws or practices encourage the practice even though formal law takes precedence (OECD, 2019). In reality, 40.9 percent of women aged 15-49 years who have heard of FGM think the practice should continue. In practice, 86.6 percent of women aged 15-49 years who have undergone FGM (OECD, 2019). Similar discrepancies exist around marriage and inheritance, etc.

While it is difficult to establish the current GBV prevalence, women experience unequal divorce rights, limited rights to inheritance and access to land, resources and finances. Only 33.1 per cent of women in the total number of people aged 15 years and above who have an account at a financial institution (by themselves or together with someone else) (OECD, 2019). Further, 86.6 percent of women aged 15-49 years who have undergone female genital mutilation (FGM) (OECD, 2019).

In Article 149 of the Criminal Act of 1991, rape is refined as “In Sudan’s Criminal Act of 1991, rape is defined within Article 149 as “sexual intercourse by way of adultery or homosexuality with any person without consent.” The law conflates rape with infidelity and leads to severe punishments for victims of gender-based violence.⁵²

Gender-based violence is often related to armed conflicts in Sudan and happens in all areas of the country. In 2012, in a peaceful demonstration event called “Sudan’s own Arab Spring”, women and youth from all ages demanded political change. Gender-based violence is a stigmatised topic in Sudan, but in recent years more and more often women testify about assaults at the hands of government security forces. In the capital of Sudan, women refugees or internally displaced women are often engaged in the informal labour market increasing their vulnerability and exposure to violence.

The victims of sexual violence are not able to access medical services, psychosocial support, access to justice and protection. They are also often faced with challenges in relation to access to employment, education and livelihoods, as responses from the national government are lacking.¹⁵ International and regional presence providing responses against gender-based violence have also been limited in

¹⁴ <http://africa.unwomen.org/en/where-we-are/eastern-and-southern-africa/sudan#sthash.PpKkoA2k.dpuf>

¹⁵ Nobel Women’s Initiative, *War on Women: Time for Action to End Sexual Violence in Conflict*, May 2011, <http://www.nobelwomensinitiative.org/wp->

Sudan.¹⁶

3.9. Horticulture Gardens

In the past, the establishment of community-managed horticulture gardens (*Jubrakas*) have proved to provide high potential for subsistence farming and economic empowerment, particularly for women. Using small-scale irrigation facilities and providing communities with vegetable seeds, agricultural hand tools, and training on horticulture farming has in recent and ongoing adaptation projects resulted in:

- Improved nutritional status of households, particularly women and children, and increased income by selling produce in local markets
- Enhanced access to water for human and livestock consumption
- Strengthened local saving system (*sandug*) and enhanced women's economic capabilities; and
- Increased women's participation in income generating activities resulting in enhanced small investments

3.10. Livelihood Diversification Strategies

Livelihood diversification strategies such as introducing sheep and goat improvement programmes for food security and income generation has been one of the successful adaptation strategies utilized in past and ongoing adaptation interventions from which many communities, particularly women, have greatly benefited. Introducing disease control and vaccination, as well as the utilization of crop residues for feed has the potential to further strengthen these activities. Other livelihood diversification strategies are poultry raising and tailoring, the latter of which can be supported through dedicated trainings (HCENR, 2012).

3.11. Rainwater Harvesting

Rainwater harvesting technologies increase agricultural production and reduce environmental degradation by reducing the pressure on ground water resources. Rainwater harvesting, together with agricultural production, enhances food security and provides income-generating opportunities for both women and men, and revenues for further strategic investments. Some of the best practices from the NAPA project interventions demonstrate how the introduction of rainwater harvesting techniques enabled families to purchase animal-drawn carts for transporting produce thereby increasing their income opportunities (HCENR, 2012).

3.12. Energy Alternatives

One of the most successful project interventions of current and past climate change projects in Sudan was the introduction of energy alternatives that resulted in significant environmental and social benefits. Providing energy alternatives to reduce firewood cutting and charcoal making with the effect of increasing tree cover and reducing land degradation and soil erosion has additional benefits for communities, particularly women. Past project interventions, like the NAPA, provided stoves and gas cylinders through a revolving fund system with the effect of reducing women's workload to collect firewood. As a result, many women in the targeted communities were able to use that saved time to engage in community activities and committees, or in income-generating activities.

content/archive/stories/Conference_Ottawa_Women_Forging_a_New_Security/ war-on-women-web.pdf, p. 12-14.

¹⁶<http://nobelwomensinitiative.org/wp-content/uploads/2013/12/Survivors-Speak-Out-Sudan-web.pdf?ref=218>

3.13. Capacity building and Trainings, Political Participation and Decision-making

Capacity building, trainings and ensuring balanced political participation and decision-making of women and men are important component of the project. Based on previous experience capacity-building activities including improving women's and men's ability to use adaptation technologies and financial services are essential in ensuring the sustainability of the project interventions (HCENR, 2014). Building on good practices, ensuring the representation of women in technical committees has been beneficial in enhancing their political participation and decision-making opportunities. In addition, ensuring balanced representation within state-level committees and task forces as well as within the project management team can contribute to ensuring the integration of gender-considerations in all parts of the project management, including in the monitoring and evaluation.

4. Mechanisms to address gender inequality in Sudan - legal and administrative framework

The legal framework in Sudan derives from British common law and Islamic law (*Shari'a*) which does not grant women same equal rights to men. In the MENA region, Sudan is one of the two countries, alongside with Iran that has not ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Bill of Rights has been established to promote gender equality, however there is no framework to protect women from gender-based violence. Commitments have been made to a number of international and regional gender equality conventions. These include the following:

- International Covenant on Economic, Social and Cultural Rights (1986)
- International Covenant on Civil and Political Rights (1986)
- Convention on the Rights of the Child (1990)
- Amendment to article 43 (2) of the Convention on the Rights of the Child (2000)
- Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict (2005)
- Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography (2004)
- Convention on the Rights of Persons with Disabilities (2009)

State legislature in Sudan disregards women's rights. However, a number of laws provide for certain entitlements that women partake. Section 92 of the Muslim Family Law (1991) states that if a wife refuses to obey her husband, her right to be provided with a living ceases to be valid. The Muslim Family Law also states that a marriage is valid and conditioned on the existence of a guardian who would conclude the contract for the woman. Section 51 of the law also provides for women's rights in relation to her husband.¹⁷

Chapter three of the Public Transportation, as part of the Public Order Act (1996) provides for ten seats in public transportation within the state specifically reserved for women as well as 25% of the total seats in public transportation. A clear separation between the role of men and women in Sudan has been identified in chapter six of Miscellaneous Provisions of the Public Order Act, such as a clear separation of men and women queuing and no dancing between men and women, nor dancing of women in front of men.¹⁸

¹⁷ <http://www.equalitynow.org/content/muslim-personal-law-act-sudan-1991>

¹⁸ http://www.pclrs.com/Khartoum_Public_Order_Act_1998.pdf

5. Gender and social inclusion in the context of climate resilience among subsistence farmer communities in Sudan

Climate change is a multidimensional problem that is a priority on the international development agenda. While climate change is affecting people generally, these conditions can render certain groups in the community particularly vulnerable. As projections indicate that climate change will cause less secure means of subsistence, more vulnerability to poverty and hunger, exacerbation of social inequalities (including gender inequalities) and more environmental degradation, it is likely that the poorest and most vulnerable groups in a society will be most affected.¹⁹

Emerging climatic trends such as more frequent droughts, declined precipitation, higher temperatures, more intense sandstorms have led to the degradation of natural resources and have led to the increased exposure of farmer communities and pastoralists heavily reliant on rain-fed agriculture to higher climate risk in Sudan. Based on the NAPA and NAP processes the project proposal has identified five strategic components for effective adaptation to climate change in Sudan's rural areas (HCENR, 2016c), including:

- **Improved seed varieties:** Early maturing, stable and drought tolerance varieties of millet, sorghum, groundnut, sesame and cowpeas. Here, activities will focus on the implementation of crops to improve food security and increase small-scale farmers' resilience.
- **Control strategies:** Improved crop cultivation practices such as spacing, seed priming and micro-dosing, or intercropping. Here, project interventions will focus on the implementation of range and livestock adaptation options including rangeland restocking and improving livestock health and nutrition technologies.
- **Management practices:** Integrated Water Management practices such as water harvesting techniques at micro-and macro-levels, small scale irrigation, implementing new or improving existing irrigation systems contour bands and ridges. Here, activities will focus on introducing and adopting integrated water resource management practices at different scales, including community, local, national and state-levels; protection of water sources, water harvesting techniques, or protection of large catchments areas.
- **Quality assurance/enhancement:** Harvest and post-harvest packages to improve crop quality and reduce losses; and
- **Animal husbandry practices:** Livestock health and nutrition (diseases control (vaccination), livestock mineral supplementation, improved diet quality, strategic supplementary feeding, feed resource improvement and others.)

Within each of the five strategic components, a set of adaptation options are offered that have proven to be effective to reduce vulnerabilities to climate change in the Sudan context, and contribute to increasing resilience in Sudan's rural areas. In further designing the project interventions of considerations will be given on how these interventions benefit women and men.

6. Stakeholder engagement for this analysis

Stakeholder consultations took place on the period 10 July to 20 August 2016 in Sudan. Four workshops and field missions for field level consultations with stakeholders and state authorities in the targeted states were organized by UNDP and HCENR. Target location of stakeholder consultations include West and South Kordofan (EL-Fula/ West Kordofan); Kassala and Red Sea (Port Sudan/ Red

¹⁹ UNDP *Resource Guide on Gender and Climate Change*, 2009

Sea); Northern (Dongola Northern State) and West, Central and East Darfur(Khartoum). The analysis drew substantially on documentation from existing climate and disaster resilience projects in Sudan.

The gender analysis, through stakeholder engagement and consultation enabled the following:

- Assessment of the activities that respond to the continuing threat of extreme weather on farmer communities and pastoralists, including gender roles and responsibilities, decision making, and resource use and management raised by the project;
- Initial engagement, development and input into the design of the 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 help incorporate the Gender and Social Inclusion Plan into the implementation of the project.

An additional annex to this proposal shows the full results from the stakeholder engagement, which details the specific issues and difficulties that women face in responding to the increasing threat of climate change and how this is related to women's security.

Specific issues raised during the stakeholder consultations include the following:

- The need for animal and agricultural community societies in West and South Kordofan State
- The need for micro-finance window in West Kordofan State and Khartoum State
- The need for savings and credit groups in South Kodofan State and Red Sea state
- The need for women saving and credit groups and revolving finds Microfinance institutions in Kassala state
- Opportunity for farmers and pastoralist committees in the Northern State
- The need for Professional Producer Associations in East Darfur State
- Integrated solution for Agriculture Sector Programme in West Darfur State

7. Gender analysis and Recommendations

This proposal identifies and integrates interventions to encourage gender responsive and transformative results. As women and men are both key players in their communities, it is integral to the success of the project that both are equitably engaged throughout the project and that both benefit also. Further, 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 Government's approach of addressing climate threats faced by farmers in Sudanese communities, in order to target the most vulnerable. This may include youth, people living with disabilities, etc.

The gender analysis undertaken at the onset and design of this project will inform the gender mainstreaming of the project.

7.1. Analysis: Implications of the findings

This gender analysis acts as an entry point for addressing gender equality and women's empowerment in the project through mainstreaming approaches. This means ensuring all areas of the project work towards strengthening gender equality and provide opportunities for rural women along with men to adopt adaptation options that reduce their vulnerability. Doing so will bolster the climate resilience of rural households and communities in the project areas and even beyond through shared learning, exchanges, awareness-raising/advocacy campaigns, and other means.

The project seeks to align with national gender policies and programmes as well as international commitments under the Paris Agreement, CEDAW, SDGs, etc. Building climate change resilience means addressing structural (socio-cultural norms in particular) and relational/power issues along with technical issues. While there is a national policy in place to support women, implementation and accountability face challenges due to a lack of resources and capacity to translate into action the policy itself.

One of the challenges directly relevant to women's (and men's lives) and the lives of their families is addressing the socio-cultural norms and practices and how these translate into local level (customary) laws, customs and practices, and social relations/power dynamics between women and men (and among women themselves along age, ethnicity, socioeconomic, and other lines and also among men). As a new study (IUCN, 2020) shows, there is enough evidence now to show that climate change is increasing gender-based violence which calls for action at all levels. Environmental degradation stresses ecosystems, leading to scarcity and stress for people; increases in environmental pressure leads to gender-based violence (IUCN, 2020). The project will address GBV issues through integrating dialogues around resilience visioning at household, group, and community levels, and also through engaging men (and supporting them as change agents) in Farmer Field Schools and other project activities including trainings, awareness-raising campaigns, microfinance, and income-generating activities.

The project recognizes the linkages of climate change to the health and resilience of men and women and the potentially different impacts therein. Literacy and education also play a strong role in determining resilience and how men and women can access and adopt adaptation measures that are proposed by the government and other stakeholders. To this end, leadership skills incorporated into women's group (production and microfinance) activities will contribute to addressing some of the constraints women face through illiteracy and lack of education. It will provide them with some of the leadership/business skills they need to run successful tree nurseries, poultry production enterprises, and other income-generating activities.

7.1.1. Goal of the Gender Action Plan (GAP)

The project will increase women's access to, and benefits from, adaptation options (e.g. climate smart agriculture approaches, micro-financing); rather it will do so through a baseline exercise to understand the potentially different costs (e.g. labour, time, finances, reallocating time from school attendance, increased/decreased social capital, increased/decreased gender-based violence, etc.) and benefits of adaptation options proposed and the potential outcomes for women and men and their families. The project will mitigate any costs or identified negative impacts and leverage opportunities for increasing benefits. It is important to increase/improve women's access to information (her agency), but there is also the need to address structural inequalities (including socio-cultural norms) and inequitable social relations and power inequalities (within households/communities) to strengthen household and community resilience. These can be addressed through this mainstreamed approach across Farmer Field Schools, production activities, training, and income-generating activities. It is expected that taking this approach will contribute to strengthening household and community resilience overall.

7.1.2. Expected changes through the GAP

The GAP approaches undertaken will stimulate positive behaviour change of women and men and transforming their lives through doing so. Behaviour change will lead to greater gender equality, which is central to establishing/sustaining resilient households and communities. The project will incorporate Household Methodologies (HHM) approaches (e.g. Gender Action Learning Systems or GALS) which represent a good return on investment (ROI) because, by securing behavioural change at the heart of daily living in the household, farmers' groups, Farmer Field Schools, and the wider community, they deepen the impact and enhance the sustainability of conventional development initiatives and adoption of adaptation practices. HHMs are also very adaptable and can be

mainstreamed into a range of development interventions and implemented in different cultural and social contexts.

7.1.3. Gender approach

The project will mainstream gender equality/women's empowerment issues throughout all relevant activities including training, Farmer Field Schools, village extension, and processes around rangeland management and water resources management. It will also incorporate women-focused activities including establishing tree nurseries and women's sustainable farms. Farmer Field Schools, women-focused activities (gardens, nurseries, poultry, microfinance, etc., and other key interventions will mainstream skills and dialogues for men and women that are informed by Household Methodology (GALS) tools/approaches focusing on gender equality which have been championed in Sudan, e.g. by IFAD.²⁰ This kind of approach will also engage men and boys as change agents around issues of gender, adaptation, and resilience. The Household Methodology tools can be adapted for visioning resilience strategies with men and women.

Undertaking a baseline at the inception of the project will help refine the projects' understanding of the women and men who will participate from the perspective of understanding the numbers and prevalence of female and male-headed households in project areas and the household structure. A baseline exercise will be conducted early on in the project to establish a reference point for future qualitative and quantitative monitoring surveys that will be designed and administered in ways that ensure provisions for collecting, analyzing, and reporting on disaggregated data (e.g. by sex/age, etc.). These surveys will be undertaken to verify Expected Result A2.3 and selected indicators for Outputs 1 and 2 (See sections E.3 and E.5 of the full proposal). The baseline exercise will use funds allocated to the relevant outputs and help to establish the potentially different costs, benefits, and perceptions of adaptation options proposed and the potential outcomes for women and men and their families

To support gender mainstreaming throughout the project, the project will include a Gender Officer who will be supported by the strengthened staff/partner capacity throughout the nine states. The Gender Officer will work with staff/partners (including agricultural extension workers) in the nine states to develop their capacity to mainstream gender equality and women's empowerment approaches into their work with communities and provide technical support to them in this endeavour. This may include training and/or identifying suitable trainers to train staff (through ToTs for the states) to mainstream gender approaches into their work with communities. This will include adapting gender mainstreaming approaches that have been used elsewhere in Sudan including, for example, Household Methodologies (GALS) (used by IFAD; see Box 7-1) for use in Farmer Field Schools to strengthen activities and ensure women as well as men in a household enjoy the benefits of their efforts and to ensure suitable adaptation options are adopted.

The project will build these activities into the existing budget through mainstreaming gender approaches and training staff/partners (including extension workers) to integrate these gender approaches into their work (see Budget below). Output 3 focuses on training/capacity development and will incorporate gender training (including Household methodologies/GALS) into other trainings and as stand-alone as necessary. Actual use of household methodologies/GALS will fall under interventions such as Farmer Field Schools and elsewhere in terms of community/group dialogues where needed. Farmer Field Schools are highlighted as a clear starting point for integrating this kind of approach.

The project design will:

²⁰ <https://www.ifad.org/documents/38714170/40253742/CSW+HHM+good+practice+FINAL.pdf/18f2a214-813a-4db8-aff2-83e623e8fbad>

- Follow from the baseline and M&E gender-differentiated roles, responsibilities, roles, decision-making, access/control of resources, and opportunities and constraints experienced by men and women in managing extreme weather, the benefits (or negative impacts) experienced by men and women through project activities;
- Focus on differing conservation incentives and experiences of women and men;
- Use the data and information collected at baseline and through the project to identify gender gaps and devote expertise/resources to implementing strategies to close the gaps, and monitor the results of implementation;
- Include all stakeholders involved in the project to develop awareness raising and incorporate trainings aimed at drawing attention to the linkages between gender equality and of climate resilience and adaptation;
- Adjust advocacy and awareness-raising to reflect the different experiences, needs, and challenges faced by women and men.;
- Incorporate community discussions and dialogues (including adapted Household Methodology/Gender Action Learning Systems or GALS tools/ into Farmer Field Schools and other relevant fora (e.g. village extension)) to strengthen household and community resilience.

7.1.4. Monitoring and evaluation

To ensure the continuous consideration of gender in the implementation of the project, gender must be also integrated in the monitoring and evaluation of the project by developing a monitoring and evaluation strategy which incorporates the indicators focused on disaggregated data and which analyses the gender-related impacts of the project. In developing the M&E strategy, gender should be integrated in the baseline data collection, through incorporating gender-sensitive indicators and targets (based on those outlined in this plan and others as identified at project inception), as well as impacts.

In developing the M&E strategy, consideration will also be given to promoting best practices and lessons learned from the different interventions and approaches and tools used, and how to communicate these at different levels in line with the information and knowledge sharing strategy as outlined in the project concept note (HCENR, 2016c). At the community level, this involves, amongst others, community mobilisation and field-based demonstration of gender and climate change adaptation practices, including the need and benefits for incorporating gender-considerations into climate change adaptation projects. At the institutional level, this includes building capacities and raising awareness of the need for incorporating gender into climate change interventions of local

Box 7-1: Overview of IFAD's Household methodologies

IFAD notes in their **Household Methodologies**

How	To	Do	Toolkit
https://www.ifad.org/documents/38714170/40198517/How+To+Do+Household+Methodologies.pdf/564875ac-af4b-4409-9271-0c90ff464b3b			
notes, "Household methodologies (HHMs) can be implemented through groups. The group acts as the entry point for reaching individual households with the visioning and action planning tools. Group members learn the basic skills in visioning and planning and then replicate the process at home, with the support of the group facilitator and peers (these can be community-based staff/partners/extension workers working with the Farmer Field Schools). Peer sharing triggers a multiplier effect among a wider audience and creates a supportive environment for behaviour change. The group-based approach can also be used to develop a group vision and action plan; this can advance the interests of the group as a whole and also help members realize their individual household visions. Embedding HHMs in existing local groups can make the process more sustainable and provides an opportunity to deliver HHMs at scale." Further, "Group meetings are typically held either weekly, bimonthly or monthly." These can be adjusted depending on the approach to be integrated in the Farmer Field Schools			

ministries and institutions. Finally, at the policy level, this involves integrating and mainstreaming gender and climate change adaptation measures in strategic and annual plans.

The analysis identified the differences between men and women within at-risk populations. In order to monitor and evaluate progress of the project. Table 7-1 provides an overview of measurable indicators for the project's quantitative and qualitative outcomes.

Table 7-1: Overview of type of outcomes and indicators

Type of outcome	Indicator
Quantitative	<ul style="list-style-type: none"> • #/% of beneficiary households by sex of head of household • Improvements in health and well-being by sex/age (this could incorporate key nutrition indicators for example which could be measured at baseline at end of project) ; • Women's livelihoods strengthened (quantitatively could be measured by <ul style="list-style-type: none"> ✓ change in income generated over time (to be checked qualitatively for who is benefiting from income increase); ✓ change in labour/time allocation to specific tasks (e.g. water collection); ✓ Rural women's enterprise groups (e.g. nurseries) strengthened financially (can be measured by change in produce marketed, income generated, etc.) (To be checked again qualitatively against who benefits from the income change if positive)
Qualitative	<ul style="list-style-type: none"> • Link income-generating activities identified by women with projects and initiatives active in the targeted project areas in Sudan. • Time-saving for women as a result of lower hours in labour required for agricultural and water management practices prior to the implementation of the project; • Contribution to improved self-esteem and empowerment of women in the community; • Expanded involvement in public and project decision-making as a result of initiation of women into active participation in income generating activities; • Support for training and educational activities which may include activities related to climate change, agriculture, leadership, business, finance, entrepreneurship and decision-making, thereby enabling empowerment and involvement (or increased involvement) of women to participate with confidence in community meetings;

7.1.5. Budget

The approach to implementing the gender action plan is to mainstream the costs associated with all actions into ongoing activities as many of the actions proposed in the gender action plan are mainstreamed into overall activities and sub-activities to avoid side-lining or marginalizing gender issues. Some activities are specific to women and are also included in the overall proposal (i.e., establish integrated women sustainable agriculture farms with leadership program.

8. Gender and Social Action Plan and Budget

This Gender and Social Inclusion plan provides entry points for gender-responsive and socially inclusive actions to be taken under the activity areas of the project. In addition, specific indicators and targets are also proposed to measure and track progress. These can be incorporated into the detailed M&E plan which will be developed at the start of implementation.

Recommendation: Overall, the project should consider gender and social inclusion implications including the following:

- Consider the differing needs of women and men experiencing climate change impacts within traditional rain fed agricultural and pastoral systems;
- Analyse the gendered division of labour (e.g. gender-differentiated roles, responsibilities, and needs); gender-differentiated access to, and control over environmental resources and the goods and services that they provide; access to financial services and markets; and gendered decision-making dynamics in households and groups.
- Use sex and age disaggregated data to facilitate improved understanding of the gender and social inequality gaps that exist to inform the development and implementation of action plans that are adequately resourced (financial, technical expertise) to address these gaps; monitor the results of implementation; and ensure accountability of institutions and individuals for gender equality outcomes;
- Ensure equitable participation by women and men at both macro and micro level climate resilience processes;
- Promote advocacy and awareness that contribute to addressing gender inequalities that exacerbate the impacts of climate change and weaken resilience at household and community level. Project strategies should address these inequalities including gender-based violence (GBV) overall and following disasters;
- Include all stakeholders involved in the project to develop awareness raising / training aimed at drawing attention to the implication of climate resilience adaptation and gender equality;
- Identify specific strategies to include or target women in particular for financial inclusion interventions;
- Undertake community discussions and dialogue in relation to gender and social inclusion in climate and disaster resilience (e.g. through adapting household methodologies/GALS approaches in Farmer Field schools and elsewhere as relevant).

In addition to the recommendations listed above, it will be important to ensure that the gender and social inclusion aspects of the project are tailored specifically for a Sudanese context. In order to do this, the following approaches are also strongly recommended:

- Build on the projects, structures and initiatives being rolled out by the Government of Sudan 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;
- Link income-generating/financial inclusion activities identified by women and men with projects and initiatives active in the nine targeted areas

Objective	Sub-activities	Indicator and Target	Timeline	Means of Verification	Responsible Institutions	Allocated Budget
Output 1: Resilience of food production systems and food insecure communities improved in the face of climate change in Sudan, benefiting at least 200,000 households and farmers and pastoralists with 35 % women						
Activity 1.1: Introduction of drought-resilient seed varieties of sorghum, millet, groundnut, and wheat that have demonstrated greater yields (and from a gender perspective also other qualities such as storage, taste, marketability) in the face of climatic changes through village procurement systems	1.1.1 Develop and implement participatory gender-responsive identification/testing/training programme for drought tolerant and early maturing certified seed distribution. This should consider the potential gender-differentiated needs and interests in terms of seed selection. While productivity is one criterion, women may also choose other criteria such as taste (for household consumption), marketability, storage).	<ul style="list-style-type: none"> Indicator: Number/% of farmers participating in seed testing, feedback, training processes (disaggregated by sex, age group). Target: 35 % women Surveys/FGD data (e.g. baselines, M&E) disaggregated by sex (and age group if possible) 	Year 2 – 5	<ul style="list-style-type: none"> Baseline and other surveys undertaken (and collecting and reporting data disaggregated by sex/age) to monitor progress. Focus Group Discussion outputs from testing with women, men (separate focus groups for women/men) Women's group reports/FGD outputs FFS reports Agricultural extension database entries Adoption reports Project reports Knowledge sharing documents Knowledge-sharing fora 	<ul style="list-style-type: none"> State ministries of Agriculture and Natural Resources (MANR) Ministry of Irrigation and Water Resources (MIWR) 	Costs to be mainstreamed in overall budget
	1.1.2 Ensure women as well as men participate in the replication of drought tolerant and early maturing seeds across neighbouring communities. This may mean addressing issues of women's mobility (social-cultural norms) and working with men in households/ groups/community leaders (see also GALS under Activity 1.2)	<ul style="list-style-type: none"> Indicator: Number/% of farmers (disaggregated by sex) benefitting from adoption of varieties Target: 35% women 	Year 2 – 5	<ul style="list-style-type: none"> Baseline and other surveys undertaken (and collecting and reporting data disaggregated by sex/age) to monitor progress. Focus Group Discussion outputs from testing with women, men (separate focus groups for women/men) Women's group reports/FGD outputs FFS reports Agricultural extension database entries Adoption reports Project reports Knowledge sharing documents Knowledge-sharing fora 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

	1.1.3 Ensure women as well as men participate in seed multiplication farms. This will require understanding the role of women in seed multiplication, identifying peer women seed multipliers (if any) as role models for other women in communities, and addressing socio-cultural norms that may limit women's participation.	<ul style="list-style-type: none"> Indicator: Number/% of farmers (disaggregated by sex) benefitting from participation in multiplication farm activities. Target: 35% women 	Year 2 – 5	<ul style="list-style-type: none"> Baseline and other surveys undertaken (and collecting and reporting data disaggregated by sex/age) to monitor progress. Focus Group Discussion outputs from testing with women, men (separate focus groups for women/men) Women's group reports/FGD outputs FFS reports Agricultural extension database entries Adoption reports Project reports Knowledge sharing documents Knowledge-sharing fora 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	1.1.4 Develop gender-responsive knowledge-sharing of seed production, handling & exchange.	<ul style="list-style-type: none"> Indicator: Number/% of farmers (disaggregated by sex) benefitting from participation in seed procurement processes. Target: 35% women 	Year 2 – 5	<ul style="list-style-type: none"> Baseline and other surveys undertaken (and collecting and reporting data disaggregated by sex/age) to monitor progress. Focus Group Discussion outputs from testing with women, men (separate focus groups for women/men) Women's group reports/FGD outputs FFS reports Agricultural extension database entries Adoption reports Project reports Knowledge sharing documents Knowledge-sharing fora 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	1.1.5 Develop/strengthen / deliver with women and men micro-finance programme/model using development and delivery of gender-responsive training	<ul style="list-style-type: none"> Indicator: Participants benefiting from participation in micro-finance model (disaggregated by 	Year 2 – 5	<ul style="list-style-type: none"> Baseline and other surveys undertaken (and collecting and reporting data disaggregated by sex/age) to monitor progress. Focus Group Discussion outputs from testing with women, men 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

	materials on launching, accessing and operating rural micro-finance systems.	sex/age group).Target: 35% women		(separate focus groups for women/men) <ul style="list-style-type: none"> • Women's group reports/FGD outputs • FFS reports • Agricultural extension database entries • Adoption reports • Project reports • Knowledge sharing documents • Knowledge-sharing fora 		
Activity 1.2: Introduce gender-responsive sustainable practices in agricultural production at the community level through introducing gender-responsive management of water resources, women's farms, home gardens, and demonstration plots.	1.2.1 Establish integrated women sustainable agriculture farms with leadership program (i.e. seed priming; fertilizer micro-dosing; intercropping, etc.)	<ul style="list-style-type: none"> • Indicator 1: #/% integrated women sustainable agriculture farms per village showcasing the new technologies and practices established • Target: 100 sustainable farms • Indicator2: #/% of women participants acquire leadership skills • Target:35 % women 	Year 2-5	<ul style="list-style-type: none"> • Women's group reports • Knowledge sharing /communications documents • FFS reports • FGD outputs • Project reports • Training reports 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget
	1.2.2 Establish sustainable women-centered home gardens program	<ul style="list-style-type: none"> • Indicator 1: #/% of women-centred home gardens established and sustained (for 2 years at least). • Target: 100% of home gardens • Indicator 2: #/% of women participating in home gardens benefiting from home garden program. (Nb. Women to participatorily discuss 	Year 2-5	<ul style="list-style-type: none"> • Women's group reports • Knowledge sharing /communications documents • FFS reports • FGD outputs • Project reports • Training reports 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget

		<p>indicators – what do they consider benefits?)</p> <ul style="list-style-type: none"> • Target: 100% women 				
	1.2.3 Establish gender-responsive sustainable practices (e.g. Wadi) training that also provides for the equitable participation of women and men.	<ul style="list-style-type: none"> • Indicator: #/% of farmers participating in sustainable practices training (disaggregated by sex/age group) • Target: 35% women 	Year 2-5	<ul style="list-style-type: none"> • Women's group reports • Knowledge sharing /communications documents • FFS reports • FGD outputs • Project reports • Training reports 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget
	1.2.4 Develop and implement training manual and trainings in a gender-responsive manner. This should include ensuring women's as well as men's concerns and interests are included in materials as well as including a module that is not only focused on technical aspects but also socio-cultural aspects of water management	<ul style="list-style-type: none"> • Indicator: All training materials and trainings are gender-responsive (i.e.. consider men's and women's concerns, interests, challenges and socio-cultural aspects of water management). • Target: 100 relevant materials 	Year 2-5	<ul style="list-style-type: none"> • Women's group reports • Knowledge sharing /communications documents • FFS reports • FGD outputs • Project reports • Training reports 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget
	1.2.5 Establish gender-responsive Farmer Field Schools that foster equitable participation and benefits by women and men. This will include mainstreaming household methodology (e.g. GALS approach)/ engaging men approaches into Farmer Field School curriculum/dialogues to facilitate women and men developing and working together on common visions of sustainable climate smart agriculture/ resilience for their households/communities.	<ul style="list-style-type: none"> • Indicator: Number/% of farmers participating in gender-responsive Farmer Field Schools (disaggregated by sex, age group) • Target: 35 % women • Indicator: Number/% of farmers participating in gender dialogues (e.g., HH/GALS). • Target 100% participants (all men, all women) 	Year 2-5	<ul style="list-style-type: none"> • Women's group reports • Knowledge sharing /communications documents • FFS reports • FGD outputs • Project reports • Training reports 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget

Activity 1.3: Introduction of rangeland management practices that reduce pastoral stress on communal lands through demonstration farms and rangeland rehabilitation techniques in ways that consider men's and women's needs and constraints as well as knowledge and experience.	1.3.1 In developing and testing technical guideline for climate adaptive rangeland management, ensure participation of women and men to identify key issues and experiences as well as needs and challenges. These will help inform more relevant technical approaches. Note: women and men may have different knowledge/experiences of their surroundings, the ecosystem, biodiversity, e.g. plants (and uses), soils, etc.	<ul style="list-style-type: none"> Indicator: Number/% of women project beneficiaries contributing to development and testing of technical guidelines Target 35% women 	Year 1-5	<ul style="list-style-type: none"> Baseline and other project monitoring reports Group reports Women's focus group discussion output Technical guideline for climate adaptive rangeland management Training reports Project reports Knowledge sharing /communication pieces 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	1.3.2 Consult women as well as men in establishing communal rangeland reserves (e.g. issues of access, use, safety, etc.)	<ul style="list-style-type: none"> Indicator 1: Number/% of women beneficiaries consulted in establishment of communal reserves. Target: 35% women Indicator 2: Women's as well as men's concerns/ interests/needs incorporated into communal rangeland reserves. Target: 35% women 	Year 1-5	<ul style="list-style-type: none"> Baseline and other project monitoring reports Group reports Women's focus group discussion output Technical guideline for climate adaptive rangeland management Training reports Project reports Knowledge sharing /communication pieces 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
Activity 1.4: Establish shelterbelts/ agroforestry in a gender-responsive manner to improve productivity and reduce land and environmental	1.4.1 Establish village women's groups to manage nursery/leadership program with multipurpose seedlings.	<ul style="list-style-type: none"> Indicator: Number of women's nursery/leadership groups established Target: 30 small-scale tree nurseries (500,000 seedlings) 	Year 2-5	<ul style="list-style-type: none"> Baseline & monitoring reports Women's group reports Training reports Project reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

degradation. This involves increasing the access to water by installing communal water infrastructure and considers men's and women's needs/constraints.	1.4.3 Establish gender-responsive, climate adaptive community-based afforestation/ forest management) that fosters the equitable participation and active voice of men and women and mainstream gender (language and content). Community-based afforestation activities can incorporate HH methodology/GALS approaches to ensure community visioning and dialogues consider men's and women's interests, needs, and challenges.	<ul style="list-style-type: none"> Indicator: Number/% of beneficiaries participating (disaggregated by sex, age group) in community-based afforestation. Target: 35% women	Year 2-5	<ul style="list-style-type: none"> Baseline & monitoring reports Women's group reports Training reports Project reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
Objective	Sub-activity	Indicator	Timeline	Means of verification	Responsible Institution	Allocated Budget
Output 2: Improved access of water for human, livestock and irrigation to sustain livelihoods in the face of climatic risks in the nine targeted states benefiting at least 200,000 households						
Activity 2.1: Construct/rehabilitate water yards and drilling of shallow/borehole for drinking water for human and livestock and small-scale irrigation in targeted locations. This involves increasing the access to water by installing communal water infrastructure.	2.1.1 Ensure participation of women as well as men in identifying water-related problems based on their use, access.	<ul style="list-style-type: none"> Indicator: Number/% of participants (disaggregated by sex/age group) in rehabilitation process. Target: 35% women	Year 1-5	<ul style="list-style-type: none"> Baseline & monitoring reports Group reports Focus group discussions Training reports Project reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	2.1.3 Establish gender-responsive trainings of village water committees that foster equitable participation and learning of women as well as men and that incorporate women's water-related concerns and needs (including e.g. accessing water safely, water usages, etc.).	<ul style="list-style-type: none"> Indicator1: Number/% of participants (disaggregated by sex/age group) in training opportunities (e.g. solar pumps, etc.) Target: 35% women Indicator 2: Evidence of gender inclusion analysis in training materials developed for 	Year 1-5	<ul style="list-style-type: none"> Baseline & monitoring reports Group reports Focus group discussions Training reports Project reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

		village water committees <ul style="list-style-type: none"> • Target: 100% relevant training materials 				
Activity 2.2: Establish sand storage dams in support of small scale irrigation in targeted localities and villages taking into consideration the different concerns of women and men. This involves the blocking of seasonal wadis for groundwater storage and exploitation.	2.2.1 Ensure participation of women as well as men in identifying water-related problems based on their use, access	<ul style="list-style-type: none"> • Indicator: Number/% of participants (disaggregated by sex/age group) in community discussions of water storage dam constructions. • Target: 35% women 	Year 1-3	<ul style="list-style-type: none"> • Group reports • Focus group discussions • Project reports • Knowledge sharing documents 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget
	2.2.3 Identify and train women and men for operation and maintenance of sand water-storage dam and solar pumps for water management scheme.	<ul style="list-style-type: none"> • Indicator 1: Number/% of participants (disaggregated by sex/age group) in training opportunities (e.g. solar pumps, etc.) • Target: 35% women • Indicator 2: Evidence of gender considerations (language, content) in training materials developed for sand storage dams • Target: 100% of relevant training materials • Indicator 3: Women working as solar pump managers • Target: 35 % women 	Year 1-3	<ul style="list-style-type: none"> • Training reports • Focus group discussions • Project reports • Knowledge sharing documents 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget

Activity 2.3: Construct improved Hafirs and/or upgrading of existing ones, excavating natural pond and cistern to increase availability of drinking water taking into consideration the different concerns of women and men	2.3.1 Establish gender-responsive development/upgrading of Hafirs/excavation of ponds and cisterns using a process that considers roles, responsibilities, use, access/control of women/men in the design and implementation).	<ul style="list-style-type: none"> Indicator: Number of participants (disaggregated by sex/age group) in the process of Haffir development/upgrading programme Target: 35 % women 	Year 1-3	<ul style="list-style-type: none"> Group reports Focus group discussions Project reports Training reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	2.3.3 Identify and train women and men for operation and maintenance of for water management scheme (e.g. solar pumps).	<ul style="list-style-type: none"> Indicator 1: Number/% of participants (disaggregated by sex/age group) in training opportunities Target: 35% women Indicator 2: Evidence of gender considerations (language, content) in training materials Target: 100% of relevant training materials 	Year 1-3	<ul style="list-style-type: none"> Group reports Focus group discussions Project reports Training reports Knowledge sharing documents 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
Objective	Sub-activity	Indicator	Timeline	Means of verification	Responsible Institution	Allocated Budget
Output 3: Strengthened capacities and knowledge of institutions and communities on climate change resilience and adaptation						
Activity 3.1: Train extension officers and other government stakeholders on climate change resilience and adaption related issues that incorporates policy, technical and (social/cultural issues including gender/social inclusion). This involves the development of raining materials	3.1.1 Mainstream gender across all training for all staff/partners at all levels including extension worker, project staff/ management (from needs assessments to development/adaptation of materials; training of extension staff, government agencies; development of guidelines on adaptation measures; and the development of a best	<ul style="list-style-type: none"> Indicator: Assessment report incorporates language and findings that consider gender (including sex-disaggregated data where needed). Target: 1 assessment report (or 1 per state if needed) 	Year 1-4	<ul style="list-style-type: none"> Assessment report Other project reports Training manuals/ materials Training workshops pre- and posttraining assessments Post training follow-up capacity assessments. 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

tailored to local circumstances and delivered through a series of workshops.	practices manual on climate adaptation measures. Training for extension workers will incorporate a module on household methodologies (Gender Action Learning Systems or GALS) to strengthen community dialogues and help households and groups strengthen resilience by addressing social constraints/challenges.					
	3.1.2 Mainstream gender across all training for all staff/partners at all levels including extension worker, project staff/ management (from needs assessments to development/adaptation of materials; training of extension staff, government agencies; development of guidelines on adaptation measures; and the development of a best practices manual on climate adaptation measures. Training for extension workers will incorporate a module on household methodologies (Gender Action Learning Systems or GALS) to strengthen community dialogues and help households and groups strengthen resilience by addressing social constraints/challenges.	<ul style="list-style-type: none"> Indicator: Training manuals/materials consider gender throughout (language and content including GALS tools/approaches, gender-responsive capacity and vulnerability assessment, etc.). (Note: there are many good gender-responsive adaptation-related tools now). Target: All training materials 	Year 1-4	<ul style="list-style-type: none"> Assessment report Other project reports Training manuals/ materials Training workshops pre- and post-training assessments Post training follow-up capacity assessments. 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

	<p>3.1.3 Mainstream gender across all training for all staff/partners at all levels including extension worker, project staff/ management (from needs assessments to development/adaptation of materials; training of extension staff, government agencies; development of guidelines on adaptation measures; and the development of a best practices manual on climate adaptation measures. Training for extension workers will incorporate a module on household methodologies (Gender Action Learning Systems or GALS) to strengthen community dialogues and help households and groups strengthen resilience by addressing social constraints/challenges</p>	<ul style="list-style-type: none"> Indicator: Extension workers improved capacity to address gender (including Gender Action Learning Systems or GALS) and climate change issues into their climate and drylands work with communities (to be defined qualitatively) Target: 100% of extension workers participating in project areas. 	Year 1-4	<ul style="list-style-type: none"> Assessment report Other project reports Training manuals/ materials Training workshops pre- and post-training assessments Post training follow-up capacity assessments. 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget
	<p>3.1.4 Mainstream gender across all training for all staff/partners at all levels including extension worker, project staff/ management (from needs assessments to development/adaptation of materials; training of extension staff, government agencies; development of guidelines on adaptation measures; and the development of a best practices manual on climate</p>	<ul style="list-style-type: none"> Indicator: Guideline on adaptation measures for upscaling consider gender throughout (language and content including GALS tools/approaches, gender-responsive capacity and vulnerability assessment, etc.). (Note: there are many good gender-responsive 	Year 1-4	<ul style="list-style-type: none"> Assessment report Other project reports Training manuals/ materials Training workshops pre- and post-training assessments Post training follow-up capacity assessments. 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

	adaptation measures. Training for extension workers will incorporate a module on household methodologies (Gender Action Learning Systems or GALS) to strengthen community dialogues and help households and groups strengthen resilience by addressing social constraints/challenges.	adaptation-related tools now). • Target: 100% materials				
	3.1.5 Mainstream gender across all training for all staff/partners at all levels including extension worker, project staff/ management (from needs assessments to development/adaptation of materials; training of extension staff, government agencies; development of guidelines on adaptation measures; and the development of a best practices manual on climate adaptation measures. Training for extension workers will incorporate a module on household methodologies (Gender Action Learning Systems or GALS) to strengthen community dialogues and help households and groups strengthen resilience by addressing social constraints/challenges.	<ul style="list-style-type: none"> Indicator: Manual on best practices in adaptation considers gender throughout (e.g. language, content, perspectives, experiences). Target: 100% materials 	Year 1-4	<ul style="list-style-type: none"> Assessment report Other project reports Training manuals/ materials Training workshops pre- and post-training assessments Post training follow-up capacity assessments. 	<ul style="list-style-type: none"> MANR MIWR 	Costs to be mainstreamed in overall budget

<p>Activity 3.2: Build capacity of women and men beneficiaries for coping with climate change risks and local operation & maintenance of project interventions. This involves a series of seminars and workshops to raise awareness among village leadership councils about gender-responsive, sustainable climate change coping strategies.</p>	<p>3.2.1 Mainstream gender (including gender-responsive tools which focus on building resilience, e.g. GALS visioning/ decision-making tools) into climate resilience training for village extension networks and village development committees.</p>	<ul style="list-style-type: none"> Indicator: Gender mainstreamed (language, content including GALS visioning tools) throughout training materials Target: All training materials for village extension networks and village development committees. 	<p>Year 1 – 4</p>	<ul style="list-style-type: none"> Training materials Training reports Project reports Knowledge-sharing/ communication documents Awareness campaigns (posters, radio programmes, ads, outreach messages) Project reports Knowledge sharing materials 	<ul style="list-style-type: none"> MANR MIWR 	<p>Costs to be mainstreamed in overall budget</p>
	<p>3.2.2 Mainstream gender (including gender-responsive tools which focus on building resilience, e.g. GALS visioning/ decision-making tools) into climate resilience training for village extension networks and village development committees.</p>	<ul style="list-style-type: none"> Indicator: Gender mainstreamed (language, content including GALS visioning tools) throughout training materials Target: All training materials for village extension networks and village development committees. 	<p>Year 2 onwards</p>	<ul style="list-style-type: none"> Training materials Training reports Project reports Knowledge-sharing/ communication documents Awareness campaigns (posters, radio programmes, ads, outreach messages) Project reports Knowledge sharing materials 	<ul style="list-style-type: none"> MANR MIWR 	<p>Costs to be mainstreamed in overall budget</p>
	<p>3.2.3 Develop gender-responsive awareness raising campaigns on building climate resilience (e.g. this may include considering different types of media, methods to address women, men; language; focus, etc.)</p>	<ul style="list-style-type: none"> Indicator: Awareness-raising campaigns mainstream gender (language, content) throughout (including attention to gender-based violence (GBV) links to resilience). Target: All awareness-raising campaigns. 	<p>Year 2 onwards</p>	<ul style="list-style-type: none"> Training materials Training reports Project reports Knowledge-sharing/ communication documents Awareness campaigns (posters, radio programmes, ads, outreach messages) Project reports Knowledge sharing materials 	<ul style="list-style-type: none"> MANR MIWR 	<p>Costs to be mainstreamed in overall budget</p>

	<p>3.2.3 Mainstream gender into awareness-raising campaigns on building resilience to climate change with women's and men's participation to develop effective messaging around resilience that is gender-responsive and highlights the socio-cultural dimensions that weakens/strengthen resilience.</p>	<ul style="list-style-type: none"> • Indicator: Awareness-raising campaigns mainstream gender (language, content) throughout (including attention to gender-based violence (GBV) links to resilience). • Target: All awareness-raising campaigns. 	Year 2 onwards	<ul style="list-style-type: none"> • Training materials • Training reports • Project reports • Knowledge-sharing/communication documents • Awareness campaigns (posters, radio programmes, ads, outreach messages) • Project reports • Knowledge sharing materials 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget
	<p>3.2.4 Facilitate women's participation in community and extension staff exchanges across localities. This may benefit from linking with the household methodologies/GALS approaches under the FFS to address issues around social norms that may limit women's mobility and participation in such exchanges.</p>	<ul style="list-style-type: none"> ▪ Indicator 1: #/% of women extension workers participating in exchanges • Target: 35 % • Indicator 2: #/% of women community members participating in exchanges. • Target: 35% 	Year 2 onwards	<ul style="list-style-type: none"> • Training materials • Training reports • Project reports • Knowledge-sharing/communication documents • Awareness campaigns (posters, radio programmes, ads, outreach messages) • Project reports • Knowledge sharing materials 	<ul style="list-style-type: none"> • MANR • MIWR 	Costs to be mainstreamed in overall budget

9. Demographic information on Darfur States, Kordofan States, Eastern States and Nile States

The location and number of households (i.e., beneficiaries) have been developed on the basis on a series of consultative workshops held in areas of rural Sudan. The proposed project aims to improve the resilience against climate change of 674,466 households distributed throughout the targeted localities. The duration of the effort is 5 years, with activities sequenced to maximize sharing of lessons learned from the implementation location across the targeted areas. A breakdown of direct and indirect beneficiaries per state, locality, and village cluster is provided in Table 1-14. Roughly half of all beneficiaries of the project are women.

Region	State		Locality		Villages	Direct beneficiaries		Indirect beneficiaries		All beneficiaries	
	#	Name	#	Name		HHs	Population	HHs	Population	HHs	Population
Darfur States	1	West Darfur State	1	Genana	4	1,629	10,934	536	3,601	2,165	14,535
			2	Krenik	1	1,200	8,400	1,724	12,065	2,924	20,465
			Subtotal		5	2,829	19,334	2,260	15,666	5,089	35,000
	2	Central Darfur State	3	Zalingi	9	3,065	18,388	40,023	240,112	43,088	258,500
			4	Azoom	4	4,662	27,972	2,731	16,388	7,393	44,360
			Subtotal		13	7,727	46,360	42,754	256,500	50,481	302,860
	3	East Darfur State	5	ELdain	3	22,100	110,500	5,329	26,645	27,429	137,145
			6	Firdous	2	16,400	82,000	40,049	200,247	56,449	282,247
			7	Asalia	5	9,200	46,000	39,090	195,452	48,290	241,452
			Subtotal		10	47,700	238,500	84,468	422,344	132,168	660,844
Kordofan States	4	West Kordofan State	8	Asalam	9	688	5,219	15,456	117,243	16,144	122,462
			9	Al Nohoud	9	649	3,894	37,184	223,106	37,833	227,000
			10	Alsunut	10	4,346	29,353	20,084	135,647	24,430	165,000
			Subtotal		28	5,683	38,466	72,724	475,996	78,407	514,462
	5	South Kordofan State	11	El Goz	12	3,000	15,000	20,778	103,889	23,778	118,889
			12	Dilling	12	7,350	36,750	35,207	176,035	42,557	212,785
Eastern States	6	Kassala State	Subtotal		24	10,350	51,750	55,985	279,924	66,335	331,674
			13	Kassala	6	30,000	180,000	19,755	118,529	49,755	298,529
			14	Telkuk	5	17,708	106,248	28,122	168,730	45,830	274,978
			15	Rural Nhr	5	26,500	132,500	882	4,411	27,382	136,911
	Subtotal		16	74,208	418,748	48,759	291,670	122,967	710,418		
	7	Red Sea State	16	Agig	6	7,000	42,000	10,500	63,000	17,500	105,000
			17	Dordaib/Haya	3	30,000	180,000	20,000	120,000	50,000	300,000
			18	Guneb Olib	6	15,000	90,000	20,000	120,000	35,000	210,000
Subtotal			15	52,000	312,000	50,500	303,000	102,500	615,000		
Nile States	8	Northern State	19	Dongala	7	1,729	8,645	28,303	141,516	30,032	150,161
			20	Marawi	7	4,600	23,000	26,946	134,729	31,546	157,729
			21	AlDabaha	4	2,600	13,000	27,109	135,545	29,709	148,545
			Subtotal		18	8,929	44,645	82,358	411,790	91,287	456,435
	9	Khartoum State	22	Rural	5	1,115	5,575	22,885	114,425	24,000	120,000
			23	Rural Sharg	4	1,232	6,160	0	0	1,232	6,160
Subtotal		9	2,347	11,735	22,885	114,425	25,232	126,160			
GRAND TOTAL					138	211,773	1,181,538	462,693	2,571,315	674,466	3,752,853

10. Annex A: Bibliography

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