

**Building Regional Resilience through Strengthened
Meteorological, Hydrological and Climate Services
in the Indian Ocean Commission Member Countries
(Hydromet Project)**

Annex 7: Gender Assessment & Action Plan

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Abbreviations and Acronyms

AFD	Agence Française du Développement
AU	African Union
AUC	African Union Commission
CEDAW	Convention on the Elimination of All Forms of Violence Against Women
COI/IOC	Commission de l’Océan Indien / Indian Ocean Commission
CS	Climate Information Services
CVI	Climate Vulnerability Index
DIE	Deutsches Institute für Entwicklungspolitik
DRR	Disaster Risk Reduction
EWS	Early Warning System/s
FHH	Female-headed Households
GBV	Gender-based Violence
GCF	Green Climate Fund
GDI	Gender Development Index
GFDRR	Global Facility for Disaster Risk Reduction and Recovery
GGGI	Global Gender Gap Index
GII	Global Inequality Index
GNI	Gross National Income
HDI	Human Development Index
ICT	Information Communication Technology
IFRC	International Federation of Red Cross and Red Crescent Societies
IPV	Intimate Partner Violence
IUCN	International Union for the Conservation of Nature
LDC	Least Developed Country/ies
MHH	Male-headed Households
MPI	Multidimensional Poverty Index
NMHS	National Meteorological and Hydrological Services
RCCC	Regional Climate Change Centre
RCSS	Regional Climate Services Strategy
OECD	Organization for Economic Cooperation and Development
OPHI	Oxford Poverty and Human Development Initiative
SADC	Southern African Development Community
SDG	Sustainable Development Goals
SIDS	Small Island Developing States
SIGI	Social Institutions and Gender Index
SMS	Short Messaging Services
SWIO RAFI	Southwest Indian Ocean Island Risk Assessment and Financing Initiative
UIP	Regional User Interface Platform
UNDESA	United Nations Department of Economics and Social Affairs
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention Climate Change
UNODC	United Nations Office on Drugs and Crime
UN-OHRLS	Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries, and Small Island Developing States
VAW	Violence Against Women
WEF	World Economic Forum
WHO	World Health Organization
WMO	World Meteorological Organization

1 Introduction

This Gender Assessment and Action Plan has been prepared to assist the design of a Green Climate Fund (GCF) funding proposal by Agence Française de Développement (AFD) and Indian Ocean Commission (IOC), titled: ***Building Regional Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission (IOC) Member Countries (Hydromet)***.

This project aims to bolster climate resilience and adaptive capacities among communities by developing national hydro-meteorological services, strengthening regional cooperation and climate knowledge sharing, and with an overall focus on improving and scaling up climate information services (CS) delivery and early warning systems (EWS) in the IOC countries. These countries have been identified as ‘climate hotspots’ - vulnerable to climate risks and impacts due to greater exposure to coastal erosion, natural hazards, sea-level rise and saline intrusion, temperature variability, to cite a few factors. This is compounded by the following¹: remoteness and deprivation from the benefits of scale, low income and assets, small domestic markets and heavy dependence on a few external markets, high volatility of economic growth, fragile natural environments, and socioeconomic as well as gendered vulnerabilities.

With **three components** (1: capacity building, institutional development, regional cooperation, public-private engagement); 2: high-quality climate-related data, improved multi-hazard impact-based forecasts and EWSs, and climate risk assessments; and, 3: enhanced use of climate services for climate change adaptation, and improved capabilities in implementation a people-centred MH-IBF-EWS for DRR), the proposed project can reduce, towards greater gender time poverty in the four countries by:

- Mainstreaming gender-responsive approaches for the design of CS products, hydro-meteorological systems, and EWS;
- Promoting gender balance through the technical and maintenance capacity-building activities as well as institutional development targeted for hydro-meteorological networks, equipment and systems;
- Establishing gender-aware policy frameworks to inform collaboration between key sectors and national/regional hydro-meteorological services; and
- Pioneering gender mainstreaming analyses and praxis regarding hydro-meteorological systems, EWS and CS in the Indian Ocean region.

A kaleidoscope of overlapping cultural, economic, social and political roles form gender relations in the Comoros, Madagascar, Mauritius and Seychelles. Given the expanse of the region and the unique markers of Comorian, Malagasy, Mauritian and Seychellois societies, these roles have multiple facets, broadly reflecting the:

¹ UN-OHRLS – Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries, and Small Island Developing States (2015). *Small Island Developing States in Numbers: Climate Change Edition 2015*. Report. Accessed 16 July 2019. Available at: https://sustainabledevelopment.un.org/content/documents/2189SIDS-IN-NUMBERS-CLIMATE-CHANGE-EDITION_2015.pdf

- **Geographical and geopolitical specificity of the region:** Comoros² and Madagascar³ are identified as Least Developed Countries or LDCs – UN designated countries for aid, preferential market access, and special technical assistance due to low income (calculated by a three-year average of Gross National Income or GNI), human assets and, economic vulnerability. Further, Mauritius and Seychelles along with Comoros are also classified as Small Islands Developing States or SIDS, which are a distinct group of developing island countries facing specific social, economic and environmental vulnerabilities. SIDS were recognized as having special status both for their environment and development at the Earth Summit, held in Rio de Janeiro, Brazil in 1992.
- **Traditional and faith-based norms within intraregional societies of the four countries:** the IOC covers a vast oceanic and land area, which despite a shared climatic and environmental system in the region reflect diversity among cultures, communities and customs. Seychelles, among the four island nations, has been distinctively a matrilineal society with greater access to both public and household expenditure and decision-making for women. On the other hand, Comoros, Madagascar and Mauritius have been traditionally patrilineal societies with varying amounts of decision-making accorded to women in the public and private sphere.
- **Gender gaps in economic roles and political representation:** the data collated from the four countries, explored in detail – see Section 3, reveal the different baselines in the IOC countries.

At the outset, the project recognises that the lack of a gender-responsive approach to address the above baseline (see Section 3 for details), particularly stemming from:

- Supposed ‘common sense’ notions that climate services are gender-neutral⁴;
- Side-lining of gender needs or ethnic vulnerabilities in adaptation design, resilience capacity-building and mitigation services⁵; and
- Lack or scant allocation of financial means, gender budgets and dedicated resources towards mainstreaming gender action

will limit the potential, inclusiveness and success of the project goals in the Indian Ocean islands.

Without gender analysis and mainstreaming in IOC Hydromet, the benefits of increased support and access to climate services, in tandem with awareness-raising and capacity-building, may accrue to better-off households or more mainstream groups that are able to capitalise on new

² UNDESA – United Nations Department of Economics and Social Affairs (2018). *LDC Country Profile: Comoros*. Brief Report. Accessed 1 August 2019. Available at: https://www.un.org/development/desa/dpad/wpcontent/uploads/sites/45/LDC_Profile_Comoros.pdf

³ UNDESA (2018). *LDC Country Profile: Comoros*. Brief Report. Accessed 1 August 2019. Available at: https://www.un.org/development/desa/dpad/wpcontent/uploads/sites/45/LDC_Profile_Madagascar.pdf

⁴ Current literature on climate change, and its effects and emergent risks, are predominantly produced in scientific circles. Yet, there is increasing evidence that adopting social science methods, and situating resilience and adaptation practice within a broader science-policy interface and right-based perspectives, can gear projects towards environmental and socioeconomic co-benefits. Particularly, this could better prepare communities to avoid resource strife and respond to the complexity of social arrangements, reducing far-reaching impacts of climate risks. See Butterfield, R. (2018) ‘Bringing rights into resilience: revealing complexities of climate risks and social conflict’ in *Disasters*. Journal Article.

⁵ Poor or missing gender analysis, or the lack of gender-responsive action, may lead to planners or personnel depending on women to assume a central role in their coping strategies, which may not be the practical reality for many vulnerable communities. Further, this also glosses over the existing burdens on women among such groups. See Nelson, V., Meadows, K., Cannon, T., Morton, J., & Martin, A. (2002) ‘Uncertain predictions, invisible impacts and the need to mainstream gender in climate change adaptations’ in *Gender and Development*. Journal Article.

opportunities and respond better to changes implemented through the project.

A 'gender lens', thus, is both necessary and relevant for the project to maximise its outcomes, particularly creating hydro-meteorological, EWS and CS capacities for observation of weather phenomena and climate change impacts for vulnerable sectors; and, ensuring preparedness against natural and climate-induced hazards, disasters and weather variations that cannot be avoided. This gender-responsive approach is also crucial for establishing institutional structures and broad-based political and socioeconomic frameworks to mobilise medium- and long-term climate change adaptation action as well as regional cooperation.

2 METHODOLOGY

2.1 Appraisal of Gender Mainstreaming Priorities of GCF and AFD

The analytical prerogatives of this Gender Assessment and Action Plan are informed by both GCF's and AFD's respective gender policies.

The **GCF** adopted a revised version of its 2014 Gender Policy and Action Plan on June 2018 in Korea.⁶ The revised Policy addresses pertinent issues on gender and climate change: the expansion of gender mainstreaming beyond the preserve of 'women's issues'; and the identification of synergies with the in-house Indigenous People (IP) Policy as well as the United Nations Framework Convention on Climate Change (UNFCCC)'s Gender Action Plan (GAP), Sustainable Development Goals (SDGs) and Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). Overall, the Policy and Action Plan reinforce the responsiveness of GCF to the multiple, heterogeneous, culturally diverse context of gender inequality to better address and account for the links between gender issues and climate change – a perspective that has been mainstreamed in the development of the funding proposal for IOC Hydromet.

The **AFD** recognises the important contributions made by increased gender equality to development. In 2013, the French Government made the promotion of gender equality a priority through the adoption of the French Gender and Development Strategy 2013 – 2017.⁷ In 2014, AFD defined its Strategy on Gender and the Reduction of Gender Inequalities. It is based on three priorities: prevent gender inequalities in the operations financed by AFD; promote gender as one of the objectives of AFD's operations; and support progress in societies on these issues.⁸

Further, the AFD defines itself as a '100% Social Link' agency in its Strategy 2018-2022⁹: "All AFD Group actions will aim to bolster social link – or at least not weaken social link – by reducing inequalities and improving access to essential goods and services such as education, health, nutrition, water, energy, judicial protection, and culture. The Group will also close gaps in economic participation by facilitating access to property ownership, employment, and credit, and by connecting isolated areas to the rest of the world. This multidimensional commitment will help attain SDG 1 (eradicate poverty), SDG 10 (reduce inequalities), and SDG 5 (gender equality). It also includes all AFD actions that contribute to SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 4 (quality education), and SDG 8 (decent work and economic growth); and, the SDGs that address access and territorial challenges: SDG 6 (water and sanitation), SDG 7 (clean and affordable energy), and SDG 11 (sustainable cities and communities)."

⁶ GCF – Green Climate Fund (2018). *Updated Gender Policy and Action Plan*. Policy Document. Accessed 22 April 2019. Available at: https://www.greenclimate.fund/documents/20182/1087995/GCF_B.20_07_-_Updated_Gender_Policy_and_Action_Plan_2018_2020.pdf/9bd48527-6e35-a72a-2f52-fd401d16d358

⁷ AFD – Agence Française de Développement (2019). 'Gender Equality'. Official Website. Accessed 2 August 2019. Available at: <https://www.afd.fr/en/page-thematique-axe/gender-equality>

⁸ AFD (2019). *Ibid.*

⁹ AFD (2018). *Towards a World in Common: AFD Group 2018 – 2022 Strategy*. Policy Document. Accessed 2 August 2019. Available at: <https://www.afd.fr/sites/afd/files/2018-09-04-05-09/afd-group-strategy-2018-2022.pdf>

The **IOC**, as of January 2020, does not have a regional gender policy in place. However, a GCF accreditation and readiness proposal put together for the IOC by Seychelles stipulates the identification and development of regional needs for equal representation of women in environmental projects.¹⁰

2.2 Concurrent Triangulation and In-country Missions

This Gender Assessment is informed by a **concurrent triangulation research design**: firstly, semi-structured interviews (with community focus groups, key informants within governments and technical organizations, and institutional representatives of met and related departments) were conducted during the rapid in-country missions (five working days in each IOC country in the months of June and July 2019).

Secondly, the **focus of these interviews** was ensured to reflect upon and build on the information and secondary data gathered from the desk-review of existing literature (see bibliography under chapter 6). Participants and stakeholders were identified using a combination of purposive and snowball sampling during the mission, and classified according to their levels of knowledge, exposure and access on climate change, early warning systems, and gender baseline and inequality issues to prioritise and vet information and data received.

The **concurrent triangulation research design** was deemed suited to the IOC Hydromet gender assessment, given: the flexibility to convert secondary quantitative and qualitative findings into narrative data for the comprehension of the studied phenomenon, and the accuracy it can provide to samples of intermediate or small size (which were the primary sources). The research undertaken in the four countries, was also formative in nature and rapid in mandate, necessitating the prompt methodology to establish an inventory of information related to gendered aspects of EWS, CS and hydromet services, relevant for the delivery of outputs identified in the results framework. The methodology, thus, informed the in-country missions for gender data and information scoping, described in chronological order below:

Madagascar (24 – 28 June 2019)

The week-long in-country mission in Madagascar, based out of Antananarivo, primarily focused on identifying and interviewing key informants (particularly government stakeholders such as representatives from the Ministries of Agriculture, Livestock and Fisheries; Tourism; Social Protection and the Advancement of Women) and experts (international organizations and NGOs) to understand the country context the country context and gender baseline, especially gauging the availability of gender-related secondary data and information on climate-vulnerable sectors (such as, participation of women in agriculture).

Multi-stakeholder meetings with different government wings (key climate-vulnerable sectors such as the Ministry of Agriculture, Livestock and Fisheries; and the Ministry of Environment, Ecology and Forests) provided an overview of gendered labour force participation and potential beneficiaries in these sectors. A report on women and environment for the National Adaptation Planning process, finalised in February 2019, was also obtained to inform this analysis.

Additionally, meetings were held with and reports were received from:

¹⁰

GCF (2017). Readiness Proposal with the Indian Ocean Commission (IOC) for Republic of Seychelles. Project Document. Accessed 15 January 2020. Available at: https://www.greenclimate.fund/documents/20182/466992/Readiness_proposals_-_Seychelles_Indian_Ocean_Commission_Entity_Support.pdf/7a649544-1b41-430e-b735-c53a840d62ba

- A local non-governmental organisation (NGO) – Capacity-Building for Communities (C for C) – that focuses on women’s economic empowerment and gender-based violence (GBV) activism in rural Malagasy communities under the EU-funded SAHALA programme; and
- USAID Madagascar for technical information on gender baselines that have informed their agenda and programming in the country, particularly the Fararano Food Security project.

Comoros (01 – 05 July 2019)

The week-long in-country mission in the Comoros archipelago was trifurcated to cover all three islands: Anjouan, Grande Comore, and Mohéli. Gender-related data scoping and information collection were undertaken primarily by the consultant in Moroni, Grande Comore. This involved:

- Engagement with key government stakeholders such as Ministry of Civil Aviation and Meteorology, Ministry of Civil Protection, Ministry of Fisheries, etc;
- Consultation with NGOs and volunteer associations such as International Red Cross and Red Crescent Societies; and
- Key-informant interviews with UN organisations active in the islands – Food and Agriculture Organization (FAO) and United Nations Development Programme (UNDP).

Additionally, site visits (organized through the project focal point in the meteorological department) in Grande Comore to areas hit by Cyclone Kenneth were undertaken along with the core and complementary studies team. Focus group discussions in coastal communities of north Ngazidja were held with women’s representatives and village elders. These were conducted in a semi-structured interview format, using both open-ended and closed questions to gather information regarding:

- Current and past livelihoods in the communities, particularly fishing practices (dominated by men), ylang ylang plucking (dominated by women);
- Gendered access to government and NGO aid, resources and capital in the selected sites;
- Information dissemination channels among different groups within the communities (particularly, public spaces such as mosques and women’s limited access to these); and
- Importantly, the ex-ante (the EW was received mostly by men, and women were uninformed / underinformed about the cyclone), during (it was revealed that due to lack of information dissemination, many communities in Ngazidja lost their housing and managed to take part in last-minute evacuations) and ex-post coping mechanisms taken by men and women, in response to the cyclone (such as community mobilization and sharing of resources – many families were depending on familial and neighbour networks as their houses were yet to be repaired, losses of agricultural land were yet to be reversed).

Seychelles (22 – 26 July 2019)

The week-long in-country mission in Seychelles was based out of Mahé Island, the largest island and governance centre of the archipelago. At the outset, a multi-stakeholder meeting organised through the Seychelles Meteorological Authority brought different governmental departments such as Ministry of Tourism, Civil Aviation, Ports and Marine, Ministry of Fisheries and Agriculture, Seychelles Fisheries Authority, etc. This helped identify the key stakeholders and existing CS, EWS and hydro-meteorological services, and understand the gender requirements in terms of sectoral users and beneficiaries. Field visits, organised through the meteorological services, to Praslin and La Digue islands, facilitated rapid assessments of coastal erosion sites and engagement with private enterprises (potential users of climate services) that have experienced sea intrusion-related losses.

A gender-focused meeting was organised with the Gender Secretariat housed within Seychelles' Ministry of Social Affairs, Community Development and Sports. Key-informant interviews with the Principal Secretary and other operatives of the Secretariat highlighted gender- and youth-related issues, that inform the climate- and disaster-readiness of the country: primarily market segmentation in the labour force, drug epidemic and gender-based violence (GBV) among certain communities.

Mauritius (29 July – 02 August 2019)

The week-long in-country mission in Mauritius was centred around Port Louis, the capital city and administrative hub, and focused on pinpointing sectoral stakeholders, cost-estimation of climate-related losses, and institutional collaborations for climate and hydro-meteorological services in the administrative structure. This began with bringing key sectors for a joint stakeholder meeting, including the Mauritius Meteorological Services, Ministry of Agro Industry and Food Security, and Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping. Following the identification of potential beneficiaries of improved climate services, a targeted gender meeting with key informants (Gender Coordinators) in the Ministry of Gender Equality, Child Development and Family Welfare was organised.

This meeting was crucial in mapping the current gender baseline in Mauritius, and understanding gender issues in context with cross-cutting factors such as socioeconomic performance and caste determinants. Further, it shed light on gender roles in Mauritian societies and how these relate to climate change preparedness, and potential adaptation options through hydro-meteorological services and products. The key-informant interviews with Gender Coordinators in the Ministry were combined with secondary data collection and policy appraisal through the existing knowledge products of the department, as well as collation of existing gender assessments done for environment- and climate change-related funding proposals on solar energy, land management, etc.

2.3 Literature Review and Structure of the Analysis

A comprehensive **desk-review** of existing literature was conducted on gender, climate change adaptation, climate services and hydro-meteorological services. Literature was drawn from: in-house documents and similar projects of both GCF and AFD; research reports from international organisations or knowledge platforms (UNDP, World Meteorological Organisation – WMO, Sustainable Development Knowledge Platform); multilateral development banks and international financial institutions (primarily the World Bank and the African Development Bank – AfDB); journals (*Gender and Development*, *Disasters*, *Society and Natural Resources*); and grey literature (for example, Beijing 25+ country report for Comoros¹¹, SAHALA-EU activity report for Madagascar¹²,

¹¹ UN Women & Union Des Comores, Commissariat National à la Solidarite, à la Protection, er à la Promotion du Genre (2014). *Rapport Pays sur les Progres Realises dans la Mise en Œuvre de la Plateforme D'Action de Beijing+25*. Government Report. Accessed 2 August 2019. Available at: <https://www.unwomen.org/-/media/headquarters/attachments/sections/csw/64/national-reviews/comoros.pdf?la=en&vs=2402>

¹² EU & C for C (2018). *Rapport Final des Activites du Project – Couvrant la Periode du 01er Avril 2016 au 31 Mars 2018*. Project Evaluation Report.

CEDAW shadow report for Mauritius¹³, and National Comprehensive Review report for Seychelles¹⁴).

The next section (Section 2) presents **gender-responsive elements related to sectoral issues** to be incorporated within project outcomes to reduce climate vulnerability, particularly of at-risk households and ethnic minority groups; gender considerations and actions for stakeholders; and presents normative information to gear the overall proposal towards better socioeconomic, gender and environmental co-benefits.

The literature review revealed useful data and research, which were informed by varied methodologies and perspectives. Thus, a **derivative baseline** (Section 3) with additional data points from composite indices and national aggregates has been inferred to identify the gender barriers and dynamics in the IOC countries, and to substantiate Section 2. Subsequently the section also explores the **policy environments** in Comoros, Madagascar, Mauritius and Seychelles, and presents a potential list of gender collaborators relevant for project activities and stakeholder consultations during project implementation.

¹³ Gender Links, Young Queer Alliance, Media Watch Organization, and SOS Femmes (2018). *Report to CEDAW from Mauritius*. Shadow Report. Accessed 2 August 2019. Available at: https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/MUS/INT_CEDAW_CSS_MUS_32569_E.pdf

¹⁴ UN Women & Government of Seychelles, Ministry of Family Affairs (2019). *Seychelles: National Comprehensive Review*. Report. Accessed 2 August 2019. Available at: <https://www.unwomen.org/-/media/headquarters/attachments/sections/csw/64/national-reviews/seychelles.pdf?la=en&vs=4554>

3 GENDER MAINSTREAMING, SECTORAL ISSUES & HYDRO-METEOROLOGICAL INFORMATION SERVICES

The World Economic Forum (WEF)'s report *The Global Risks Report 2020* finds that the top five among the primary ten risk factors facing the world population are environmental in nature: (in order of risk) extreme weather, climate action failure, natural disasters, biodiversity loss, human-made environmental disasters.¹⁵ These risk factors are often compounded by 'threat multipliers' such as precarious economic status and lack of political access (including, decision-making bodies); performance on health, education and livelihood indicators (which are often worsened by extreme weather events and natural disasters); limited access to productive assets, information networks, skills (which work as buffers during ex-post disaster situations); among others.

Employing a gender mainstreaming perspective will highlight these complex social development phenomena and interconnected nature of risks and threats in the western Indian Ocean nations. Once identified, this will form the gender and social development context in which the IOC Hydromet has to be operationalized. In doing so, the project's change narrative can also amend some of these persistent inequalities and unequal access, which often result in specific and entrenched vulnerabilities in the IOC countries.

Vulnerabilities, thus, can be defined a set of general characteristics that impair the ability of a social group to cope with, respond effectively to, and adapt to external shocks, including those emerging from climate change, natural hazards, and disasters.¹⁶ This perspective is an important point of departure for the IOC Hydromet project, as vulnerabilities (in the background of risks and threat multipliers) need addressing through a range of climate adaptation activities, as they act as impediments for coping capacities against climate risks and impacts.

Further, these vulnerabilities, whether compounded or individual, can reverse the progress achieved in securing household economic stability (with spillover effects on food, energy and water security) and managing community, resource and social strife. They can also reverse advances made on developmental goals and social change, particularly in the precarious contexts of both LDCs and SIDSs. On the other hand, gender mainstreaming through the Gender and Development (GAD) approach¹⁷ (as adopted by the project) will also recognise the role marginalised and vulnerable groups can play, and not simply stylise them *a priori* as 'victims'. With an inclusive project design, they are often able to contribute traditional and artisanal knowledge of coping and improvising strategies, which can either be strengthened and mainstreamed as well as used as a basis for further capacity development.

This section presents a synthesis of gender, environment and climate change issues, as these pertain to EWS and CS, as a broad background informing the gender-responsive perspective of IOC Hydromet. Then, it identifies sectoral recommendations in relation to gender-responsive planning for CS that have been identified for the project's design and operationalisation.

¹⁵ World Economic Forum – WEF (2020). Official Website. Accessed 17 January 2020. Available at: http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf

¹⁶ DIE – Deutsches Institute für Entwicklungspolitik (2009). "Climate Change Adaptation from a Gender Perspective". Discussion Paper.

¹⁷ The GAD approach seeks to correct systems and mechanisms that produce gender inequality by focusing not only on women, but also by assessing the social status of both women and men. Moreover, it emphasises the role of men in resolving gender inequality, and places importance on the empowerment of women, who are placed in a socially and economically weaker position than men.

3.1 The Gender-Climate Change-EWS/CS Nexus

In December 2019, the 25th Conference of the Parties (COP) was held in Madrid, Spain and organized by the Government of Chile, bringing together all the signatories to the United Nations Framework Convention on Climate Change (UNFCCC). Renewed demands and efforts for gender mainstreaming and gender-responsive climate change adaptation were highlighted by the Women and Gender Constituency – particularly the inadequacy of transformative action (and policy gaps) on gender-climate issues towards the Lima Work Programme and its Gender Action Plan.

COP 25 and other high-level policy engagements, between states and international organizations, reveal that gender and climate change issues have been recognized in adaptation and mitigation policy design and action. Yet, despite having currency as a concept and perspective, the operationalization of gender-responsive measures in adaptation and mitigation action remains scarce.

Further, resource mobilization and commitments by national governments, in tandem with local actors, do not exhibit the percolation of these issues – especially at grassroots level where gender-responsive climate action is crucial in determining overall resilience and adaptive capacities of communities.

As elaborated in the funding proposal, this Gender Annex concurs that climate impacts in the IOC countries will be on demographic groups that are (primarily) reliant on natural resource-based livelihoods and agriculture, as well as tourism. The stakeholders in these sectors, in each IOC country, require capacity-building to manage changed climate phenomenon, natural disasters and hazards, as well as increasing and intensifying weather events. It has been generally observed, that female-headed households and women commonly face higher risks and greater burdens from these impacts, particularly compounded by incidence of poverty, unequal participation in decision-making processes, disparities in labour markets, health risks, etc.

The following table identifies the main risks and challenges relevant for gender mainstreaming in a multi-country EWS and CS adaptation project like IOC Hydromet.

MAIN GENDER RISKS AND CHALLENGES FOR IOC HYDROMET	
GENDER-DIFFERENTIATED IMPACTS OF CLIMATE EFFECTS AND NATURAL DISASTERS	<p>The first and foremost hurdle for the project is the gender-specific differences (in consumption patterns and incidence of poverty, access to and control of resources and power, time use patterns and economic activities, etc.) that uniquely compound and overlap to create gendered vulnerability to climate change in each IOC country.</p> <p>This high burden of adverse impacts of climate change, especially with the lack of EWS, CS, and hydromet services, limit not only adaptation capacities in real time, but also have intergenerational effects and undo progress made towards gender equality in the island nations (particularly in SIDS and LDC contexts).</p>
GENDERED ACCESS TO ADAPTATION SOLUTIONS IMPLEMENTED BY THE PROJECT	<p>Field visits and engagement with government officials revealed that adaptation solutions, ranging from climate-smart agriculture to DRR training, face gendered impediments in percolation (when these are rarely mobilized). Women are often not allowed to access public spaces (where EW may be announced), for example mosques in Comoros. They may have limited access to radios or other information channels, such as in Madagascar. As a trend in the region, dissemination of information are limited to channels primarily accessed by men. Additionally, time poverty (explored below) experienced by women and men (in some contexts) can also constrain the adoption of adaptation solutions, particularly in post-disaster and other vulnerable contexts.</p>
SIDELINING LOCAL ADAPTATION MEASURES AND INFORMATION CHANNELS	<p>Communities have long histories and praxis of engagement with and management of natural resources. Consequently, local adaptation methods, information channels, and disaster strategies (albeit discrete and reactive) have also existed. Resilience of communities, as well as ecosystems, can be ensured through the incorporation of these primarily reactive techniques into broader, pre-emptive EWS, CS and hydromet services with an emphasis on cross-community dialogue to tailor these provisions.</p>
GENDER-BASED VIOLENCE (GBV)	<p>Despite mounting evidence for interlinkages between GBV and environmental factors, academic enquiry and practical integration of this perspective remains limited in adaptation practice. Physical, sexual and psychological harm are usually exacerbated during <i>ex-post</i> situations of climate impacts and losses, disasters and extreme weather events.</p> <p>In the Indian Ocean island nations, GBV rates are high (when reported), and often go underreported (with, in fact, Madagascar lacking a recent nation-wide survey). In the Seychelles archipelago, men also experience high levels of violence (uncharacteristic to the region, where women are usually targeted) alongside a persistent drug addiction epidemic, creating further barriers in the face of frequent and severe climate impacts.</p>
GENDERED LIMITATIONS IN DECISION-MAKING INSTITUTIONS (RELATED TO EWS, CS & HYDROMET) & REPRESENTATION	<p>Decision-making institutions, power-sharing mechanisms and overall representation tend to be skewed towards men in all four IOC countries, barring Seychelles. Yet, at the same time, women make important household decisions daily, in these countries, that pertain to domestic food security, water provision and other essentials. Without the adequate integration of these complex and gendered phenomena, it will be difficult to respond to particular needs and interests of vulnerable groups at the local level. In such a context, interventions become restricted to implementing scenario-based adaptation solutions, which are essentially top-down, that lead to limited successes and lack of ownership at the community level.</p>

3.2 Mainstreaming Gender within Climate Information Services in the IOC Countries

The countries identified by the project are uniquely vulnerable to aggregate shocks from both economic and environmental stressors due to their small size, isolation, and other geographic, economic and socio-political features. The climate impacts on household well-being and the effectiveness of prevailing risk management mechanisms are not well understood, despite the use of different types of risk assessments, household income and expenditure surveys, and poverty analysis having been conducted in the region, and the macroeconomic impacts of negative shocks having been well studied in generic contexts.

Given this lack of understanding regarding the effects of climate-related risks, natural hazards and disasters, along with inadequate CS, cannot be empirically quantified but can be hypothesised to produce unevenly distributed impacts within a population. The impacts and exposure compound with current incidence of impoverishment, gender inequality and lack of access to social safety networks and disproportionately affect the poorer and more vulnerable demographics – determined by the needs, opportunities and perils facing men and women. In this context, gender-responsive CS will play a unique and positive role in increasing adaptability and resilience of communities towards climate-related risks and hazards; bolstering national meteorological and hydrological institutions (NMHS) and weather variation as well as observation, data collection, analysis, and interpretation; and strengthening EWS.

At the outset, mainstreaming gender in CS through the project will involve the consideration of the following factors in activity design:

- Division of labour (activity/place);
- Visibility of labour (formal/informal sector);
- Poverty levels (incidence/severity);
- Human development factors, including:
 - nutrition pattern (current levels of health/morbidity and mortality rates),
 - literacy levels (access to information/ability to act on information and knowledge),
 - recourse to legal protection (inheritance/land rights);
- Access to and supply of information;
- Access to critical resources (emergency aid/loans/insurance); and
- Influence over decision-making processes (authority/power over domestic, community and local management).
- Household responsibilities and time-use (domestic and unpaid care as well as reproductive work, fuel and water provisioning)
- Incidence of physical, social and psychological violence in the household (especially how gender-based violence and intimate partner violence trends are affected in *ex post* disaster contexts)

3.3 Tailoring Products towards End Users in Climate-Vulnerable Sectors

The IOC countries have faced consequences of disasters (including climate-induced disasters), extreme weather events and the pitfalls of limited meteorological capacities in recent years. For example:

- Comoros is estimated to have lost between 60 – 80% of staple crops, water facilities and housing due to Cyclone Kenneth.¹⁸
- The Climate Vulnerability Index (CVI)¹⁹ calculated by Germanwatch e.V. identifies Madagascar as the 7th most affected by climate event and related losses in 2017.
- The Southwest Indian Ocean Risk Assessment (SWIO RAFI), conducted by the Global Facility for Disaster Risk Reduction and Recovery (GFDRR) and World Bank, finds that Mauritius experiences a combined US\$ 110 million in combined direct losses from earthquake, floods and tropical cyclone each year.²⁰
- In 2013, a Damage, Loss, and Needs Assessment report²¹ by the Government of Seychelles (supported by the European Union or EU and the World Bank) found that Cyclone Felleng caused an estimated loss of US\$ 8.4 million, equivalent to 0.77% of the country's GDP.

The above predicament of the IOC countries can be contextualised by a CGIAR report²² that highlights how the extent of exposure to the impacts and losses of climate events is determined mainly by three factors:

- *Ex ante* and *ex post* coping mechanisms;
- The resources and information available to a community; and
- The frequency and intensity of shocks/impacts that determines income shortages and asset loss, and cause failures of local recovery techniques built up over time.

The reports reiterate the importance of hydromet and CS as well as a robust EWS in the Indian Ocean island countries, and how these cannot simply be limited to technical capacities and tools, particularly because expected and unavoidable variations in climatic patterns, climate-induced disasters and hazards, and unpredicted climate change risks will create different exposure patterns among communities.

To address these differential exposure patterns, CS products, such as impact forecasting (analysing and disseminating implications of the forecast and specific uses of the forecast information) and nowcasting (short range weather forecasting, particularly from ground-based remote sensing

¹⁸ ReliefWeb (2019). 'Comoros Humanitarian Situation Report – Cyclone Kenneth'. Online Report. Accessed 09 September 2019. Available at: <https://reliefweb.int/report/comoros/comoros-humanitarian-situation-report-no-2-cyclone-kenneth>

¹⁹ GermanWatch (2019). *Climate Vulnerability Index 2019*. Report. Accessed 09 September 2019. Available at: https://germanwatch.org/sites/germanwatch.org/files/Global%20Climate%20Risk%20Index%202019_2.pdf

²⁰ The World Bank & Global Facility for Disaster Reduction and Recovery – GFDRR (2016). *Disaster Risk Profile: Mauritius*. Accessed 09 September 2019. Available at: <https://reliefweb.int/sites/reliefweb.int/files/resources/mauritius.pdf>

²¹ Government of Seychelles (2013). *Seychelles Damage Loss and Needs Assessment Report 2013*. Report. Accessed 09 September 2019. Available at: https://www.gfdr.org/sites/default/files/publication/Seychelles_DaLA_2013_Floods.pdf

²² CGIAR CCAFS – Research Program on Climate Change, Agriculture and Food Security (2013). 'Investigating Climate Information Services through a Gendered Lens'. Working Paper no. 42.

systems, radars, wind profilers) etc., have to be geared towards end users, particularly those with low access in vulnerable sectors such as agriculture, fishing, and pearl farming.

Gearing CS products for greater end-to-end value and effectiveness thus functions in tandem with gender-responsive mapping of users and stakeholders. The project will address this through the Regional Climate Services Strategy (RCSS), which will allow for user feedback mechanisms to evaluate the effectiveness and pitfalls of CS – recalibrating and configuring these products to optimise value and information, where necessary.

3.4 Utilising Community Information Channels and Local Knowledge

A complementary approach to creating user-friendly and gender-responsive climate service products is sourcing local knowledge, artisanal practices and traditional know-how to inform EWS and CS products as well as other hydromet technical and maintenance capacity building activities. Conducting mapping exercises, informed by participant observation and a consultative approach, will be key to: understand how local information and warning systems work; identify community engagement and decision-making groups; and invest in gender-relevant or women's groups.

Further, the consideration of gendered access to technology in the different countries is an important factor in the delivery and efficiency of CS products. The importance of understanding differences in access to information and communication technologies (ICTs) between women and men, as well as variations in usage patterns and desired value-added services have been highlighted in recent research, particularly for climate-smart agriculture.²³ The data reveals that often women are falsely presumed to have similar levels of access and usage as men to ICTs²⁴, creating a significant gender gap that can determine the effectiveness and percolation of CS products and EWS. Additionally, gender-disaggregated data is often available for the national level – concealing large variations in access and use by geographical region and rural versus urban communities.²⁵

Addressing these factors will assist in empowering women in their roles as key actors in climate-vulnerable sectors, encourage active participation and involve them as information producers, and draw out valuable inputs for climate information product design.

A CGIAR²⁶ report finds that inclusion of traditional methods and gender-responsive design in community engagement could substitute for where modern innovations are lacking in gender awareness or accessibility, as these utilise strong social networks that have historical continuity within the community and provide a familiar means of communication. Adaptation to technological changes is not linear, hence these traditional methods can be easily hybridised with modern technology such as (where available) radio, television and short messaging service (SMS) through telecom networks to ensure impact forecasting products and other relevant climate content are disseminated effectively. The GAP report shows that in some contexts it is important to build on the existing socio-political networks that form the basis of information sharing, EWS, DRR. Since the

²³ USAID (n.a.). *Gender and Information Communication Technology (ICTs)*. Survey Toolkit.

Accessed 01 October 2019. Available at:
https://www.usaid.gov/sites/default/files/documents/15396/Gender_and_ICT_Toolkit.pdf

²⁴ USAID (n.a.). *Gender and Information Communication Technology (ICTs)*. *Ibid*.

This was particularly true for Comoros – where women (in focus group discussions) revealed the lack of access to technology within the household (for example, mobile phones). Further research can identify the sociocultural norms informing this, which remains beyond the scope of this assessment.

²⁵ *Ibid*.

²⁶ CGIAR CCAFS – Research Program on Climate Change, Agriculture and Food Security (2013). *Ibid*.

project is expected to introduce newer technologies, to encourage uptake, it will be important to build on the existing, traditional systems - such as public announcements in mosques in Comoros and radio usage in Madagascar. At the project onset and during implementation period, the reassessment of the baseline will be tackled for each country with the support of the last mile partner such as IFRC/PIROI. This will allow identifying carefully if there are traditional networks that can be built on, how these serve different gender interest groups, and then to figure how improved hydromet and early warning services can build on this to improve outcomes. The consultation process have shown that sometimes-traditional networks may exclude women, as it was observed in Comoros.

Feedback loops, by which community members, specifically women in vulnerable groups such as subsistence agriculture-dependent smallholders, can reflect upon which methods work best for their particular context, are also necessary.²⁷ By introducing new technologies into traditional networks and means of communication, climate information providers, such as field workers from met services, may be able to extend the reach of their climate information services and help more vulnerable communities to adapt to environmental and climate changes.

3.5 Creating Opportunities to Overcome Gendered Barriers

Section 3 below presents detailed statistics related to poverty and hardship, labour and education, and health and social indicators to demonstrate the gendered realities of the Indian Ocean islands under the purview of this project. To further the analyses, it is important to consider the intra-household dynamics between men and women pertaining to culture- and faith-based socioeconomic practices. Regionally, it is commonplace for women to participate in the bulk of domestic, care and reproductive work – which is further exacerbated²⁸ with productive labour due to high levels of male out-migration for seasonal work. Thus, it can be surmised that gendered time poverty in the project countries is high.

Bardasi and Wodon define²⁹ an individual as ‘time poor’ if he/she is working long hours, while being simultaneously monetary poor, or facing the risk of monetary poverty if he/she were to reduce his/her working hours below a given time poverty line. Thus, time poverty results from the combination of two conditions³⁰:

- Firstly, the individual does not have enough time for rest and leisure once all working hours (whether spent in the labour market or doing household chores such as cooking and fetching water and wood) are accounted for; and
- Secondly, the individual cannot reduce his/her working time without either: increasing the level of poverty of his/her household (if the household is already poor); or leading his/her household to fall into monetary poverty due to the loss in income or consumption associated with the reduction in working time (if the household is not originally poor).

²⁷ *Ibid.*

²⁸ Wodon, Q. & Bardasi, E. (2006). “Measuring Time Poverty and Analyzing its Determinants: Concepts and Applications to Guinea” in *Economics Bulletin* (Vol. 10, No. 12). Journal Article.

²⁹ *Ibid.*

³⁰ *Ibid.*

An additional implication of time poverty is the lack of flexibility/opportunity to change the current time usage pattern within the household to explore other economic activities or, as in the case of this project, to explore autonomous or technical adaptation options against climate-induced weather variation, natural disasters and hazards such tropical cyclones, and other climate risks.

In addition to facing the time poverty-related risks, GBV persists as a serious epidemic in the Indian Ocean region, as explored further in Section 3. The International Federation of Red Cross and Red Crescent Societies (IFRC), upon conducting in-depth research³¹ on its designated regional zones and national societies, found that GBV is a constant theme in post-disaster contexts. Given the negative shocks, loss of family members, livelihoods and homes, domestic conflict levels tend to rise, leading to greater incidence of GBV and IPV, among other effects on gender relations. With the increasing frequency and intensity of climate-related hazards and risks, GBV can be expected to witness an upward trend, reiterating the importance of resilience mechanisms and adaptation opportunities through CS in the beneficiary countries. Further, recent research³² undertaken by the International Union for the Conservation of Nature (IUCN) with USAID has revealed potential risks of and connections between environment- and climate-related stressors and increased GBV, which are both detrimental to the well-being of survivors as well as impediments for inclusive climate change adaptation and resilience.

³¹ IFRC – International Federation of Red Cross and Red Crescent Societies (2015). *Unseen, Unheard: GBV in Disasters*. Report.

³² Research connecting environmental and climate-related stressors to GBV is nascent. AGENT – Advancing Gender in the Environment (USAID-IUCN partnership) is at the forefront of collating, analysing and identifying these stressors in different contexts.

4 SOCIOECONOMIC AND GENDER BASELINE IN THE IOC COUNTRIES

The previous section underscored the important nexus issues of gender, environment, climate risks, and threat multipliers, which are relevant towards the successful implementation of the project. Gender mainstreaming, in line with GCF and AFD standards, requires taking stock of the complex phenomena that inform the existing gender inequalities in any society. In the context of climate change and environment, the under usage of gender and social indicators has led to a lacuna in the available data, necessitating the use of indirect (but related) points of entry, such as: poverty and hardship; labour and education; and, health and social indicators. AFD's in-house gender profiles³³ for Comoros, Madagascar and Mauritius (not available for Seychelles), similarly, establishes the gender landscape by analysis the health, access to water and sanitation, education and professional training, etc.

4.1 National aggregate statistics and data

The national-level data points (divided into three categories: **poverty and hardship**; **labour and education**; and **health and social indicators**) presented below are *not* comparable across countries, given the different methodologies of each statistical bureau or equivalent national counterpart. These broadly speak to issues³⁴ identified by the GCF as crucial in the project design stage (such as: poverty levels; participation of men/women in formal/informal labour markets; gender-disaggregated education and literacy indicators; gender-disaggregated health, morbidity and mortality statistics; etc.) to map and mainstream existing vulnerabilities.

4.1.1 Poverty and Hardship

POVERTY & HARDSHIP INDICATORS	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
% of Population Below International Poverty Line	17.9 ^a	77.6 ^b	7.90 ^c	1.10 ^d
% of Population Below National Poverty Line	42.4 ^a	70.7 ^b	0.50 ^c	39.3 ^d
% of Population in Severe Multidimensional Poverty	16.1 ^e	57.1 ^e	-	-
% of Population Vulnerable to Multidimensional Poverty	22.3 ^e	11.8 ^e	-	-
% of Female-Headed Households (FHHs)	27.7 ^f	19.3 ^f	17.0 ^g	51.0 ^h
% of Male-Headed Households (MHHs)	72.3 ^f	80.7 ^f	83.0 ^g	49.0 ^h
NOTE: NATIONAL AND INTERNATIONAL POVERTY LINE: National poverty lines are defined according to each country's specific economic and social circumstances. The national poverty lines are typically lower in poorer countries and higher in				

³³ AFD (n.a.). Profil Genre: Afrique (three of the four countries available under the continent tab) Accessed 20 January 2020. Available at:

https://www.afd.fr/fr/ressources/profil-genre-afrique?fbclid=IwAR104PGZ_TlhVqDdO2ie3V6KeACfxzckkYjaiNAUWBcp93m5_4T0UqqKn-M

³⁴ GCF and UN Women (2017). "Mainstreaming Gender in Green Climate Fund Projects". Policy Document. Accessed 07 August 2019. Available at: https://www.greenclimate.fund/documents/20182/194568/Guidelines_GCF_Toolkit_Mainstreaming_Gender.pdf/860d1d03-877d-4c64-9a49-c0160c794ca7

richer countries. International poverty lines attempt to hold the real value of the poverty lines consistent across countries by accounting for differences in purchasing power across countries.³⁵

For Comoros, the international poverty line is 432.2 in Comorian franc (2013) or US\$ 1.90 (2011 PPP).^a

For Madagascar, the international poverty line is 1415.9 in Malagasy ariary (2012) or US\$ 1.90 (2011 PPP).^b

For Mauritius, the international poverty line is 36.1 in Mauritius rupees (2012) or US\$ 1.90 (2011 PPP).^c

For Seychelles, the international poverty line is 16.8 in Seychelles rupees (2013) or US\$ 1.90 (2011 PPP).^d

MULTIDIMENSIONAL POVERTY: In the post-2015 SDG and Agenda 2030 framework, SDG 1 targets poverty elimination – in all forms and dimensions. This mandate requires tools to enumerate (quantitatively) and assess (qualitatively) poverty levels in different countries – here the MPI can be a useful tool. It compares acute multidimensional poverty for more than 100 countries and 5.7 billion people, and monitors changes over time.³⁶ The global MPI scrutinises a person's deprivations across 10 indicators in health, education and standard of living and offers a high-resolution lens to identify both who is poor and how they are poor. It complements the international \$1.90 a day poverty rate by showing the nature and extent of overlapping deprivations for each person. The 2019 update uses data from 50 Demographic and Health Surveys (DHS), 42 Multiple Indicator Cluster Surveys (MICS), one DHS/MICS and eight national surveys that provide comparable information to DHS and MICS.

GENDER-DISAGGREGATION OF HOUSEHOLDS: Micro data analyses (conducted by the World Bank Development Research Group), with consideration for macro, population and demographic factors, reveals the importance of introducing heterogeneity in household poverty figures as well as contextualising how FHHs and MHHs function, conditional upon location, age, number of members, marital status, economic access, etc.³⁷ 'Feminisation of poverty' is a concept that gained currency in the development and aid sector since the 1990s – but more recent analysis and data collection reveals that such concepts may border on generalisations rather than being based on realities. Instead the data reveals more complex trends: firstly, it can be more conclusively ascertained that certain types of FHHs are frequently found to head disadvantaged households; and, secondly, in Africa FHHs have better rates of poverty reduction than MHHs. Gender-disaggregation of households, with consideration in tandem of other conditions, is therefore an important method to understand the specificities of poverty incidence in a certain context.

Sources of data/information for this table:

^a The World Bank, Poverty and Equity Data Portal (2019). 'Poverty and Equity Brief: Comoros'. Technical Note (online). Accessed 07 August 2019. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_COM.pdf

^b The World Bank, Poverty and Equity Data Portal (2019). 'Poverty and Equity Brief: Madagascar'. Technical Note (online). Accessed 07 August 2019. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_MDG.pdf

^c The World Bank, Poverty and Equity Data Portal (2019). 'Poverty and Equity Brief: Mauritius'. Technical Note (online). Accessed 07 August 2019. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_MUS.pdf

^d The World Bank, Poverty and Equity Data Portal (2019). 'Poverty and Equity Brief: Seychelles'. Technical Note (online). Accessed 07 August 2019. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_SYC.pdf

^e UNDP & University of Oxford (2019). *Table I: Multidimensional Poverty Index*. Composite Index Data. Accessed 07 August 2019. Available at: http://hdr.undp.org/sites/default/files/mpi_2019_table_1.pdf

³⁵ The World Bank, Data Help Desk (2018). 'Poverty Data: National and International Poverty Lines'. Technical Note (online). Accessed 07 August 2019. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/193309-should-i-use-national-or-international-poverty-line> for more.

³⁶ UNDP & OPHI (2019). *Global MPI 2019: Illuminating Inequalities*. Report. Accessed 15 August 2019. Available at: http://hdr.undp.org/sites/default/files/mpi_2019_publication.pdf

³⁷ The World Bank, Development Research Group (2015). 'Women Left Behind? Poverty and Headship in Africa'. Working Paper no. 7331. Accessed 10 August 2019. Available at: <http://documents.worldbank.org/curated/en/277221468189851163/pdf/WPS7331.pdf>

^f The World Bank & Union des Comores (2017). *Comoros Poverty Assessment*. Report. Accessed 15 August 2019. Available at: <http://documents.worldbank.org/curated/en/342321528113131924/pdf/125069-WP-P156542-OUO-9-Comoros-Poverty-Assessment-revised.pdf>

^g United Nations Population Fund (2012). *Population Dynamics and Household Structure*. Country Implementation Profile. Accessed 28 August 2019. Available at: https://www.unfpa.org/sites/default/files/resource-pdf/FINAL_Mauritius.pdf

^h World Health Organization – WHO (2016). *Country Cooperation Strategy 2016 – 2021*. Policy Document. Accessed 28 August 2019. Available at: <https://apps.who.int/iris/bitstream/handle/10665/254891/ccs-syc-2016-2021-en.pdf;jsessionid=E8B0B324965D261078C3BA1B2C44A0BC?sequence=1>

Comoros

The poverty incidence indicators presented above show Comoros' position as compared to the other three IOC countries. Given Comoros' status as an LDC, the statistics lay bare the intensity and extent of poverty, identified along both national and international poverty line indicators, as well as UNDP – OPHI's MPI. The latter goes a step further to enumerate the sections of the population that can be exposed to multidimensional poverty, implying the possibility of poverty traps and risks associated with external shocks (in the context of this project relating to the lack of EWS and hydromet services) to an already-vulnerable context.

However, a World Bank Poverty Assessment report³⁸ finds that although Comoros has slow GDP and GNI growth, available household surveys and national accounts show important increases in consumption patterns. This highlights the importance of the informal sector and heavy reliance on remittances (which flow through informal channels), as well as the lack of data and enumeration capacities.³⁹

The pervasiveness of the informal economy and remittance-based capital channels influence household decision-making. This, in turn, plays an important role in the determination of poverty, adaptation access and mitigation opportunities. The proportion of female-headed households (FHHs) has reached 27.7% (2014), showing a 6.2 percentage point increase from 2004 figures.⁴⁰ Further, the report finds that between 2004 and 2014, the proportion of bottom 40% households headed by women increased by almost 10 percentage points, from 18.6% in 2004 to 27.9% in 2014. Overall, however, there are fewer FHHs in the archipelago as compared to male-headed households (MHHs).⁴¹

Thus, it can be posited that FHHs have not witnessed a proportionate increase in income and consumption with the advances made in household expenditure and consumption patterns (with the caveats that the data quality is low and the nature of the FHH is transient, factors which are beyond the scope of this assessment).

³⁸ The World Bank & Union des Comores (2017). *Comoros Poverty Assessment*. *Ibid.*

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

Madagascar

The poverty incidence indicators presented above show Madagascar's position as compared to the other project countries. In a recent report⁴², the World Bank identified Madagascar as the poorest country in the sub-Saharan Africa (where internationally comparable data was available), with present real GDP lower than in the 1960s. This poverty is associated with low and declining labour productivity – by 2012, Madagascar's GDP per employed worker had fallen to the lowest in the world except for the Democratic Republic of the Congo (DRC).⁴³ The high level of multidimensional poverty (over 55%) also reveals the intensity of deprivation and different types of poverty faced by the majority of the Malagasy population. Given that an additional ~12% of the population is vulnerable to multidimensional poverty, it can be posited that even minor external shocks can destabilise household consumption patterns and lead to poverty (where the household is vulnerable to multidimensional poverty) and entrench poverty levels (where households are already facing multidimensional deprivation).

A complementary study conducted by the World Bank in 2014⁴⁴ finds that about a fifth of all households nationally are headed by women – primarily because they are widowed, divorced, or separated. While on primary inspection, FHHs do not appear, as a group, to be significantly worse off than MHHs, the situation is different when the study controls for certain covariates including location and age, as well as, importantly, the marital status of the household head.⁴⁵ Conditional on location only, FHHs in both rural and urban areas experience lower consumption than MHHs.⁴⁶

Mauritius

The poverty incidence indicators presented above show Mauritius' position as compared to the other project countries. In contrast to the LDC status of Comoros and Madagascar, the World Bank classifies Mauritius as an upper-middle income country with low levels of poverty and inequality, having diversified its economy and accomplishing unprecedented structural transformation.⁴⁷ However, in 2010, after sugar and textile (the main Mauritian exports) lost preferential status from western markets⁴⁸, the economy has witnessed initial setbacks. Concurrently, inequality has risen, lowering the living standards of the poorer sections of the populace – which has complex gendered aspects that inform it.

The main contributor to rising inequality is the variance among earnings (males) situated in different social classes – showing the imperatives of redistribution and pro-poor investment in the country. Mauritius, additionally, has low female labour participation (compared to peer economies – see table below), and women continue to be disadvantaged in access to the labour market, which can

⁴² The World Bank (2016). *Shifting Fortunes and Enduring Poverty in Madagascar*. Report. Accessed 15 August 2019. Available at: <http://documents.worldbank.org/curated/en/413071489776943644/pdf/113582-v2-FINAL-PUBLIC-7817-Madagascar-Poverty-Report.pdf>

⁴³ The World Bank (2016). *Shifting Fortunes and Enduring Poverty in Madagascar*. *Ibid*.

⁴⁴ The World Bank, Poverty Reduction and Economic Management (PREM) – Africa (2014). *Face of Poverty in Madagascar: Poverty, Gender and Inequality Assessment*. Report. Accessed 15 August 2019. Available at: <http://documents.worldbank.org/curated/en/538821468271809604/pdf/781310PRIORITY0English0Apr900May012.pdf>

⁴⁵ The World Bank, PREM – Africa (2014). *Face of Poverty*. *Ibid*.

⁴⁶ *Ibid*.

⁴⁷ The World Bank (2017). *Mauritius: Addressing Inequality through More Equitable Labour Markets*. Report. Accessed 17 August 2019. Available at: <https://openknowledge.worldbank.org/handle/10986/29034>

⁴⁸ The World Bank (2015). *Mauritius: Inclusiveness of Growth and Shared Prosperity*. Report. Accessed 17 August 2019. Available at: <https://openknowledge.worldbank.org/handle/10986/23804>

be attributed to traditional models of domestic and care work persistent in most Mauritian households. The World Bank finds⁴⁹ that the disproportionate expansion of the female labour force is through the entry of women primarily from affluent households – contributing to greater inequality between households. To elucidate, since affluent households possess certain advantages over their poorer counterparts, women are increasing the income of these households while women in poorer households lack access to productive and economic resources (*ipso facto*, widening the inequality gap in the country).

Economic inequality is an important consideration for this project as the main focus is towards increasing climate risk resilience and disaster preparedness through CS, EWS and other hydromet products. External shocks caused by cyclones and storms, which are common in Mauritius, are known to push vulnerable households into poverty and keep poor households caught in the cycle of poverty traps. With rising household income inequality in Mauritius, more and more households will continue to be exposed, impacting also on the existing rates of low female labour participation in the market from these economic strata as well as increasing the household care and domestic work burden.

Seychelles

The poverty incidence indicators presented above show Seychelles' position as compared to the other project countries. Similar to Mauritius, the archipelago nation is different from its Indian Ocean counterparts: Seychelles has the highest GDP per capita in Africa (\$15,410 in 2016).⁵⁰ The Seychelles also has better social indicators than comparator small countries – it achieved most of the Millennium Development Goals (MDGs), especially for education, health, poverty eradication, and the environment.⁵¹ However, income inequality remains significant in the country, with a GINI Index score of 46.8 (2013), placing it among the top-25 most unequal countries.⁵²

The persistently unequal distribution of income, despite Seychelles' long-standing policy focus and high spending on public services, social protection and housing incentives, point to constraints in accessing economic opportunities and reduction of productivity in the economy, according to the World Bank.⁵³ These constraints could well intensify as the economy develops further with current trends, causing income gaps and capacity barriers, especially with increasing climate risks in the region.

Key informant interviews conducted with the Ministry of Social Affairs, Community Development and Sports also revealed the correlation of high unemployment rates among youth with gendered drug (heroin) abuse in the main islands, particularly among young boys and men. United Nations Office on Drugs and Crime (UNODC) provides empirical confirmation of this: Seychelles is among the countries and areas with the highest rates of injected drug use (more than 3.5 times the global average).⁵⁴

⁴⁹ The World Bank (2017). *Mauritius: Addressing Inequality through More Equitable Labour Markets*. *Ibid*.

⁵⁰ The World Bank (n.a.). 'Seychelles: Country Overview'. Online. Accessed 17 August 2019. Available at: <https://www.worldbank.org/en/country/seychelles/overview>.

⁵¹ The World Bank (2012). *Country Partnership Strategy: Seychelles*. Policy Document. Accessed 17 August 2019. Available at: <http://documents.worldbank.org/curated/en/524151468165858183/pdf/669190CASOP1240OfficialUseOnly090.pdf>

⁵² The World Bank, Development Research Group (2013). 'Gini Index'. Online Databank. Accessed 20 August 2019. Available at: https://data.worldbank.org/indicator/SI.POV.GINI?end=2017&most_recent_value_desc=true&start=1979&view=chart

⁵³ The World Bank (2017). *Seychelles: Systematic Country Diagnostic*. Report. Accessed 20 August 2019. Available at: <https://openknowledge.worldbank.org/handle/10986/27559>

⁵⁴ United Nations Office on Drugs and Crime – UNODC (2013). *World Drug Report 2013*. Accessed 23 August 2019. Available at: https://www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf

These issues can be identified as indirect exposure risks to climate hazards and disasters, as well as impediments in adaptation capacities and opportunities. Given that Seychelles is particularly dependent on imports, rising commodity prices (especially food and fuel) also are high risk factors for households struggling with lower income as well as drug addiction and abuse problems in the backdrop of climate-related risks.

The World Bank Country Partnership Strategy for the Republic of Seychelles⁵⁵ identifies the vulnerabilities of being a small island nation and reiterates the importance of enhancing its ability to cope with increased climatic variability through mechanisms like EWSs and better coordination with other agencies, such as the meteorological wing. It also recommends the formulation of social safety nets (with the potential of to be scaled up) in connection with EWS and CS in the country.

4.1.2 Labour and Education

LABOUR AND EDUCATION INDICATORS	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
% of Labour Force Participation – Female	37.4 ^a	83.6 ^b	45.4 ^c	66.9 ^d
% of Labour Force Participation – Male	44.1 ^a	89.2 ^b	74.2 ^c	73.9 ^d
% Agricultural Labour – F	63.3 ^e	65.0 ^f	6.0 ^g	-
% Agricultural Labour – M	52.6 ^e	71.0 ^f	8.0 ^g	-
% Non-Agricultural Informal Labour – F	19.5 ^h	38.0 ⁱ	-	-
% of Formal Labour – F	17.0 ^a	-	-	-
% of Formal Labour – M	39.7 ^a	-	-	-
% Adult Literacy Rate – F	77.6 ^e	68.0 ^j	91.0 ^j	94.0 ^j
% Adult Literacy Rate – M	84.0 ^e	75.0 ^k	95.0 ^k	93.0 ^k
<p>NOTE:</p> <p>LABOUR FORCE PARTICIPATION: The labour force participation rate is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work; it provides an indication of the size of the supply of labour available to engage in the production of goods and services, relative to the population at working age. The breakdown of the labour force (formerly known as economically active population) by sex and age group gives a profile of employment distribution of the labour force within a country.⁵⁶</p> <p>GENDER-DISAGGREGATED LABOUR STATISTICS: These figures show the percentage of female and male labour force involved in different sectors of the economy – agriculture (which is the primary sector in Comoros and Madagascar), non-agricultural/non-farm informal sector and formal sector. It is important to introduce heterogeneity in labour statistics to analyse, evaluate and monitor the way an economy is performing and the effectiveness of current and longer-term policies in generating employment.</p> <p>LITERACY RATE: According to UNESCO UIS, literacy rate is the percentage of the population aged 15 years and over who can read and write with understanding a short simple statement on his/her everyday life. Generally, 'literacy' also encompasses 'numeracy' – the ability to make simple arithmetic calculations.</p> <p>Sources of data/information for this table:</p> <p>^a Quoted in Arab Development Portal (2019). <i>Comoros Statistical Snapshot 2019</i>. Figures from the International Labour Organisation – ILO & Institute National de la Statistique et des Etudes Economiques et Démographiques – INSEED (2013).</p>				

⁵⁵ The World Bank (2012). *Country Partnership Strategy: Seychelles*. Ibid.

⁵⁶ ILO (n.a.). 'ILOSTAT Technical Note'. Online. Accessed 16 August 2019. Available at: https://www.ilo.org/ilostat-files/Documents/description_LFPR_EN.pdf

Data Report. Accessed 24 August 2019. Available at:

<http://data.arabdevelopmentportal.com/StatisticalSnapshot/?ln=en&type=country&query=COM/>

^b ILOSTAT (2015). 'Country Profile: Madagascar'. Online Databank. Accessed 24 August 2019. Available at:

<https://www.ilo.org/ilostatcp/CPDesktop/?list=true&lang=en&country=GBR>

^c ILOSTAT (2017). 'Country Profile: Mauritius'. Online Databank. Accessed 24 August 2019. Available at:

<https://www.ilo.org/ilostatcp/CPDesktop/?list=true&lang=en&country=GBR>

^d ILOSTAT (2017). 'Country Profile: Seychelles'. Online Databank. Accessed 24 August 2019. Available at:

<https://www.ilo.org/ilostatcp/CPDesktop/?list=true&lang=en&country=GBR>

^e The World Bank, Gender Data Portal (2019). 'Comoros'. Online Databank. Accessed 24 August 2019. Available at:

<http://datatopics.worldbank.org/gender/country/comoros>

^f The World Bank, Gender Data Portal (2019). 'Madagascar'. Online Databank. Accessed 24 August 2019. Available at:

<http://datatopics.worldbank.org/gender/country/madagascar>

^g The World Bank, Gender Data Portal (2019). 'Mauritius'. Online Databank. Accessed 24 August 2019. Available at:

<http://datatopics.worldbank.org/gender/country/mauritius>

^h African Development Bank – AfDB (n.a.). *Comoros: Country Gender Profile*. Report. Accessed 26 August 2019. Available

at: <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Comoros%20-%20Country%20Gender%20Profile.pdf>

ⁱ The World Bank, Human Development Department – Africa (2010). *Labour Markets Conditions in Madagascar*. Report. Accessed 24 August 2019. Available at:

<http://siteresources.worldbank.org/INTMADAGASCAR/Resources/LaborMarkets.pdf>

^j The World Bank, Open Data (2019). 'Literacy rate, adult female 15+' (collated from UNESCO UIS). Online Databank.

Accessed 30 August 2019. Available at: <https://data.worldbank.org/indicator/SE.ADT.LITR.FE.ZS>

^k The World Bank, Open Data (2019). 'Literacy rate, adult male 15+' (collated from UNESCO UIS). Online Databank.

Accessed 30 August 2019. Available at: <https://data.worldbank.org/indicator/SE.ADT.LITR.MA.ZS>

Comoros

Indicators compiled for the labour and education sectors show the interrelated nature of the two sectors, and how these help determine both individual and national well-being. Comoros, among the four countries targeted by this project, displays the lowest labour force participation (both male and female) – testifying to its status as an undiversified economy, dependence on remittances and high levels of non-wage activities. In the context of climate change and increasing disasters, the lack of diversification in the economy and natural resource-based livelihoods for a majority of the population can create impediments to adaptation opportunities, access to climate services and *ex-post* disaster relief.

An AfDB Country Gender Assessment⁵⁷ finds that the labour market in Comoros is characterised by the feminisation of precarious employment, informal activities, and unemployment – the agricultural sector employs the largest number of women (about 67%) while the civil service employs only 30% of women, particularly in low-level jobs. There are more self-employed women (56.1%) than men (47.5%), in tandem with 47% of the unemployed in Comoros being women.⁵⁸ To cite an example, the field visits revealed that women also tend to be employed in 'add-on' activities: in the fishing communities, *pêcher à pieds* (fishing by feet) is a common practice. Men undertake boat-capture fishing, while women extract small fishes, oysters and crabs by walking along the sea coast during low tides. In the non-agricultural informal sector (traders, small entrepreneurs and the self-employed), women occupy a further 19.5% of jobs.⁵⁹ Female employment in Comoros remains

⁵⁷ African Development Bank – AfDB (n.a.). *Comoros: Country Gender Profile*. *Ibid.*

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*

low with only 13.7% of women in the wage-earning group, 69.2% of which are in 'unsheltered employment'.⁶⁰

Madagascar

The International Labour Organisation – ILO in its flagship *Key Indicators of the Labour Market – KILM* study⁶¹ finds a positive correlation between education and productive employment in different countries. In Madagascar, ILO's findings are conclusively replicated: although labour force participation is high, the country has uniquely high poverty rates in the region, as large sections of the population are dependent on agriculture. In fact, literacy rates collated for the country are misleading: over half of the population (and consequently, the workforce) lack qualified training and knowledge to enter the formal sector (which accounts for less than 3%⁶² of the total economy). The agricultural livelihoods-dependent economy and households are vulnerable to external shocks and climate risks, reiterating the importance of robust CS, EWS and hydromet products and services to strengthen income strategies and resilience.

Further, the World Bank identifies a three-tiered gender gap in Madagascar.⁶³ For example, median earnings for women in non-agricultural employment reach only two-thirds of earnings tabulated for men.⁶⁴ The differences are partly explained by differences in levels of education, yet women with similar characteristics as men are paid comparatively less.⁶⁵ Additionally, the gender wage gap is highest in the informal private non-agricultural sector, and this appears to be largely linked to firm size and other characteristics.⁶⁶ Women, thus, appear to face difficulties and possibly discrimination in at least three areas: access to education, access to higher paying jobs and same pay in those jobs, and access to financial capital and other institutions that favour firm growth.⁶⁷

Mauritius

Indicators compiled on labour and education display the linkages between the two sectors, and how these help determine both individual and national well-being. In Mauritius, the gendered dynamic of the labour market is evident: female labour force participation is quite low compared to peer economies. This can be primarily attributed to tradition- and faith-based norms that inform domestic and household labour (care, reproductive and related work) in Mauritian society.

A study⁶⁸ conducted on gender, education and labour market however problematises the 'common sense' hypothesis suggesting better educational access imply better labour market opportunities. In fact, Gokulsing et al find that though girls outperform boys at all education levels (primary, secondary and tertiary), their access to job opportunities is reduced.⁶⁹ The female unemployment rate is higher than that of males, while women who manage to enter the labour market are

⁶⁰ *Ibid.*

⁶¹ ILO (2016). *Key Indicators of the Labour Market*. Report. Accessed 01 September 2019. Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_498929.pdf

⁶² The World Bank, Human Development Department – Africa (2010). *Labour Markets Conditions in Madagascar*. *Ibid.*

⁶³ *Ibid.*

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

⁶⁸ Gokulsing, D. and Tandrayen-Ragoobur, V. (2014), "Gender, education and labour market: evidence from Mauritius", *International Journal of Sociology and Social Policy*, Vol. 34 No. 9/10

⁶⁹ *Ibid.*

segmented to remain in low-occupation jobs.⁷⁰ As mentioned in an earlier section, women entrants from affluent households primarily fuelled the recent expansion of female labour – showing how women’s access to the market and remunerative prospects are stymied by existing household income levels.⁷¹

These existing gaps translate into inequalities, such as in: decision-making authority and power within the household; control over economic and productive resources; and access to capital, savings and investment opportunities; which are crucial in determining resilience capacities, disaster response and the ability to capitalise on adaptation opportunities.

Seychelles

The archipelago nation presents distinctive statistics for labour and education sectors, as compared to peer economies or other African countries. A SACMEQ (Southern and Eastern Africa Consortium for Monitoring Educational Quality) study⁷² which conducted a cross-country analysis of the magnitude of the variation in reading and mathematics scores, and the between- and within-school components of that variation, show the differences between Seychellois girls and boys. Girls outperformed boys in all SACMEQ indicators, evincing different rates of streaming at different education levels with the gender disparity favouring the former.

Despite higher levels of education, however, female labour force participation still lags behind male labour force participation by almost 10%⁷³, with the Gender Secretariat reporting considerable dropout and occupational streaming rates for women from the labour market. A study conducted by the University of Cape Town finds that women are more likely to be under-paid (19.6% relative to males’ 11.2%), when selected characteristics for minimum wage violation levels and depth are explored. Seychelles presents a unique case for labour and education performance, underscoring the complex social phenomena that inform socioeconomic indicators, which provide the baseline upon which climate adaptation and resilience can be built.

4.1.3 Health and Social Indicators

HEALTH & SOCIAL INDICATORS	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
# # Maternal Mortality Ratio (MMR) Per 100,00 Live Births ^a	335	353	53	-
# Under-Five Mortality Rate, Per 1000 Live Births ^b	69	44	13	14
% Exposure to Gender-Based Violence (GBV)	5 ^c	-	24 ^d	58 ^e
Note: MATERNAL MORTALITY RATIO & UNDER-FIVE MORTALITY RATE: The World Health Organisation (WHO) identifies MMR or complications during pregnancy and childbirth as a leading cause of death and disability among women of reproductive age in developing countries. The MMR represents the risk associated with each pregnancy, i.e. the obstetric risk. It was a MDG and is an SDG 3 indicator. Similarly, the under-five mortality rates take stock of preventable child deaths below the age of 5. Inequities in child mortality between high-income and low-income countries remain large, according to the WHO. In 2017, the under-five mortality rate in low-income countries was 69 deaths per 1000 live births – around 14 times the average rate in high-income countries (5 deaths per 1000 live births). Reducing these inequities				

⁷⁰ *Ibid.*

⁷¹ The World Bank (2015). *Mauritius: Inclusiveness of Growth and Shared Prosperity*. *Ibid.*

⁷² Government of Seychelles, Department of Education and Human Resources Development (n.a.) Streaming in Seychelles: from SACMEQ research to Policy Reform. Accessed 22 August 2019. Available at: <http://www.sacmeg.org/sites/default/files/sacmeg/research/Papers%20from%20the%202005%20International%20Invitational%20Educational%20Policy%20Research%20Conference/leste.pdf>

⁷³ ILOSTAT (2017). ‘Country Profile: Seychelles’. *Ibid.*

across countries and saving more children's lives by ending preventable child deaths are important priorities, particularly under the post-2015 SDG agenda.

LIFETIME EXPOSURE TO GBV: According to the World Bank, around 1 in every 3 women in the world will face physical and/or sexual abuse during their lifetime; and 1 in 4 children bear witness to domestic or GBV. Although the data is sketchy, incidence of GBV is common and normalised through local beliefs and customs in the Indian Ocean Islands. Gender Links, a South Africa-based women's organisation, finds that cultural contexts of preserving family honour, shame stemming from experiencing violence, and lack of redressal and grievance mechanisms as well as low support for GBV survivors result in continued and elevated rates of GBV in the region.

Sources of data/information for this table:

^a The World Bank, Open Data (2015). 'MMR, modelled estimate (collated from WHO/ UNICEF/ UNFPA/ UNDESA). Online Databank. Accessed 22 August 2019. Available at: <https://data.worldbank.org/indicator/SH.STA.MMRT>

^b The World Bank, Open Data (2017). 'Mortality Rate, under 5 (collated by the UN Inter Agency Group for Child Mortality Estimation). Online Databank. Accessed 23 August 2019. Available at: <https://data.worldbank.org/indicator/SH.DYN.MORT>

^c The World Bank, Open Data (2017). 'Comoros: Proportion of women subjected to sexual/ physical violence in last 12 months (collated by the UNDS). Online Databank. Accessed 24 August 2019. Available at: <https://data.worldbank.org/indicator/SG.VAW.1549.ZS?locations=KM>

^d Gender Links (n.a.). 'Mauritius: VAW Baseline Research'. Online. Accessed 24 August 2019. Available at: <https://genderlinks.org.za/what-we-do/justice/research/violence-against-women-baseline-research/mauritius-vaw-baseline-research/>

^e Gender Links (n.a.). 'Seychelles: GBV National Baseline Research'. Report. Online. Accessed 24 August 2019. Available at: <https://genderlinks.org.za/what-we-do/justice/research/violence-against-women-baseline-research/seychelles-vaw-baseline-research/>

Comoros

Selected health and social indicators presented above, particularly the staggering maternal mortality ratio (MMR) and under-five mortality rate, display how the health system in Comoros is plagued by limited access to medical centres, insufficient resources with frequent drug shortages, skilled staff shortages, inadequate staff training opportunities, and weaknesses in health data collection, analysis, and processing.⁷⁴ In 2003, the MMR was 381 deaths per 100,000 live births, and has seen a downward trend marked at 335 deaths in the latest survey (2015). Although GBV rates are lower and atypical in the region, Comoros has a high rate of child marriage (32%, according to the UN Women Global Database on Violence Against Women).

The WHO suggests⁷⁵ that climate change effects on health outcomes and indicators can be based on approximation, however even conservative predictions have tended towards highlighting the negative impacts it can have on a populace. Indeed, with erratic weather events and increasing frequency (and intensity) of climate-related disasters, a limited healthcare system can only be expected to falter (if not fail entirely), underpinning the necessities of strengthened climate services in the country.

Madagascar

The data gathered on Madagascar for health and social indicators reveal a similar predicament to that of Comoros. High MMR and under-five mortality rates, along with the country's struggles with pneumonic plague in 2017 and 2018, indicate a lack of investment in the public health system,

⁷⁴ African Development Bank – AfDB (n.a.). *Comoros: Country Gender Profile*. Ibid.

⁷⁵ <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

limited access to healthcare, and gaps in preparedness, surveillance and response capabilities. Although national GBV rates are not available yet for the country, a UNFPA pilot study (in Antananarivo, Diego and Tulear) found about 30% of women reported having experienced GBV.⁷⁶ Further, Madagascar has a high rate of child marriage (41%, according to the UN Women Global Database on Violence Against Women).

Given this baseline, climate-sensitive health impacts/disease outbreaks (such as malaria, typhoid, and cholera in the aftermath of disasters) can be expected to further destabilise households, create income shocks, and lead to preventable loss of life. The latter is also a marked gender phenomenon, as gender differences have been shown to have conclusive linkages with meteorological hazards due to physiological, behavioural and socially constructed influences on health outcomes.⁷⁷

Mauritius

In contrast to Comoros and Madagascar, Mauritius' performance on health and social indicators is better, proving the importance of consistent and relevant government investment in the public health sector and social institutions. According to time-series data reported by the Government of Mauritius, however, there are recent spikes in MMR and under-five mortality (especially in 2017).⁷⁸ Gender Links finds that about a quarter of women in Mauritius have experienced some form of GBV in their lifetime, including partner and non-partner violence, while a similar proportion of men admit to perpetuating violence against women in their lifetime.⁷⁹ Violence occurs primarily in intimate partner relationships, showing how IPV is the predominant type of GBV in the island country, in addition to minimal rates of reporting: only 0.3% of women in Mauritius have reported domestic violence.⁸⁰ It can be speculated from the Gender Links baseline study that actual levels of GBV (and IPV) are higher and go underreported in the country.⁸¹

Linkages between health indicators, climate change resilience and GBV are less tenuous than previously assumed and have been emphasised more and more through targeted socio-anthropological research.⁸² For the overall success of climate change adaptation efforts, these considerations need to inform mainstreaming activities, to ensure better targeting of beneficiaries and delivery of project goals.

Seychelles

In a similar vein to Mauritius, Seychelles has better indicators of health outcomes (such as life expectancy and child mortality rates) than many other small island states, primarily because of free access to healthcare provided by the state. Since the 2000s, the country has recorded zero maternal mortality; births attended by skilled health staff hovers between 99 and 100%, and the proportion of women receiving prenatal care has consistently been over 99%.⁸³ The island nation achieved

⁷⁶ The New Humanitarian (2013). 'Small steps in Madagascar's fight against GBV'. Online News Report. Accessed 03 September 2019. Available at: <http://www.thenewhumanitarian.org/feature/2013/12/10/small-steps-madagascar-s-fight-against-gender-based-violence>

⁷⁷ Neumeyer, E. & Plümper, T. (2007). 'The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981 – 2002' in *Annals of the Association of American Geographers* (Vol. 97, No. 3).

⁷⁸ Government of Mauritius (2017). *Health Statistics Report 2017*. Government Report. Accessed 03 September 2019. Available at: <http://health.govmu.org/English/Documents/2018/ANNUAL%20REPORT%202017%20FOR%20PRINTING.pdf>

⁷⁹ Gender Links (n.a.). 'Mauritius: VAW Baseline Research'. *Ibid*.

⁸⁰ *Ibid*.

⁸¹ *Ibid*.

⁸² <https://genderandenvironment.org/2018/08/survey-linkages-between-gender-based-violence-gbv-and-the-environment/>

⁸³ The World Bank (2012). *Country Partnership Strategy: Seychelles*. *Ibid*.

most of the health-related MDGs, and is on track to operationalise policy and budgetary allocations towards SDG 3 (Good Health and Well-Being).

Yet, challenges crop up in the broader health landscape in the Seychelles. UNODC reports that Seychelles is among the countries and areas with the highest rates of injected drug use (more than 3.5 times the global average).⁸⁴ Interviews held with the Gender Secretariat in Victoria confirmed these findings and revealed the gendered nature of substance abuse in the country: demand for illegal heroin and other substances originate primarily from unemployed youth and men in the country.

GBV studies in Seychelles have uniquely featured both women and men: in partnership with Gender Links, the Government has determined that the most common form of violence against men is emotional violence (29%), followed by physical violence (12%), economic violence (9%), and sexual violence (3.3%). Violence against women stands at a staggering 58%, showing the prevalence of different types and complex incidence of GBV in the islands. Although the linkage between GBV and environment is a nascent topic of research, the evidence of violence as a threat multiplier of risks (as well as exposure to them) is mounting.⁸⁵

The WHO suggests⁸⁶ that SDG 13 (Climate Action) and SDG 3 (Good Health and Well-Being) are closely related, with results gained in one sector positively impacting results in the other. Targeted health-related investment for continued results, thus, is important for the archipelago – with better CS, EWS and hydromet products assisting in disaster-related health outcomes.

4.2 Policy environment

This sub-section takes stock of the policy environment and legal frameworks available for gender-responsive climate change adaptation in the project countries (including international conventions such as the Convention on the Elimination of all Forms of Discrimination against Women or CEDAW, national laws and policies, strategy documents on gender and climate change), as well as a list of potential institutions for collaboration on gender mainstreaming during the project cycle. Identification of legal tools and enabling policies, particularly at the baseline outset, are crucial in ensuring that gender inequality can be addressed through tangible and formal procedures. Additionally, the inclusion of local and national gender partners develops capacity and technical knowledge towards future gender efforts while establishing ownership of the project and the change narrative being implemented.

The Social Institutions and Gender Index (SIGI)⁸⁷ category (very low to very high discrimination), indicating the relative strength of legal and social institutions in the country, is presented for Madagascar (only aggregate available), and scores in other indicators are presented for all four IOC countries targeted by the project. The SIGI covers four dimensions⁸⁸ of discriminatory social institutions, spanning major socioeconomic areas that affect women's lives: discrimination in the family, restricted physical integrity, restricted access to productive and financial resources, and restricted civil liberties.

⁸⁴ UNODC (2013). *World Drug Report 2013*. *Ibid*.

⁸⁵ <https://genderandenvironment.org/2018/08/survey-linkages-between-gender-based-violence-gbv-and-the-environment/>

⁸⁶ <http://www.euro.who.int/en/health-topics/health-policy/sustainable-development-goals/publications/2019/policy-briefs-on-health-and-the-sustainable-development-goals/sdg-13-health-and-climate-action>

⁸⁷ Organisation for Economic Cooperation and Development – OECD, Development Centre (2019). 'What is SIGI?'. Official Website. Accessed 08 September 2019. Available at: www.genderindex.org

⁸⁸ *Ibid*.

Social Institutions and Gender Index 2019 (SIGI) ⁸⁹	Comoros ⁹⁰	Madagascar ⁹¹	Mauritius ⁹²	Seychelles ⁹³
Categorisation into 5 segments from very low to very high discrimination	-	HIGH	-	-
% Prevalence of Discrimination in the Family	81	57	53	41
% Restricted Physical Integrity	28	32	-	-
% Restricted Access to Financial and Productive Resources	-	39	19	-
% Restricted Civil Liberties	-	59	41	-
<p>NOTE:</p> <p>Calculated by the Organisation for Economic Cooperation and Development (OECD)'s Development Centre, the SIGI is a cross-country measure of discrimination against women in social institutions (formal and informal laws, social norms, and practices) across 180 countries. Discriminatory social institutions intersect across all stages of girls' and women's lives, restricting their access to justice, rights and empowerment opportunities and undermining their agency and decision-making authority over their life choices.</p> <p>As underlying drivers of gender inequalities, discriminatory social institutions perpetuate gender gaps in development areas – such as education, employment and health – and hinder progress towards rights-based social transformation that benefits both women and men.</p> <p>The SIGI's variables quantify discriminatory social institutions such as unequal inheritance rights, child marriage, violence against women (GBV/VAW), and unequal land and property rights. Through its 180 country profiles, country classifications, unique database and its innovative simulator, the SIGI provides a strong evidence base to effectively address the discriminatory social institutions that hold back progress on gender equality and women's empowerment, allowing policy makers to scope out reform options and assess likely effects on gender equality in social institutions.</p>				

COMOROS	
CEDAW, Maputo Protocol	Comoros acceded to the CEDAW on 31 October 1994, but has not yet ratified it. The island nation also ratified the Maputo Protocol (The Protocol to the 'African Charter on Human and Peoples' Rights' on the Rights of Women in Africa) as one of the earlier signatories.
Gender Policies	In Comoros, the law prohibits discrimination based on gender and the government has taken steps to improve the political participation of women. The Constitution was revised in 2018 ⁹⁴ to include the Articles 30, 34 and 36 to ban abandonment and GBV, and increase political representation – with provision for government intervention, where necessary, for the actualisation of these rights.
Governmental Mechanisms	The National Commission on Solidarity, Civil Protection and Promotion of Gender is the primary socio-civic organisation for the mobilisation of gender mainstreaming efforts. The Beijing 25+ report produced by the Commissariat shows that baseline understanding of gender inequality

⁸⁹ OECD, Development Centre (2019). '2019 Results'. Official Website. Accessed 08 September 2019. Available at: www.genderindex.org/countries

⁹⁰ OECD, Development Centre (2019). *Country Profile: Comoros*. Accessed 08 September 2019. Available at: <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/KM.pdf>

⁹¹ OECD, Development Centre (2019). *Country Profile: Madagascar*. Accessed 08 September 2019. Available at: <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/MG.pdf>

⁹² OECD, Development Centre (2019). *Country Profile: Mauritius*. Accessed 08 September 2019. Available at: <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/MU.pdf>

⁹³ OECD, Development Centre (2019). *Country Profile: Seychelles*. Accessed 08 September 2019. Available at: <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/SC.pdf>

⁹⁴ UN Women & Union Des Comores, Commissariat National à la Solidarite, à la Protection, et à la Promotion du Genre (2014). *Rapport Pays sur les Progres Realises dans la Mise en Œuvre de la Plateforme D'Action de Beijing+25*. Ibid.

	issues in the country exists.
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MADAGASCAR	
CEDAW, Maputo Protocol	Madagascar ratified the CEDAW on 17 March 1989. Madagascar has also signed the Maputo Protocol but is yet to ratify it through national prerogatives due to reservations regarding abortion-related policies.
Gender Policies	<p>The following policy tools towards gender mainstreaming exist in the country: Gender and Elections strategy (2015–2020), aimed at enhancing the representation and participation of women in decision-making; and a National Action Plan for combating GBV.</p> <p>Madagascar is identified as having ‘high’ discrimination on the SIGI index, which takes stock of discrimination in the family, restricted physical integrity, restricted access to productive and financial resources, and restricted civil liberties.</p> <p>Under the Constitution all citizens are equal before the law and are protected from discrimination based on gender.⁹⁵ Yet, regarding basic citizenship rights, the status of women and men is uneven. Until 2017, for example, the Nationality Code did not allow a Malagasy woman to confer her nationality to her children. Under civil law, women and men have equal rights marry. In 2007, the law was amended to increase the legal age of marriage for women and men to 18. Further, the law recognises both civil and traditional ceremonies (if legally registered by an officer of civil status) and prohibits bigamy (Law on Marriage and Matrimonial Regimes, 2007).⁹⁶ In practice, customary marriages are widely practiced, and few are legally registered, leaving women without the protections offered through the civil law. Traditional and faith-based norms, a national CEDAW shadow report⁹⁷ identifies, perpetuate unequal treatment of women in family matters such as marriage, divorce, and child custody.</p>
Governmental Mechanisms	Ministry of Population, Social Protection and Promotion of Women is the national gender machinery for the country and has extensive experience working with different funds and UN/aid agencies.

MAURITIUS	
CEDAW, Maputo Protocol	Mauritius acceded to the CEDAW on 09 July 1984, but is yet to ratify it. In June 2017, Mauritius also ratified the Maputo Protocol (with reservations), noting the commitment of the government of Mauritius to securing the rights of every woman and child through various programmes.
Gender Policies	<p>Under the 1968 Constitution all citizens are equal before the law and are protected from discrimination based on gender.⁹⁸ The state’s Constitution affords both women and men the same rights to access justice, including provisions for legal aid and interpretation services, for example.</p> <p>Yet, while discrimination of all forms is prohibited by the state’s Constitution, the law provides exemptions in matters relating to personal status, including marriage, divorce, death and inheritance.</p> <p>However, Mauritius has been proactive in incorporating gender mainstreaming goals through its state machinery, and is currently developing a draft National Gender Policy Framework with EU</p>

⁹⁵ OECD, Development Centre (2019). *Country Profile: Madagascar*. *Ibid*.

⁹⁶ *Ibid*.

⁹⁷ The Madagascar Coalition of Civil Society Organization (2015). *CEDAW Shadow Report: Madagascar*. Accessed 12 September 2019. Available at: https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/MDG/INT_CEDAW_NGO_MDG_21897_E.pdf

⁹⁸ OECD, Development Centre (2019). *Country Profile: Mauritius*. *Ibid*.

	support to replace the 2008 version. ⁹⁹ Further, a National Action Plan to Combat Domestic Violence was formulated by the Family Welfare and Protection Unit in 2007.
Governmental Mechanisms	The Ministry of Gender Equality, Child Development and Family Welfare is the primary organisation for the mobilisation of gender mainstreaming efforts. It is proactive and well equipped for gender-responsive activities, has previously developed (and is developing a replacement) policy framework, and has a demonstrated knowledge of the intersections between gender and environmental issues.

SEYCHELLES	
CEDAW, Maputo Protocol	Seychelles acceded to the CEDAW on 05 May 1992, but is yet to ratify the convention. The archipelago nation also ratified the Maputo Protocol (2006), and is one of the frontrunners in fulfilling its commitments to the African Union.
Gender Policies	<p>The Seychelles has the following two gender-specific policies: the National Strategy for Domestic Violence 2008 – 2012; and the National Action Plan on Gender-Based Violence 2010 – 2011.¹⁰⁰</p> <p>Seychelles has been one of the better performers for gender indicators in the continent – the CEDAW, for example, particularly recognises the high representation of women in parliament (~44%) and in the public service. The Committee also welcomes the quality and accessibility of maternal and child health-care services by the government, in addition to the results achieved regarding de facto equality between girls and boys in the education sector.</p> <p>The country also welcomed an election observation mission (exclusively staffed by women) on 04 September 2016 by the African Union Commission (AUC). Additionally, in 2012, the Gender Secretariat of the Government of the Seychelles developed the ‘Gender and the Law Manual’ to provide parliamentarians, judges, lawyers and law enforcement agencies with legal guidance, information and resources on gender sensitivity.¹⁰¹</p>
Governmental Mechanisms	The Gender Secretariat, housed within the Ministry of Social Affairs, Community Development and Sports, is the primary gender mainstreaming machinery in the country. The Secretariat is currently developing a climate change and gender action plan, in line with the protocols laid down by the South African Development Community (SADC).

4.3 Composite Indices – HDI, GDI, GGI, GGGI, and MPI

Implementing gender-responsive adaptation action requires situating the project’s results framework on a thorough and context-driven baseline. A collation exercise of scores and rankings from composite indices, especially due to the lack of decentralized, nationally available data, has been included in this assessment to reflect the overall gender performances of the four countries. These indices have differing methodologies, and are being employed as indicative (and *not* conclusive) measures of current levels of development, gender equality, poverty, and labour force participation.

As Booyesen’s research¹⁰² shows, composite indices present both challenges and advantages. For example, numerous fallacies have been identified in the methodologies employed in composite indexing. These indices are mainly quantitative, and present empirical and aggregate measures of

⁹⁹ African Union Commission – AUC & United Nations Office for High Commissioner of Human Rights – UNOHCHR (n.a.). *Development in Laws since the Maputo Protocol*. Report. Accessed 12 September 2019. Available at: <https://www.ohchr.org/Documents/Issues/Women/WRGS/DevelopmentsinLawsinfoGraphics.pdf>

¹⁰⁰ AUC & UNHCR (n.a.). *Development in Laws since the Maputo Protocol*. *Ibid*.

¹⁰¹ OECD, Development Centre (2019). *Country Profile: Seychelles*. *Ibid*.

¹⁰² Booyesen, F. (2002). “An Overview and Evaluation of Composite Indices of Development” in *Social Indicators Research*, (Vol. 59 No. 2). Journal Article.

complex development phenomena, making values apparently objective, at the cost of subjective nuances. Yet, these also remain invaluable as useful supplements to income-based development indicators, understanding relative degrees of development, simplifying complex measurement constructs as well as providing access to non-technical audiences.

This baseline, at the outset, uses scores of three different UNDP composite indices: **Human Development Index (HDI)**, **Gender Inequality Index (GII)** and **Gender Development Index (GDI)** as points of departure. Secondly, the baseline collates scores from the **World Economic Forum (WEF)**'s **Global Gender Gap Index (GGGI)** and **Oxford Poverty and Human Development Initiative (OPHI)**'s **Multidimensional Poverty Index (MPI)**, although data for some project countries are unavailable.

HDI	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
HUMAN DEVELOPMENT INDEX				
UNDP (2018) – out of 189 countries ¹⁰³	165	161	65	62
<p>NOTE: This index measures and combines three basic dimensions of human development (long and healthy life, knowledge and decent standard of living) and provides an overall socioeconomic landscape of a country.</p> <p>In line with Booyesen's argument, however, the HDI should be treated as indicative, not conclusive. It provides an overview of relative degree of development in a particular country but remains a 'synthetic indicator'. Recent research has shown the need to supplement the HDI with other indicators associated with economic and social cohesion, sound development strategies, and sustainability in growth models.¹⁰⁴</p>				

GII	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
GENDER INEQUALITY INDEX				
UNDP (2018) – out of 189 countries ¹⁰⁵	-	161	-	-
<p>NOTE: This index, showing inequality in achievement between men and women in three aspects (reproductive health, empowerment and labour market), provides a useful gender baseline in terms of health equity, economic capital and financial access, speaking to the gender opportunities of men and women in the countries. It provides a primary understanding of the different levels of achievement on basic development indicators between men and women. This displays useful features towards the gender status quo hypotheses, which could then be derived in the context of this project. GII should be treated as indicative: note that Pernmayer finds that the functional form of the index could be unclear, particularly the inclusion of relative performance indicators for women vis-à-vis men, along with absolute women-specific indicators.¹⁰⁶</p> <p>GII scores for Comoros, Mauritius and Seychelles are unavailable as of August 2019.</p>				

GDI	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
GENDER DEVELOPMENT INDEX				

¹⁰³ UNDP – United Nations Development Programme (2018). *Human Development Reports*, 'Table I: HDI and its Components'. Website. Accessed 02 August 2019. Available at: <http://hdr.undp.org/en/composite/HDI>

¹⁰⁴ Bilbao-Ubillos, J (2011). "The Limits of HDI" in *Sustainable Development*, (Vol. 21 No. 6). Journal Article.

¹⁰⁵ UNDP (2018). *Human Development Reports*, 'Table V: Gender Inequality Index'. Website. Accessed 02 August 2019. Available at: <http://hdr.undp.org/en/composite/GII>

¹⁰⁶ Pernmayer, I (2013). "A Critical Assessment of UNDP's Gender Inequality Index" in *Feminist Economics*, (Vol. 19 No. 2). Journal Article.

UNDP (2018) – grouped in 5 for absolute deviation ¹⁰⁷	5	2	2	-
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NOTE: The GDI (UNDP) index shows the ratio of female to male HDI values. GDI expresses values in deviation, hence, to facilitate understanding GDI grouped categories have been used (as grouped by UNDP) to show the absolute deviation from gender parity in HDI values (1 being the highest, and 5 being the lowest). This further reiterates the results of the HDI (UNDP) and GII (UNDP), and shows the real gender gap in human development achievements. Geske Dijkstra and Hanmer find that although gender-related development indices have increased attention towards ‘feminization of poverty and underdevelopment’, more robust data needs and indicators are required to create aggregate indices that are sensitive to contemporary trends in gendered privation, particularly with the categorisation of ‘women’.¹⁰⁸

GDI grouping for Seychelles is unavailable as of August 2019.

GCCI	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
GLOBAL GENDER GAP INDEX WEF (2018) – out of 144 countries ¹⁰⁹	-	84	109	-

NOTE: The GGCI (WEF) benchmarks 144 countries on their progress towards gender parity on four thematic dimensions – economic participation and opportunity, educational attainment, health and survival, and political empowerment. The Index takes stock of national gender gaps on economic, political, education- and health-based criteria, and provides country rankings that allow for effective comparisons across regions and income groups.

GGCI rankings for Comoros and Seychelles are unavailable as of August 2019.

MPI	COMOROS	MADAGASCAR	MAURITIUS	SEYCHELLES
MULTIDIMENSIONAL POVERTY INDEX (2019) – out of 101 countries ¹¹⁰	65	94	-	-

NOTE: Calculated by the Oxford Poverty and Human Development Institute (OPHI) and UNDP, the global Multidimensional Poverty Index (MPI) measures acute poverty in developing countries (covering 76% of the population). It complements traditional income-based poverty measures by capturing severe deprivation regarding different indicators: education, health, and living standards. The index not only identifies those living in multidimensional poverty, but the extent (or intensity) of their poverty. The MPI can support the effective allocation of resources by making it possible to target those with the greatest intensity of poverty, addressing SDGs strategically and monitoring tangible impacts of policy intervention.¹¹¹

MPI scores are calculated for developing countries¹¹² – hence, data is available only for Comoros and Madagascar due to Mauritius’ categorisation as an ‘upper middle income’ country by the World Bank with ‘High Human Development’

¹⁰⁷ UNDP (2018). *Human Development Reports*, ‘Table IV: Gender Development Index’. Website. Accessed 02 August 2019. Available at: <http://hdr.undp.org/en/composite/GDI>

¹⁰⁸ Geske Dijkstra, A. & Hanmer, L. C (2002). “Measuring Socio-Economic Gender Inequality: Towards an Alternative to the UNDP Gender Index” in *Feminist Economics*, (Vol. 6, No. 2). Journal Article.

¹⁰⁹ WEF – World Economic Forum (2018). *The Global Gender Gap Report*. Report. Accessed 06 August 2019. Available at: http://www3.weforum.org/docs/WEF_GGGR_2018.pdf

¹¹⁰ UNDP & Oxford Poverty and Human Development Initiative – OPHI (2019). *Human Development Reports*, ‘Multidimensional Poverty Index: Developing Countries’. Website. Accessed 06 August 2019. Available at: http://hdr.undp.org/sites/default/files/mpi_2019_table_1.pdf

¹¹¹ UNDP & OPHI (2019). *Human Development Reports*, ‘MPI Technical Note’. Technical Note. Accessed 06 August 2019. Available at: http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf

¹¹² See: <https://ophi.org.uk/background-to-the-mpi/>

according to the UNDP's HDI rankings, and Seychelles' categorisation as a 'high-income' country by the World Bank with 'High Human Development' according to the UNDP's HDI rankings.

5 CONCLUSION: REGIONAL POTENTIAL & WAY FORWARD

This Gender Assessment has identified and expounded upon both explicit and implicit gender and socio-economic issues that could be addressed through the project components. The findings from the Assessment also form the basis for the Gender Action Plan (Section 5), which will specify this proposal's desired results, corresponding actions, indicators, timelines, responsible parties, and budget allocations, through the results framework (Section E of the funding proposal or FP).

Given mounting evidence that dynamic, long-term planning for the uncertainties posed by climate change must be inclusive, gender-responsive and stakeholder-friendly, this project will pioneer gender mainstreaming in climate services. Gender equality has also gained priority in the GCF, AFD, and other agencies' portfolios as a part of implementing a holistic social development mandate with inclusive engagement. With that policy background this project partakes in the international conversation on gender mainstreaming in climate change adaptation efforts.

If implemented effectively, this project has the potential to become a good practice gender-mainstreaming guide for future interventions in the Comoros, Madagascar, Mauritius and Seychelles (nationally), the Indian Ocean region (regionally) as well as among other SIDS and LDCs, and globally.

6 GENDER ACTION PLAN

This section provides the Gender Action Plan. The first table shows the main outputs and responsibilities expected from the Gender Consultant to be hired during the project cycle. The Gender Consultant will also participate in activity 1.4.1, which will conduct a baseline study of access to climate services, institutional capacities of NMHSs, and needs of these different institutions. This will be conducted with the aim to build upon the formative research on gender mainstreaming presented in Annex 8, and develop agreed-upon and needs-based outputs for the four countries. The gender mainstreaming action points will also pertain to regional and national priorities and deliver on greater gender equality in the region. The second table puts forward a gender action plan with a gender impact statement and expected outcome for each component. Gender mainstreaming action points are then presented for each activity of the expected results, with the required outputs towards identified targets and indicators.

SUMMARY TABLE OF GENDER TARGETS <i>(to be undertaken by the Hydromet Project Gender Consultant)</i>	
COMPONENT	GENDER TARGET
COMPONENT 1: CAPACITY BUILDING, INSTITUTIONAL DEVELOPMENT, REGIONAL COOPERATION AND PUBLIC-PRIVATE ENGAGEMENT	<ul style="list-style-type: none"> → Include gender-responsive policy inputs in regional and national frameworks developed for climate services (with reference to WMO Gender Strategy) → Ensure gender capacity building through the design of training modules to assist transition and development plans of NMHSs, DRR institutions and relevant sectoral ministries → Increase gender parity in new staff and trainees hired for EWS, CS, and hydromet services
COMPONENT 2: HIGH-QUALITY CLIMATE-RELATED DATA, IMPROVED MULTI-HAZARD IMPACT-BASED FORECASTS AND EWSs, AND CLIMATE RISK ASSESSMENTS	<ul style="list-style-type: none"> → Ensure gender-engagement training of observers and forecasters, particularly those involved in impact forecasting and nowcasting, to increase gender-responsiveness of EWS and CS products → Research and include community and social vulnerabilities, particularly gendered impacts and gender-differentiated capacities of resilience, in the hazard maps and climate vulnerability maps developed for each country
COMPONENT 3: ENHANCED USE OF CLIMATE SERVICES FOR CLIMATE CHANGE ADAPTATION, AND IMPROVED CAPABILITIES IN IMPLEMENTING A PEOPLE-CENTERED MH-IBF-EWS FOR DRR	<ul style="list-style-type: none"> → Conduct needs assessments to ensure gender-responsiveness of daily weather bulletins, seasonal forecasts and agricultural advisories → Ensure gender-responsiveness in EW dissemination, particularly with regard to the limited access women have in public spaces (mosques in Comoros), or to information channels (radios in Madagascar) → Incorporate time use analysis to ensure effective and meaningful participation of women and other vulnerable groups in any trainings and/or information campaigns for EW and CS

COMPONENT 1: CAPACITY BUILDING, INSTITUTIONAL DEVELOPMENT, REGIONAL COOPERATION AND PUBLIC-PRIVATE ENGAGEMENT

GENDER IMPACT STATEMENT: Strengthened institutions reinforced capacity and greater regional cooperation among the four IOC countries and their NMHSs with gender mainstreaming will ensure that a standardised gender-responsive approach is pioneered and operationalized for EWS and CS in the region.

COMPONENT OUTCOME: A standardised mainstreaming approach for greater gender equality, particularly for climate change adaptation through CS, EWS, hydromet, for the IOC countries.

OUTPUTS:

1.1: A REGIONAL CLIMATE CHANGE CENTRE NETWORK AND R/NFCSs ESTABLISHED IN THE SWIO REGION WITH GENDER-RESPONSIVE POLICIES

1.2: INSTITUTIONAL ARRANGEMENTS FOR NMHS OPERATIONS STRENGTHENED AND CIEWS FUND ESTABLISHED TO DELIVER USER-FRIENDLY AND ACCESSIBLE CS

1.3: IMPROVED STAFFING CAPACITY AND CAPABILITY OF THE RCC, NMHS AND OTHER RELEVANT INSTITUTIONS WITH A FOCUS ON INCREASED GENDER PARITY

1.4: DETAILED DESIGN AND SYSTEMATIC INTEGRATION OF PROJECT ACTIVITIES TO DELIVER GENDER-RESPONSIVE CS, EWS AND HYDROMET SERVICES

ACTIVITY	RELEVANCE	GENDER ACTION POINT	INDICATOR/S	BASELINE (VALUE, YEAR)	TARGET (VALUE, YEAR)	RESPONSIBLE PARTY	MEANS OF VERIFICATION	MONITORING (UNIT, DISAGG.)	ASSUMPTIONS
1.1.1 Develop regional and national frameworks for climate services (RFCS & NFCS)	<p>The establishment of the RFCS and NFCS will be a pioneering effort in the Indian Ocean region for cohesive climate adaptation efforts involving the four member countries. Without replacing the functions of NMHSs, this will promote a regional methodology based on the WMO GCFS.</p> <p>This activity, hence, will have a policy-level and institution-level action point.</p>	<p>Include gender and vulnerability context monitoring in the regional and national frameworks developed for climate services</p> <p>Organise specific working sessions, adapted to women and girls daily activities. When possible theses specific sessions shall be animated by women expert to identify the specific needs,</p>	<p>RFCS with gender strategy</p> <p>NFCSs, which reflect national gender priorities</p>	<p>0 (2019)</p> <p>0</p>	<p>1</p> <p>4</p>	<p><u>AE PMU – GENDER CONSULTANT (GC)</u> through participation in sub-activities 1.1.1.1 (stakeholder consultation), 1.1.1.2 (regional workshop), and 1.1.1.4 (national workshops).</p> <p>The GC will refer to WMO policies and efforts on gender equality and mainstream the same in the R/NFCSs. See: https://public.wmo.int/en/resources/gender-equality</p>	<p>Minutes from stakeholder consultation, regional workshop and national workshops and specific women sessions</p> <p>Gender content in the RFCS</p> <p>Gender content in the NFCS</p>	<p>Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)</p>	<p>National stakeholders are willing to explicitly include gender strategies within the overarching R/NFCSs.</p>

		ease and smooth the expression of needs and expectations							
1.1.2 Design the legal, institutional, financial and organisational strategy to establish the RCC within the IOC	<p>The RCC profile generated through the preceding activity, will lead to the establishment of an RCC for the SWIO region within the IOC. It will provide regional services and facilities to IOC member states (pertaining to activities 2.2.1, 2.2.2, 2.3.2, 3.3.3, and 3.3.4).</p> <p>It will carry on the gender-inclusive policies identified for the RCFS and NCFs, ensuring scaled-up gender mainstreamed model for the region.</p> <p>This will also, hence, have a combined policy-level and institution-level action point.</p>	Include gender and vulnerability context monitoring in the legal, institutional, financial and organisational strategy for the RCC	Gender components for the RCC Strategy – which will consolidate 50% – 50% male and female representative hiring for the RCC	0	1	<p><u>AE PMU – GENDER CONSULTANT</u></p> <p>through contribution to 1.1.2.1 (RCC Network plan) and 1.1.2.2 (Validation Workshop)</p> <p>The GC will include gender-, climate change- and environment-related priorities of each country and choose standards accordingly towards the RCC. This effort will be informed by WMO's and SWIOCOF's multi-hazard, gender-responsive approach identified in 2015. See: https://www.gfdrr.org/sites/default/files/2.a.%20WMO%20ASG%20CG%20GFDRR.pdf</p>	<p>Minutes from validation workshop</p> <p>Gender mainstreaming clauses / priorities in the RCC Network Plan - organizational, legal and financial frameworks, policies and MoUs – agreed upon by national and local institutions</p>	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are willing to explicitly include gender strategies for the RCC
1.1.3 Design, define strategies and operating plans for the establishment of: (i) a regional laboratory for maintenance and annual calibration of equipment as a	These strategies focus on technical capacity strengthening. Here, gender mainstreaming will take the form of involvement of more women in technical capacities, ensuring greater gender parity (currently favoured towards men) in the meteorological sectors of the countries.	Ensure gender-equitable participation through the strategies and operation plans developed to set up the calibration and maintenance lab (WMO Regional Centre)	Rapid analysis (baseline) gender-disaggregation of existing personnel in each NMHSs	Exact figures N/A, annex 8 study suggests skewed towards male	ideal: 50 – 50 M/F min: 65 – 35 M/F	NMHSs to present personnel data for baseline establishment to AE PMU GENDER CONSULTANT	Baseline studies delivered under activity 1.4.1 will reflect this information, by country and by gender-disaggregation	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are able to share the details of NMHSs personnel

WMO Regional Instrument Centre; and, (ii) regional center for specialized training	This will, thus, have two technical-level action points for (i) and (ii).	Ensure specialized training equips new and existing personnel for gender mainstreaming	Gender mainstreaming module to be included in specialized training for new and existing staff	0	1	<u>AE PMU GENDER CONSULTANT</u> to develop gender module for specialized training programme	Gender module content in the specialized regional training programme		Countries are willing to agree on a regionally standardised gender training module
1.1.4 Prepare a strategy to improve Regional Numerical Weather (NWP) and Climate Prediction (NCP)	This is a technical activity that will ensure the harmonization of climate products across countries, based on WMO standards. Given the focus on harmonization across the range of different capacities of the countries, it will be important to operationalize gender mainstreaming actions based on WMO's policy and strategy on gender equality. Within this, gender-responsive design will mainstreamed according to WMO strategy. This will, thus, have a technical-level action point .	Inform the NWP and NCP with gender and vulnerability context monitoring	Gender components in NWP and NCP	0	1	<u>AE PMU – GENDER CONSULTANT</u> through participation in 1.1.4.3 (regional workshop) is able to onboard NMHSs representatives from each country, as well as external, relevant partners towards harmonization of gender-responsive, regional climate products	Gender mainstreaming clauses reflected in the NWP and NCP	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	Country representatives are willing to agree on regionally standardised climate products with gender-responsive components
1.2.1 Strengthen the institutional, operational and financial strategy of NMHSs for each target country	This activity focuses on development and implementation of capacity building. Here, gender mainstreaming will take the form of involvement of more women in technical capacities, ensuring greater gender parity (currently	Ensure gender equitable (where possible based when relevant on GbV identified practices) participation in	– 1.1.3 (i)	– 1.1.3 (i)	– 1.1.3 (i)	<u>AE PMU – GENDER CONSULTANT</u> Under sub-activities 1.2.1.1 – 1.2.1.3 the staffing needs of the met services will be assessed, and quick gender analysis in terms of disaggregation will be	Baseline studies delivered under activity 1.4.1 will reflect this information, by country and by gender-disaggregation	NUMBER of: existing personnel & new personnel hired, disaggregated by country and by gender	Availability of gender-diverse human resource for each NMHSs Countries are willing to hire more female staff for their NMHSs

	favoured towards men) in the meteorological sectors of the country Hence, this activity will have a combined capacity- and technical-level action point .	the NMHSs of each country				performed. Adherence to gender-equal hiring policies will be gradually ensured, to improve both participation and representation, in the meteorological services.	End of project cycle numbers for personnel in NMHSs	PERCENTAGE: change in representation (whether increase registered for women's representation)	
1.2.2 Design the transition support plan of each NMHS, DRR institutions and relevant sectoral ministries (Capacity Development Plans)	This activity focuses on development and implementation of capacity building. Here, gender mainstreaming will take the form of increasing awareness regarding gender-climate change-hydromet services nexus issues. The action point for this will be at capacity- and technical-level .	Ensure gender is mainstreamed in the Capacity Development Plans while paying attention to GbV if any identified.	Gender components in Capacity Development Plans	0	1	<u>AE PMU – GENDER CONSULTANT</u> New training programmes will include modules on gender-climate change adaptation-hydromet services nexus issues. These modules will also be included in the training exercises for new recruits under activity 1.2.1.	Gender module content in the training programmes and Capacity Development Plans	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are willing to include gender as a part of capacity development planning
1.2.3 Review and/or strengthen legal and regulatory materials, including the potential establishment of a CIEWS fund	This activity focuses on a regulatory framework that establishes the mission and mandate of the NMHSs and a ring-fenced CIEWS fund. This activity therefore will have both policy-level and institution-level action point .	Ensure gender-sensitive grievance mechanisms are legally mandated, with access guaranteed for women and prevent from GbV if any identified	Grievance mechanisms are made part of the legal and institutional frameworks	0	4	<u>IOC NMHSs in collaboration with AE PMU – GENDER CONSULTANT</u> The GC to specify, based on contextualised research, how grievance mechanisms can be designed in each country and how they can be made accessible particularly to women	Detailed reporting on each mechanism mandated for the IOC country in context, and how it can be accessed especially by women and local actors	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	NMHSs agree with legal mandate to create and operationalize grievance and redressal mechanisms
1.3.1 Recruit new staff members for the RCC-	The activity focuses on increasing the human resources available in each	Ensure gender-equitable representation in the RCC	More female staff hired to balance existing inequalities that	Exact figures N/A, annex 8	ideal: 50 – 50 M/F	<u>AE PMU – GENDER CONSULTANT</u> Under sub-activities 1.2.1.1 – 1.2.1.3 the	Baseline studies delivered under activity 1.4.1 will reflect this	NUMBER of: existing personnel &	Availability of gender-diverse human resource for each NMHSs

Network and NMHSs	<p>NMHSs of the IOC countries.</p> <p>Thus, this activity will have a capacity-based action point mirroring the actions undertaken by the GC for activities 1.1.3 (i) and (ii), as well as 1.2.1.</p>	Network and NMHSs while paying attention to GbV to direct and indirect practices.	favour male representation in these institutions, with aim to hire at least 1 qualified female candidate per country	<p>study suggests Higher male staff currently in each NMHSs</p> <p>0</p>	<p>min: 65 – 35 M/F</p> <p>1</p>	<p>staffing needs of the met services will be assessed, and quick gender analysis in terms of disaggregation will be performed. Adherence to gender-equal hiring policies will be gradually ensured, to improve both participation and representation, in the meteorological services.</p>	<p>information, by country and by gender-disaggregation</p> <p>End of project cycle numbers for personnel in NMHSs</p> <p>Profile of female, qualified candidates hired exchanged between countries – organized by GC</p>	<p>new personnel hired, disaggregated by country and by gender</p> <p>PERCENTAGE: change in representation (whether increase registered for women's representation)</p>	Countries are willing to hire more female staff for their NMHSs
<p>1.3.2</p> <p>Train new and retrain existing staff</p>	<p>The activity focuses on increasing the capacity of human resources available in each NMHSs of the IOC countries.</p> <p>Thus, this activity will have a capacity-based action point mirroring the actions undertaken by the GC for activities 1.1.3 (i) and (ii), as well as 1.2.1. and 1.3.1.</p>	<p>Ensure gender-equitable participation in trainings while paying attention to GbV to direct and indirect practices.</p> <p>Ensure risk exposure component of training includes modules on gender and social inclusion modules</p>	<p>More female staff hired under 1.3.1 (min. 1 / country) are provided with better training</p> <p>Gender and social inclusion modules included under risk exposure component with a minimum of 1 gender mainstreaming module or session per training</p>	<p>Exact figures currently N/A, AE PMU GC will request personnel records as part of previous activities (1.2.1.1 – 1.2.1.3)</p>	<p>ideal: 50 – 50 M/F</p> <p>min: 65 – 35 M/F</p>	<p><u>AE PMU – GENDER CONSULTANT</u></p> <p>will collaborate with the NMHSs to ensure a minimum of 1 qualified female candidate is hired per country.</p> <p>While designing modules the GC will deliver a minimum of 1 gender mainstreaming session / training planned for new and existing staff. It will be important to tune this output towards the different and specific cultural context of each IOC country.</p>	<p>Training records and attendance sheet from each NMHSs</p> <p>Content and records of the gender mainstreaming session or module</p>	<p>– 1.1.3 (i)</p> <p>– 1.2.1</p>	<p>– 1.1.3 (i)</p> <p>– 1.2.1</p>
<p>1.4.1</p> <p>Conduct baseline studies on how CP-CS and MH-IBF-EWS for hydro-</p>	The goal of this activity is to have an increased understanding of who has access to CP-CS in each beneficiary country, how,	Establish implementation gender baseline for each country,	Updated Gender Assessment and Action Plan	1 (Annex 8)	2 (Updated Report and Annex 8)	<u>AE PMU – GENDER CONSULTANT</u> to develop a gender baseline report as a part of the reassessment of the baseline, which will	Gender Report, as part of the CONOPS	Data for this indicator will be qualitative and collected as a part of other activities	<p>Subject to COVID-19 and related risk</p> <p>IOC countries agree to validate update Gender Assessment</p>

meteorological hazards are used in each beneficiary country, and on user requirements for improving such services	<p>and how CP-CS are used in decision-making.</p> <p>The studies will be conducted to assess access to, and use of CP-CS at baseline in the following sectors: agriculture and fisheries (Comoros and Madagascar); agriculture and tourism (Mauritius); fisheries and tourism (Seychelles); as well as access to early warnings for tropical cyclones and other hydro-meteorological hazards in all countries.</p> <p>Thus, this activity will have a research action point which will expand the intermediary baseline presented in Annex 8.¹¹³</p>	<p>building on Annex 8</p> <p>Organise specific working sessions, adapted to women and girls daily activities. When possible, these specific sessions shall be, animated by women experts to identify the specific needs, ease and smooth the expression of needs and expectations</p>				<p>inform the implementation stage of IOC Hydromet</p> <p>The baseline shall be developed by mobilizing women community representatives in Host countries in order to set the optimum calendar and daily time slot allowing women and girls to participate actively in the co-design and co-implementation of the climate products and services and when appropriate, in coordination with relevant regional partners such as IFRC-PIROI</p>		<p>through the main Logical Framework (Section E – FP)</p>	<p>and Action Plan as a part of CONOPS</p>
<p>1.4.2</p> <p>Produce a detailed design of the hydromet observational networks, modelling, forecasting and service delivery systems for each NMHS, taking a</p>	<p>This activity seeks to ensure harmonization of the various systems across the SWIO region through the preparation of implementation plans, technical specifications and tender documents for equipment and services, taking a regional approach. As such, it is an ideal opportunity to ensure the</p>	<p>Ensure gender is mainstreamed in the technical designs produced through this activity.</p> <p>Ensure gender-equitable</p>	<p>Gender components in the technical designs produced through this activity.</p> <p>More female representation</p>	0	<p>N/A (dependent on number of technical specifications produced)</p> <p>Ideal:</p>	<p><u>AE PMU – GENDER CONSULTANT</u></p> <p>through contribution to technical specification and design.</p>	<p>Minutes from validation workshop</p> <p>Baseline studies delivered under</p>	<p>Data for these indicators will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)</p>	<p>National stakeholders are willing to explicitly include gender components in the technical specifications.</p> <p>National stakeholders can</p>

¹¹³ Understanding and analyses of current levels and accessibility of CP-CS among men and women are crucial to design gender-responsive, inclusive, end-users' services. Progressive capacity-building in the provision of gender-mainstreamed early warning systems and climate information services require gender mainstreaming to capture the varying needs and vulnerabilities of different interest groups in a community. Apropos of in-country missions and Gender Assessment undertaken during the preparation phase, each country presents different gendered dynamics in the usage of CP-CS. In Madagascar, women tend to have limited access to ICTs, such as radio or SMS service. Similarly, in Comoros, women reported constraints in accessing the public sphere, such as community mosques or public squares, where early warnings were announced for Cyclone Kenneth. In Mauritius and Seychelles, gender accessibility to CP-CS are better balanced, however, information may not often cater to the different household duties or roles played by men and women.

regional harmonized approach (regional and national CONOPSS)	integration of gender issues from the outset of these activities. This activity therefore will have policy-level and institution-level action point .	representation in the procurement of services undertaken based on the tender documents produced through this activity.	in services procured to balance existing inequalities that favour male representation in these industries. Rapid analysis (baseline) gender-disaggregation of existing service providers.	Exact figures N/A, annex 8 study suggests skewed towards male	50 – 50 M/F min: 6 5 – 35 M/F	NMHSs to present personnel data for baseline establishment to <u>AE PMU GENDER CONSULTANT</u>	activity 1.4.1 will reflect this information, by country and by gender-disaggregation		share the details of personnel engaged through procurement processes to provide services.
1.4.3 Ensure full system integration from observation stations to delivery of CP-CS to end-user	This activity includes the development of step-by-step practices and procedures for system integration and coordination of project activities. As such, it is an ideal opportunity to ensure the integration of gender issues from the outset of these practices and procedures. This activity therefore will have policy-level and institution-level indicator .	Ensure gender mainstreaming in the practices and procedures produced through this activity.	Gender components in the practices and procedures produced through this activity.	0	N/A (dependant on number of practices and procedures produced)	Ensure gender is mainstreamed in the practices and procedures produced through this activity.	Gender components in the practices and procedures produced through this activity.	Data for these indicators will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	– 1.4.2

COMPONENT 2: HIGH-QUALITY CLIMATE-RELATED DATA, IMPROVED MULTI-HAZARD IMPACT-BASED FORECASTS AND EWs, AND CLIMATE RISK ASSESSMENTS

GENDER IMPACT STATEMENT: Improved climate data and risk assessments, leading to more precise climate change projections, will provide a ‘gender lens’ to risk exposure in the IOC countries.

GENDER OUTCOME STATEMENT: Adopting a gender lens to analyse potential risks and hazards will prioritise the identification of gendered vulnerabilities, leading to targeted and effective action. Further, altering the skewed gender ratio will not only help representation rates, but also create a bona fide cycle of engaging and empowering women through climate change adaptation processes.

OUTPUTS:

2.1: ENHANCED HYDRO-METEOROLOGICAL OBSERVATION AND MONITORING BY MAKING USE OF INNOVATIVE TECHNOLOGIES FOR COST-EFFECTIVENESS AND GENDER-RELEVANCE

2.2: REGIONAL FACILITIES FOR MAINTENANCE AND TRAINING ESTABLISHED WITH FOCUS ON INCREASING CAPACITY IN TANDEM WITH GENDER PARITY

2.3: SCIENCE-BASED MULTI-HAZARD WEATHER AND CLIMATE RISK INFORMATION GENERATED AND DISSEMINATED TO TARGET CLIMATE-VULNERABLE AUDIENCES IN THE SELECTED SECTORS

ACTIVITY	RELEVANCE	GENDER ACTION POINT	INDICATOR/S	BASELINE (VALUE, YEAR)	TARGET (VALUE, YEAR)	RESPONSIBLE PARTY	MEANS OF VERIFICATION	MONITORING (UNIT, DISAGG.)	ASSUMPTIONS
2.1.1 Modernise / upgrade climate observation and monitoring network	The project will deliver a modernised climate observation and monitoring network based on a capacity gap analysis following the WMO technical regulations and standards. Therefore, a technical-level action point has been identified for this specific activity.	Ensure women and other marginalized groups, identified through 1.4.1 by the GC, benefit from improved technology in the IOC countries	Gender content in the CONOPSS produced under 1.4 which will inform 2.1.1	To be reassessed using activity 1.4.1	To be determined after the reassessment of the baseline	<u>IOC with the support of the PMU and the AE PMU GENDER CONSULTANT</u>	MoV for this indicator is qualitative and will be draw from other activities, such as 1.4.1 and 1.4.2	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are willing to explicitly include gender strategies within the overarching R/NFCSs.
2.1.2 Modernise / upgrade the information and communication technology system	The project will deliver a modernised information and communication technology system. Therefore, a technical-level action point . has been identified for this specific activity.	Ensure end user access through the sub-activity 2.1.2.7 (service delivery platform), particularly for vulnerable demographics	Gender training (1 session / country) for forecasters, nowcasters, and observers to ensure relevance of hydromet information	To be reassessed using activity 1.4.1	To be determined after the reassessment of the baseline	<u>AE PMU – GENDER CONSULTANT</u> through the gender modules developed in earlier activities for training will deliver this output. The GC will ensure that the training modules reflect the cultural	Training records / attendance sheets Satisfaction survey conducted in each	NUMBER of: attendants for gender training	Gender training is encouraged and operationalized by country stakeholders for new and existing personnel

			for different user groups			specificities of each country.	country after training session on gender		
2.2.1 Establish a maintenance and calibration laboratory (WMO Regional Instrument Centre)	This technical output builds on the strategy and planning envisioned under activity 1.1.3. Therefore, the gender considerations from that activity will be brought forward to enable continuity with activity 2.2.1.	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)
2.2.2 Refurbish the specialized training centre for the region hosted by Mauritius NMHS (which contribute to the WMO Global Campus)	This technical output builds on the strategy and planning envisioned under activity 1.1.3. The specialized training centre will be complementary to the WMO Regional Instrument Centre established through 2.2.1. Thus, succeeding 2.2.1, this activity too will build on the indicator, baseline, target, MoV etc. of activity 1.1.3.	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)	– 1.1.3 (i) & (ii)
2.3.1 Downscale and calibrated meteorological forecasts by making use if numerical weather prediction / ensemble prediction systems (NWP/EPs) and applying modern techniques such as artificial intelligence	This will improve the production of short-range 'day-to-day' forecasts and warnings in each target country. Staff members of NMHSs, with the support of DRM institutions, will be trained in probabilistic forecasts and on its use to produce impact-based forecasts (IBF) to translate hydromet hazards into sector and location-specific impacts. Therefore, a combined technical-level indicator and a capacity-building action point have been	Ensure women and other marginalized groups, identified through 1.4.1 by the GC, benefit from improved technology in the IOC countries Ensure gender-	The needs of women and other marginalized groups are considered in the downscaling and calibration of forecasts. Rapid analysis (baseline) gender-	To be reassessed using activity 1.4.1 Exact figures N/A,	To be determined after the reassessment of the baseline ideal: 50 – 50 M/F	<u>IOC with the support of the PMU</u> NMHSs to present personnel data for baseline establishment to	MoV for this indicator is qualitative and will be draw from other activities, such as 1.4.1 and 1.4.2 Baseline studies delivered under activity 1.4.1 will reflect this	Data for these indicators will be qualitative and quantitative, and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are willing to explicitly include gender strategies within systems. National stakeholders can share the details of NMHSs personnel

	identified for this specific activity.	equitable participation in training while paying attention to GbV direct and indirect practices. This will be supported by gender-equitable recruitment.	disaggregation of existing personnel in each NMHSs, supplemented with analysis of access to training opportunities.	annex 8 study suggests skewed towards male	min: 6 5 – 35 M/F	AE PMU GENDER CONSULTANT	information, by country and by gender-disaggregation		
2.3.2 Establish threshold values for issuing warnings based on extreme value analysis and review of historical hydrometeorological events	This activity will identify threshold values for each hazard (flooding or otherwise) for each country by using extreme analysis tools, available climate data as well as historical hydrometeorological data. Therefore, this activity will have a technical action point, combined with capacity analysis (exposure risks) .	Ensure threshold values reflect gendered exposure risks	Harmonized national thresholds for hydromet events developed to reflect gendered and social vulnerabilities	0	4	<u>AE PMU – GENDER CONSULTANT</u> will assist IOC and PMU to coordinate with NGOs and other knowledge brokers, as well as using the implementation gender baseline developed under activity 1.4.1 to ensure thresholds reflect on-the-ground concerns and vulnerabilities.	Baseline studies delivered under activity 1.4.1 will reflect parts of this information List of NGOs and other relevant institutions to participate in workshops organized with NMHSs and	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – E – FP)	Success of baseline gender study conducted under activity 1.4.1 to capture relevant information regarding thresholds and impacts NGOs and other relevant institutions are willing to participate
2.3.3 Develop hazards maps	This activity will create hazard maps to be utilised by NMHSs and DRM institutions. These maps will take into account climate change impacts on return period/intensity of selected hazards of the four countries. This will be technical action point, combined with	Ensure hazard maps are gender-responsive, community-informed and stakeholder-owned	Hazard maps that mainstream community and gendered vulnerabilities through stakeholder consultations	0	8 (2 hazard maps / country)	<u>IOC NMHSs in collaboration with AE PMU – GENDER CONSULTANT</u> The GC to assist with sub-activity 2.3.3.3, wherein communities and stakeholders will be consulted to understand the frequency and intensity of the selected hazards	Consultation and meeting minutes Stakeholder and community engagement report by the GC	NUMBER of: community members consulted, by gender-disaggregation by location and by country	Communities are able to provide objective analysis of different hazards which can be harmonized across the country NMHSs show interest in mainstreaming community and local stakeholder

	capacity analysis (exposure to hazards).								interest in hazard maps
2.3.4 Develop climate vulnerability maps	<p>This activity will be based on the hazard maps produced under activity 2.3.3. and will constitute a mapping exercise for climate-risk vulnerability (of people and assets).</p> <p>This will, therefore, be a technical-level as well as at capacity-level action point like the preceding activities 2.3.3 and 2.3.2.</p>	Ensure climate vulnerability maps are gender-responsive and community-informed and stakeholder-owned	Climate vulnerability maps that mainstream community and gendered vulnerabilities through stakeholder consultations	0	4 (1 climate vulnerability map / country, each reflecting two areas within the country)	<p><u>IOC NMHSs in collaboration with AE PMU – GENDER CONSULTANT</u></p> <p>The GC to assist with sub-activities 2.3.4.1 – 2.3.4.4, towards the development of the climate vulnerability maps</p>	<p>Consultation and meeting minutes</p> <p>Stakeholder and community engagement report by the GC</p>	NUMBER of: community members consulted, by gender-disaggregation by location and by country	<p>Vulnerable sections of communities are able to meaningfully participate and represent their needs and interests</p> <p>NMHSs show interest in mainstreaming community and local stakeholder interest in climate vulnerability maps</p>
2.3.5 Undertake risk analysis incorporating hazard, exposure and vulnerability to identify potential impacts from extreme events	<p>This output will deliver risk maps by developing a tool that is able to quantify and characterize hazards, vulnerabilities and exposure risks based on existing datasets.</p> <p>This will, therefore, be a technical-level action point like 2.3.3 & 2.3.4.</p>	Ensure gendered vulnerabilities are considered within the risk maps, mirroring activity 2.3.3.	– 2.3.3	0	8 (2 per country)	– 2.3.3	– 2.3.3	– 2.3.3	– 2.3.3
2.3.6 Carry out downscaling of global, regional and seasonal forecast to national level, and use them to produce agrometeorological products	<p>This activity will focus on the development of agrometeorological advisories, which are climate products that will service particularly Comoros, Madagascar and Mauritius.</p> <p>This will function both at the technical and capacity levels, as women are</p>	Ensure agrometeorological training provided mainstreams gender requirements, particularly needs of women subsistence farmers	Agrometeorological advisories that are viable, stakeholder-friendly and cover the 'last mile'	0	4	<p><u>IOC NMHSs in collaboration with AE PMU – GENDER CONSULTANT</u></p> <p>The GC to assist using research undertaken for reassessment of baseline (activity 1.4.1), and for sub-activities under activities 2.3.2 – 2.3.5.</p>	<p>Consultation and meeting minutes</p> <p>Stakeholder and community engagement report by the GC</p>	NUMBER of: community members consulted, by gender-disaggregation by location and by country	NMHSs agree to incorporate gender perspectives explicitly into agrometeorological advisories

	heavily (and often disproportionately) involved in agriculture.								
2.3.7 Build the capacity to downscale climate models for national purposes	This activity will enable the development of impact assessments of various sectors in each country based on the downscaled climate change projections. The climate change models and projections as well as the sectoral models and impact assessments will be shared on the UIP, allowing for greater information sharing at a regional level, while tailoring end products to local context.	Ensure women and other marginalized groups, identified through 1.4.1 by the GC, benefit from improved technology in the IOC countries	The needs of women and other marginalized groups are considered in the downscaling and calibration of forecasts.	To be reassessed using activity 1.4.1	To be determined after the reassessment of the baseline	<u>IOC with the support of the PMU</u>	MoV for this indicator is qualitative and will be draw from other activities, such as 1.4.1 and 1.4.2	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders are willing to explicitly include gender strategies within systems.
2.3.8 Build the capacity for hydrological modelling for flood forecasting (i.e. flood propagation model)	This activity will focus on increasing knowledge and building capacity identified gaps in monitoring hydrology data, hydrology expertise and forecasting floods in the four target countries through training of NHMS staff. Therefore, a capacity-building action point has been identified for this specific activity.	Ensure gender-equitable participation in trainings. This will be supported by gender-equitable recruitment, as noted above.	Rapid analysis (baseline) gender-disaggregation of existing personnel in each NMHSs, supplemented with analysis of access to training opportunities.	Exact figures N/A, annex 8 study suggests skewed towards male	ideal: 50 – 50 M/F min: 6 5 – 35 M/F	NMHSs to present personnel data for baseline establishment to AE PMU GENDER CONSULTANT	Baseline studies delivered under activity 1.4.1 will reflect this information, by country and by gender-disaggregation	Data for this indicator will be qualitative and quantitative, and collected as a part of other activities through the main Logical Framework (Section E – FP)	National stakeholders can share the details of NMHSs personnel

COMPONENT 3: ENHANCED USE OF CLIMATE SERVICES FOR CLIMATE CHANGE ADAPTATION, AND IMPROVED CAPABILITIES IN IMPLEMENTING A PEOPLE-CENTERED MH-IBF-EWS FOR DRR

IMPACT STATEMENT: User-friendly climate services for climate change adaptation will shift the needle on existing gender inequalities exacerbated by climate risks and natural hazards in the region.

OUTCOME STATEMENT: Strengthened NMHSs staff capacity, knowledge brokers, as well as regional platforms, to deliver on gender-responsive CP-CS, EWS.

OUTPUTS:

3.1: PRODUCTION, DISSEMINATION AND UPTAKE OF CP-CS, INCLUDING MH-IBF-EWS, IMPROVED AND GENDER-RESPONSIVE

3.2: SHORT- AND LONG-TERM RISK REDUCTION AND ADAPTATION PLANS IMPROVED OR DEVELOPED BASED ON HIGH QUALITY CLIMATE-RELATED DATA, RISK/VULNERABILITY ASSESSMENTS AND CLIMATE CHANGE PROJECTIONS INCLUDING ANALYSES ON GENDERED VULNERABILITIES AND MAINSTREAMING ACTION
3.3: TRAINING FOR IMPROVED DISSEMINATION AND PREPAREDNESS INVOLVING USERS AND END-USERS OF CP-CS ESTABLISHED WITH FOCUS ON DISEMPOWERED WOMEN

<i>ACTIVITY</i>	<i>RELEVANCE</i>	<i>GENDER ACTION POINT</i>	<i>INDICATOR/S</i>	<i>BASELINE (VALUE, YEAR)</i>	<i>TARGET (VALUE, YEAR)</i>	<i>RESPONSIBLE PARTY</i>	<i>MEANS OF VERIFICATION</i>	<i>MONITORING (UNIT, DISAGG.)</i>	<i>ASSUMPTIONS</i>
<p>3.1.1</p> <p>Set up / update protocol to produce and deliver improved daily weather bulletin, multi-hazard impact-based forecasts, seasonal forecasts, and agrometeorological advisories</p>	<p>This activity addresses the key finding of Annex 2 (FP): the need to improve the production and delivery of daily weather bulletins, IBF, seasonal forecasts, and other weather products among the population of the four target countries.</p> <p>Therefore, three combined technical-level and capacity-level action point has been identified for this specific activity.</p>	<p>Design weather products that are user-friendly</p> <p>Mainstream gendered interests and needs of vulnerable socioeconomic groups</p> <p>Ensure communication channels chosen for dissemination are accessible to marginalized and vulnerable user groups</p>	<p>Targeted content in the weather bulletins, multi-hazard forecasts, seasonal forecasts, agromet advisories</p>	<p>To be reassessed using activity 1.4.1</p>	<p>To be determined after the reassessment of the baseline</p>	<p><u>AE PMU – GENDER CONSULTANT</u></p> <p>The GC to assist with sub-activities 3.1.1.1, 3.1.1.2, 3.1.1.3. Through sub-activity 3.1.1.4, the GC will ensure meaningful participation from key stakeholders (particularly women involved in subsistence agriculture) who are marginalized. The GC to advise how communication channels identified through 3.1.1.5 and dissemination through 3.1.1.6 can serve women better, given limited access in</p>	<p>Survey report</p> <p>Gender report (as part of CONOPSs – activity 1.4.1)</p>	<p>Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)</p>	<p>The project is able to engage with marginalized subsets of the beneficiaries without cultural or socio-political hindrances</p> <p>NMHSs and country partners are willing to mainstream gendered needs in climate products</p>

						certain contexts (Annex 8).			
3.1.2 Set up protocols (standard operating procedures) to strengthen MH-IBF-EWS dissemination for and uptake by key sectors and among the general public	This activity will build on the technical advances made under component 2 (instalment of modern meteorological equipment). Through this, the project will undertake in-depth end user analysis to ensure synergy between needs and solutions while packaging EW and CS. Therefore, the action point identified for this project combines technical and monitoring aspects.	Ensure an end user-focused dissemination channel Prioritise vulnerable socioeconomic groups in identified dissemination channels	MH-IBF-EW gender-responsibly packaged and disseminated among targeted vulnerable groups	0 (2019)	1 regional strengthened MH-IBF-EWS 4 national strengthened MH-IBF-EWS	<u>AE PMU – GENDER CONSULTANT</u> to bring forward gender actions for sub-activity 2.1.2.7 (service delivery platform), and contribute to sub-activity 3.1.2.2 to ensure better targetting	Training records / attendance sheets Gender-responsive end user satisfaction survey and in-depth analysis	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	Gender training is encouraged and operationalized by country stakeholders for new and existing personnel under previous sub-activity 2.1.2.7 Target vulnerable groups are able to meaningfully participate in end user surveys
3.2.1 Improve data sharing and coordination with emergency services for on-the-ground interventions at national and local levels	Through this activity, the project will strengthen the collaboration between NMHSs and DRM institutions. The activity will pilot two local emergency plan per country, to demonstrate how to downscale national emergency response plans.	Deliver national and local emergency response plans which prioritise gendered exposure risks	Local emergency response plans includes gender and vulnerability assessments for exposure risks to improve risk mitigation, mitigation and recovery	To be reassessed using activity 1.4.1	4 national emergency response plans 8 local emergency response plans (2 piloted per country)	<u>AE PMU – GENDER CONSULTANT</u> to bring forward gender research undertaken for activity 1.4.1 and present a list of DRM institutions and regional and national active NGOs as such PIROI/CRC/IFRC and UN agencies with prior and	GbV trend analysis report in the 2 pilot sites selected in each country Compilation of historical information and data on <i>ex-ante</i> , <i>during</i> , <i>ex-post</i> GbV and disaster for each country, to be included in 1.4.1 gender deliverable	PERCENTAGE of: people experiencing GbV, disagg. by gender, by pilot site by each country	The GC is able to access information about GbV prevalence in selected pilot sites in a culturally sensitive manner GbV survivors are willing to share information and personal experience with the GC

	Therefore, the action point identified for this project combines technical and capacity aspects.	Mainstream gender-based violence (GbV) as a key issue for analysis Mobilize the last-mile partners such as PIROI/CRC/IFRC and its national counterparts, NGOs and UN agencies	Prevention, mitigation and redressal mechanisms for gender-based violence are identified in local emergency response plan			ongoing experience with gender-responsive DRM and GbV (for example: C for C in Madagascar, consulted for Annex 8 formative research, has extensive experience with GbV)		Additional data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	
3.2.2 Develop risk matrices for each hazard with agreed risk-levels and colour-coded, and description of related impacts and response/action s; test and validate in selected sites in the four countries; expand and roll out nationwide	Activity 3.2.2 builds on the preceding activity 3.2.1. Therefore, the action point identified for this project derives from activity 3.2.1.	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1
3.2.3 Develop a knowledge and decision support system to support the implementation	This activity will develop a web-based knowledge and decision support system that can provide colour-coded risk-based warnings. Through	Deliver a gender, responsive stakeholder-friendly Common Alert Protocols for each country	Knowledge and DSS mainstreams gender and socioeconomic concerns	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1	– 3.2.1

of MH-IBF-EWS at regional, national and local levels	<p>this, it can support the selected socioeconomic sectors in each country (agriculture, fisheries and tourism) and therefore the stakeholders involved in these climate-vulnerable sector.</p> <p>Therefore, the action point serves at a combined technical and capacity-level. This activity will also benefit from gender action taken under activities 1.4.1 and 3.2.1.</p>		User-friendly CAPs which go the 'last mile'						
3.2.4 Update long term climate change adaptation plans responding to the needs of each country	<p>The project has identified that Comoros, Madagascar and Mauritius are developing National Adaptation Plans (NAPs) and Seychelles is developing a Coastal Management Plan (CMP).</p> <p>These long-term climate change adaptation plan can benefit from the project's efforts</p>	Ensure gender is mainstreamed in long-term climate change adaptation plans for each country taking into account direct and indirect GbV.	Gender content in NAPs and CMP	0 (2019)	3 NAPs 1 CMP	<u>AE PMU – GENDER CONSULTANT</u> to bring forward gender research undertaken in the preparation phase (Annex 8) for activity 1.4.1, and activities 3.2.1 and 3.2.2. The GC will highlight key issues to be covered in the long-term plans (summary notes)	4 summary notes highlighting gender-environment-climate change issues for each IOC country 4 ToRs for national consultants for each IOC country	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	Ministry of Environment / Climate Change units in each country are willing to hire national gender consultants for updating the long-term climate change adaptation plans (i.e. 3 NAPs and 1 CMP)

	<p>towards gender mainstreaming as well as existing work on gender and climate change in each country.</p> <p>Thus, the action point identified for this activity is research-oriented.</p>					and assist Ministry of Environment / Climate Change units to develop TORs for national consultants to be hired in the NAPs and CMP processes			
<p>3.3.1</p> <p>Train staff members of NMHS and in the RCC on how to package climate-related information in a user-friendly way</p>	<p>This activity will organize workshops with NMHSs and CP-CS users in priority areas of the GFCS to ensure better design of climate products prepared by the NMHSs including sector-tailored forecasts and EWS.</p> <p>Thus, the action point identified will deliver on a capacity-level.</p>	<p>Ensure gender parity in training for NMHSs staff ensure that gender-based violence (GbV) dimension is taken into consideration to design and package appropriate and user friendly CP-CS including for women and girl</p>	<p>50 – 50 M/F representation in trainings</p>	<p>To be determined through activity 1.1.3</p>	<p>Minimum 15 staff trained from each NMHSs, with 50 – 50 M/F representation</p>	<p><u>AE PMU – GENDER CONSULTANT</u> will determine, using action taken under activity 1.1.3, the gender disaggregation of personnel</p> <p>The GC will ensure 50 – 50 M/F representation, where possible, and a minimum of 35% representation</p>	<p>Training attendance sheet</p>	<p>NUMBER of: existing personnel & new personnel hired, disaggregated by country and by gender</p> <p>NUMBER of: personnel trained disagg. by country and by gender</p>	<p>Availability of gender-diverse human resource for each NMHSs</p> <p>Countries are willing to hire more female staff for their NMHSs</p>
<p>3.3.2</p> <p>Train knowledge brokers – including NGOs, red crescent/cross, local leaders and extension officers – and representatives of sectors in the</p>	<p>This activity will focus on key knowledge brokers, which are active particularly at local level for disaster risk prevention, mitigation and response.</p> <p>Thus, the action point identified will</p>	<p>Train local knowledge brokers to consider gender needs and to develop GBV prevention programmes</p> <p>Organize workshops with special sessions</p>	<p>50 – 50 M/F representation in trainings</p> <p>Women are prioritised in workshops through gender-friendly sessions</p>	<p>To be determined through research undertaken under activity 1.4.1</p>	<p>Trained knowledge brokers mobilized at local level</p>	<p><u>AE PMU – GENDER CONSULTANT</u> to bring forward gender research undertaken for activity 1.4.1 and present a list of DRM institutions and NGOs with prior and ongoing experience with</p>	<p>Training attendance sheet</p> <p>Compendium of selected and potential knowledge brokers, with key informant/contact from each</p>	<p>NUMBER of: Individuals trained, disaggregated by gender by institution by location and by country and</p>	<p>NGOs and other knowledge broker entities are willing to participate in training provided by the project</p> <p>Availability of gender-diverse human resource in these entities</p>

GFCS areas (public and private organisations) on how to interpret and use CP-CS for decision-making	deliver on a capacity-level .	for women and other marginalized groups and develop awareness message on GbV against women and girls.				gender-responsive DRM and GbV that will be vetted and selected as knowledge brokers (for example: C for C in Madagascar)			
3.3.3 Strengthen the User Interface Platform (UIP)	Through this activity, the project will strengthen the existing Regional Climate Portal developed by IOC and hosted by Seychelles (SMA). The products developed under output 2.3 will be made available on this platform. The platform will have a feedback mechanism where users of CP-CS can review the services they receive. Thus, the action point identified will be at technical-level .	Strengthen UIP to establish a reliable feedback mechanism between NMHSS and CP-CS users	UIP information is shared at trainings, consultations	1 (2019)	1 strengthened regional UIP	<u>IOC with support of PMU</u>	MoV for this indicator will be collected as a part of the main activity	Data for this indicator will be qualitative and collected as a part of other activities through the main Logical Framework (Section E – FP)	N/A
3.3.4 Support SWIOCOFs to ensure the active participation of	SWIOCOF is convened annually by IOC. Under this activity, SWIOCOF will be reviewed by meteorological	Ensure SWIOCOF ties in with regional and national gender-responsive FCSs	SWIOCOF is user-oriented and gender-responsive	1 (2019)	1 strengthened SWIOCOF	<u>IOC with support of PMU AE GENDER CONSULTANT</u> to review the SWIOCOF strategy	MoV for this indicator will be collected as a part of the main activity	Data for this indicator will be qualitative and collected as a part of other activities	N/A

climate services users	expert to ensure the platform more user-friendly. Thus, the action point identified will be at technical-level .	Ensure gender-equitable participation to SWIOCOF			Ideal participants: 50 – 50 M/F min: 6 5 – 35 M/F	and identify pathways for increasing women's participation (e.g. SWIOCOF will cover themes which are of interest to women)	SWIOCOF participation list	through the main Logical Framework (Section E – FP)	
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GENDER DELIVERABLE CHART: CORE OUTPUTS, PERIPHERAL INPUTS TO BE PROVIDED BY THE GENDER CONSULTANT

The Gender Consultant is expected to be hired for 13,5 months at both regional and national level to provided beaded expertise (full-time expertise not required) and their per diem will be capped at 2000 USD/month .

TENTATIVE GENDER BUDGET LINE: 32500 (apart for activity costs which will include overhead costs required for travel, gender sessions in training, validation workshops etc.)

DELIVERABLE	RELEVANT FOR:	EXPECTED Months	START YEAR	END YEAR	COST
GENDER BASELINE REPORT This is the core deliverable for the GC. It will be delivered through Activity 1.4.1. However, it will underscore the project implementation phase as it will provide the reassessment of the gender baseline. The report will be used to update the Gender Action Plan presented in Annex 8.	COMPONENT 1: 1.1.3, 1.2.1, 1.2.2, 1.2.3, 1.3.1, 1.3.2, 1.4.1, 1.4.2, 1.4.3; COMPONENT 2: 2.1.1, 2.3.8; and, COMPOENT 3: 3.1.1, 3.2.2, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.3, 3.3.4	4 months	(mid) 2021	(mid) 2022	8,000 USD

GENDER ASSESSMENTS These will be brief assessments which into Activities 2.3.2 – 2.3.7. The GC will assist with these assessments towards the threshold values being determined, hazard and climate vulnerability mapping, risk exposure analyses etc.	COMPONENT 2: 2.3.1 2.3.2, 2.3.3, 2.3.4, 2.3.5, 2.3.6, 2.3.7	2 months	Expected start with Output 2.3	Expected end with Output 2.3	4, 000. USD
GENDER TRAINING MODULE This deliverable will feed into the activities with training components. The GC will deliver a gender module for these trainings highlighting the importance of gender analyses for EWS, CS and hydromet. Particularly, information on user-based analyses (for example women’s participation in agriculture) and gender-disaster management nexus will be highlighted. The GC has to tune the training module for each country.	COMPONENT 1: 1.1.3; COMPONENT 2: 2.1.1, 2.1.2, 2.2.1, 2.2.2; and, COMPONENT 3: 3.3.1, 3.3.2 .	5 months	Expected start with Outputs 2.1 and 3.3	Expected start with Outputs 2.1 and 3.3	10,000 USD
POLICY NOTES The GC will assist by developing policy notes for the Outputs 1.1 and 1.2. Since these outputs will focus on legal frameworks and establishing institutional arrangements, the GC will step in to ensure gender-responsive policies receive <i>de jure</i> verification	COMPONENT 1: 1.1.1, 1.1.2, 1.1.4.	1 month	Expected start with Outputs 1.1 – 1.2	Expected start with Outputs 1.1 – 1.2	2,000 USD
FIELD ACTIVITY		1,5months	(mid) 2021	(mid) 2024	3,000 USD

These are days allocated for field activities such as workshop facilitation, interviews with key stakeholders etc.	—				
EXPECTED COST FOR GENDER CONSULTANT (in USD)					27,000.

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