

## **Annex 11. Monitoring and Evaluation Plan**

**Programme title:** Building Regional Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission (IOC) Member Countries (the “Project” or “Funded Activity”).

**Duration:** 5 years

**Accredited Entity:** Agence Française de Développement (AFD)

**Executing Entity:** Indian Ocean Commission (IOC)

**Programme Countries:** Comoros, Madagascar, Mauritius and Seychelles

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## Overview of Monitoring and Evaluation Plan

The Project Monitoring and Evaluation Plan includes the following components:

1. Inception workshop: A Project inception workshop, involving AFD (Accredited Entity- AE) and IOC(the Executing Entity -EE) will be held within the first three months of the project. The overarching objective of the inception workshop is to assist the Project team and stakeholders to understand and take ownership of the Project objectives and outcomes. The inception workshop will be used to further detail the roles, support services and complementary responsibilities of the AE and EE and the national entities (NE), which are the NMHSs.
2. Inception workshop report: The EE with the support of the Project Management Unit (PMU), will produce an inception report documenting all changes and decisions made during the inception workshop to the Project planned activities, budget, results framework, and any other key aspects of the Project . The inception report should be produced within one month of the inception workshop, as it will serve as a key input to the timely planning and execution of Project start-up and activities.
3. Project Results Monitoring Plan: A Project Results Monitoring Plan is provided below following the GCF template. This will be further refined once the Project has started to ensure that the Project team understand and take ownership of the Monitoring Plan. The Plan will be refined to ensure that it includes GCF-level Impact and Outcome indicators and Project -level Output and Activity indicators, metrics to be collected for each indicator, methodology for data collection and analysis, baseline information, location of data gathering, frequency of data collection, responsible parties, and indicative resources needed to complete the plan.
4. Baseline Establishment: in the case that any necessary baseline data have not been collected during the Project preparation phase, they will be collected and documented by the EE/PMU/NE, in consultation with relevant Project partners, ***within the first year*** of Project implementation.
5. Project Steering Committee meetings: The IOC as the EE will establish a Regional Project Steering Committee (RPSC) and will act as the coordinator and chair during all Project implementation period. The RPSC will include as permanent members: the Regional Project Coordinator (RPC); the National Focal Points (FPs), and IOC Permanent Liaison Officers (PLOs) from Comoros, Madagascar, Mauritius, Seychelles and La Réunion Island (fifth member of IOC). The RPSC can invite additional participants as observers and advisors among whom: (i) the four National Project Coordinators; (ii) the four National Designated Authorities; (iii) a representative from AFD; as well as a representative of the EU Commission in Mauritius; and (iv) a representative from WMO and/or representatives of advanced NMHSs that could guide the implementation of the project. The mandate of the RPSC will involve providing broad strategic oversight, direction and technical advice: i) overseeing project implementation; ii) redefining or readjusting project activities, when necessary; and ii) reviewing/validating annual work-plans and project reports. The RPSC will meet at least once a year, with ad hoc meetings held as and when necessary. There will also be a platform for sharing lessons learnt and good practices among IOC member states.
6. At national levels a National Project Steering Committee<sup>5np</sup> will be established and chaired by the National Focal Points in the NMHSs(NE)<sup>o</sup>. The NPSC will be responsible for coordination and oversight of activities being delivered by national involved stakeholders. The NPSC will be held twice a year, in order to take stock of progress accomplished during project implementation, identify any issues, and,

if need be, raise and address them with the PMU. The NDA will also attend the NPSC. If deemed necessary, the RPC and the PM could be invited to participate in the NPSC at least to once year.

7. AFD's Accredited Entity field supervision missions: AFD, as the Accredited Entity, will conduct annual supervision missions to lease with the EE in Mauritius and also in Comoros, Madagascar and Seychelles, to maintain a constant contact with the beneficiary countries. Oversight visits will most likely be conducted to coincide with the timing of NSCP and/or RPSC supervision missions organized by the IOC Secretariat and the RPC to oversee development of the activities. A Field Visit Report will be prepared by the AFD staff participating in the oversight mission, and will be circulated to the Project team and IOC/PMU members within one month of the visit.
8. IOC/PMU field supervision missions: Semi-annual supervision missions organized by the IOC Secretariat with the support of the PMU Regional Project Coordinator (RPC) to oversee development of the Project activities and review the performance of the National Implementation Activities (NIA) of each counterpart (NMHSs).
9. NDA supervision: The NDAs (or technical agencies/staff that they designate – country specific arrangements to put in place) in each of the Project countries will participate in monitoring and evaluation of Programme activities through participation at key meetings with AFD, the IOC Secretariat and the RPSC, and supervision visits.
10. Annual Performance Report (APR): IOC will prepare an APR to monitor progress made since Project start and in particular for the reporting period (dates to be determined as part of inception meeting based on actual Project start date). The APR will summarize the annual Project results and progress. A summary of the report will be shared with the RPSC and NPSC.
11. Final Project Report: IOC will draft a final report at the end of the Project.
12. Independent external mid-term Review: The Project will undergo independent Interim Evaluation within 90 days prior to half-way through the grant term (i.e. after 3 years). The Interim Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. The Evaluation will highlight issues requiring decisions and actions, and will present lessons learned about Project design, implementation and management. Findings and recommendations of the Evaluations will be incorporated into the design of the Project to secure maximum Project results and sustainability during subsequent Project implementation.
13. Independent Final Evaluation: An independent Final Evaluation will take place within the last 90 days before the end of the Project, and will be undertaken in accordance with AFD guidance. The Final Evaluation will focus on the delivery of the Project's results as initially planned (and as corrected after the Interim Evaluation, if any such correction took place). IOC, in collaboration with the RPSC, will provide a formal management answer to the findings and recommendations of the Final Evaluation.
14. Lessons learned and knowledge generation: Results from the Project will be disseminated within and beyond the Project intervention area through information-sharing User Interface Platform (UIP), networks, and forums developed by the Project. The Project will identify and participate, as relevant and appropriate, in scientific, policy-based and any other networks, which may be of benefit to Project implementation though lessons learned. The Project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of upscaling the regional initiatives to others projects.

15. Time and resources are explicitly allocated to documentation and dissemination of lessons learned under the Project activities but opportunities for sharing with other GCF HYDROMET projects/programmes funded by other donors will also be sought out on an opportunistic basis throughout the Project. There will be a two-way flow of information between this Project and other projects/programmes of a similar focus.
16. Financial statements audit: A separate audit of IOC records, accounts, and financial statements is undertaken annually, in accordance with generally accepted accounting principles. The purpose of this external audit is to provide assurance on the financial statements of IOC. The audit will test IOC's compliance with provisions of the IOC Operational Manual and consideration of its related internal control. This external IOC audit will be conducted by independent auditors in accordance with Terms of Reference approved by the IOC PMU.
17. The Terms of Reference for the evaluations will be drafted by AFD in accordance with GCF requirements.

## Project Results Monitoring

This section describes the expected Project results that will be used to measure GCF-level impact and progress towards achieving the Project Outcomes and activities. Project targets are provided for each of the indicators.

*Table 1. Fund-level Impact indicators*

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions	A1.1 Change in expected losses of lives and economic assets (US\$) due to the impact of extreme climate-related disasters	Humanitarian reports, including but not limited to the Rapid Damage and Needs Assessment reports (RDNA) and Post-Disaster Needs Assessment reports (PDNA)  PIROI reports  Community surveys and government reports	During Tropical Cyclone Enawo in 2017, 81 lives (mostly Women and children) were lost and damage to economic assets amounted to EUR 50 million (Number of women and children lost will be collected upon project commencement from RDNA and PDNA reports from the Local Governments)	The introduction of MH-IBF-EWS can reduce the damage to economic assets by 3% or EUR 1,5 million and reduce loss of life to less than 40 or 50%	The introduction of MH-IBF-EWS can reduce the damage to economic assets by 5% or EUR 2,5 million and reduce loss of life to less than 16 or 80%	CP-CS are used by population in project sites and target sectors to inform decision-making processes  The produced CP-CS leads to actual livelihood benefits for individuals, communities and sectors  Well-established coordination and collaboration with regional and national DRM institutions and NGOs (under the leadership of PIROI)  Occurrence of extreme weather events in project sites  Humanitarian missions, including RDNA and/or PDNA conducted and reported  PIROI and government reports prepared

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<p><i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i></p>	<p><i>A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</i></p>	<p>Community survey and local government reports in project selected sites (2 sites per countries to be defined upon project commencement)</p> <p>RDNA and/or PDNA reports</p>	<p>Climate-resilient fisheries (in project sites): Males: 0 Females: 0</p> <p>Climate-resilient agriculture (in project sites): Males: number of males to be collected upon project commencement (during inception) from statistics and reports of the Local Governments and FAO Females: number of females to be collected upon project commencement (during inception) from statistics and reports of the Local Governments and FAO</p>	<p>For project sites in the 4 countries (in fisheries): Male: additional 50 Female: additional 50 (or +5% male/female of the baseline)</p>	<p>For project sites in the 4 countries (in fisheries): Male: additional 250 Female: additional 250 (or +10% male/female of the baseline)</p>	<p>Occurrence of extreme weather events in project sites</p> <p>RDNA and/or PDNA conducted and reported</p> <p>Communities and target beneficiaries in project sites wanting to engage in the MH-IBF-EWS</p>
<p><i>A2.0 Increased resilience of health and well-being, and food and water security</i></p>	<p><i>A2.2 Number of food secure households (in areas/periods at risk of climate change impacts)</i></p>	<p>Household surveys</p> <p>Statistics and reports of the Local Governments and FAO that would demonstrate more productive and year around production of food</p>	<p>Total number of food-secure households<sup>12</sup>(for the project sites in the 4 countries) to be collected upon project commencement (during inception) from statistics and reports of the Local Governments and FAO</p> <p>Male-headed householders: number of male food-secured households to be collected upon project commencement (during inception)</p>	<p>Total number of food-secure householders (for the project sites in the 4 countries): Additional 100 (or +5% of the baseline) Male-headed householders: additional 50 Female-headed householders: additional 250</p>	<p>Total number of food-secure householders (for the project sites in the 4 countries): Additional 500 (or +10% of the baseline) Male-headed householders: additional 250 Female-headed householders: additional 250</p>	<p>Hydromet information is disseminated to end-users using appropriate channels and used to inform decision-making</p> <p>The produced CP-CS bring actual benefits to communities and sectors, through the establishment of MH-IBF-EWS at regional, national and local levels</p> <p>The FAO definition for food security is applied in defining food-security households.<sup>3</sup> Food</p>

<sup>1</sup> For Comoros, data extracted from : Rapport ACCLIMATE (2011). 'Etude de vulnérabilité aux changements climatiques: évaluation qualitative'. For Madagascar, data extracted from : <http://www.foodsecurityportal.org/madagascar/resources>. For Mauritius and Seychelles, data extracted from : <https://www.who.int/nutrition/publications/foodsecurity/state-food-security-nutrition-2019-en.pdf?ua=1>

<sup>2</sup> Households of Comoros, Madagascar and Seychelles: [https://www.un.org/en/development/desa/population/publications/pdf/ageing/household\\_size\\_and\\_composition\\_around\\_the\\_world\\_2017\\_data\\_booklet.pdf](https://www.un.org/en/development/desa/population/publications/pdf/ageing/household_size_and_composition_around_the_world_2017_data_booklet.pdf); Households of Mauritius: <https://www.africageportal.com/datasets/02c0feecd29d4f219f4da2a4308e720c>

<sup>3</sup> Households are food secure when they have year-round access to the amount and variety of safe foods their members need to lead active and healthy lives. At the household level, food security refers to the ability of the household to secure, either from its own

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			<p>from statistics and reports of the Local Governments and FAO</p> <p>Female-headed householders: number of female food-secured households to be collected upon project commencement (during inception) from statistics and reports of the Local Governments and FAO</p>			<p>security will be monitored by working with the FAO, which is also implementing project in target countries, and gathering statistics from its surveys.</p>
<p>A2.0 Increased resilience of health and well-being, and food and water security</p>	<p>A2.3 Number of males and females with yearround access to reliable and safe water supply despite climate shocks and stresses</p>	<p>Household surveys</p> <p>Statistics and reports of the Local Governments and FAO that would demonstrate year around access to reliable and safe water supply in agriculture with more production of food</p> <p>Household surveys</p>	<p>Total number of males and females with access to reliable and safe water supply for the project sites in the 4 countries (in agriculture) to be collected upon project commencement from statistics and reports of the Local Governments and FAO</p>	<p>For project sites in the 4 countries (in agriculture):</p> <p>Male: additional 50</p> <p>Female: additional 50 (+5% of the baseline)</p>	<p>For the project sites in the 4 countries (in agriculture):</p> <p>Male: additional 250</p> <p>Female: additional 250 (+10% of the baseline)</p>	<p>Hydromet information is disseminated to end-users using appropriate channels and used to inform decision-making</p> <p>The produced CP-CS bring actual benefits to communities and sectors, through the establishment of MH-IBF-EWS at regional, national and local levels</p> <p>Sufficient rainfall, groundwater and surface water can be mobilized to help achieve water security</p> <p>Water safety and reliability in agriculture is defined as water availability for at least 2 hours per day to be used for irrigation, throughout a calendar year</p>

production or through purchases, adequate food for meeting the dietary needs of all members of the household. See: [http://www.fao.org/ag/agn/nutrition/household\\_en.stm](http://www.fao.org/ag/agn/nutrition/household_en.stm)



Table 2. Fund-level Outcomes indicators

Expected Outcomes	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term)	Final	
	Number of technologies and innovative solutions transferred or licensed to support low-emission development as a result of GCF support	<p>Technology: Audit reports of the on-site inspections Reports of the Factory Acceptance Tests (FAT), Site Inspections Tests (SAT), and Operational Tests (OT)</p> <p>Measure: A Regional Framework for Climate Services (RFCS) established National Frameworks for Climate Services revised or established</p>	<p>Technology: Number of technologies (networks and systems) to be determined based on the assessments done under Activity 1.4.1 (at the inception phase of the project)</p> <p>Measure: No RFCS 1 NFCS Madagascar</p>	<p>Technology: At least 2 new technologies in place across the four countries in the SWIO region</p> <p>Measure: 4 NFCS revised or established</p>	<p>Technology: At least 4 new technologies in place across the four countries in the SWIO region</p> <p>Measure: A RFCS established 4 NFCS revised or established</p>	<p>Government has a political will, institutional capacity and necessary resources to support O&amp;M of the new technologies (networks and systems)</p> <p>NMHS are willing to participate in the development and adoption of RFCS and NFCS</p> <p>Sector specific stakeholders are willing to participate in the development and adoption of RFCS and NFCS</p>
A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development	A5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation	<p>Approved national hydromet laws</p> <p>Approved national and local policies, guidelines and frameworks on climate services and MH-IBF-EWS</p>	<p>Existing hydromet laws do not have a sustainable mechanism for supporting O&amp;M of NMHSs</p> <p>Existing plans currently do not have MH-IBF-EWS (such as the national DRM plans; the SOP on EWS)</p>	<p>Drafted National Hydromet Laws with a sustainable mechanism for supporting O&amp;M of NMHSs</p> <p>Risk matrix with impact and response tables adopted by the local DRM authorities at the project sites</p> <p>Drafted guidelines on mainstreaming MH-IBF-EWS in national and local disaster preparedness</p>	<p>Adopted National Hydromet Laws with a sustainable mechanism for supporting O&amp;M of NMHSs</p> <p>Risk matrix with impact and response tables adopted by the local (at project sites) and national DRM authorities</p> <p>Final guidelines on mainstreaming MH-IBF-EWS in local resilience planning and national SOPs of collaborating members of National DRM Committee that is gender- and sector- sensitive</p>	<p>NMHS are willing to participate in the development and adoption of institutional and regulatory frameworks and CP-CS</p> <p>Sector specific stakeholders are willing to participate in the development and adoption of SOPs National disaster response plans, EWS and SOPs are using hazard-based forecasting and warning information</p>

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				<p>s and response plans that is gender- and sector-sensitive</p> <p>National DRM Committee that is gender- and sector-sensitive (re-)established</p>		
<p>A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development</p>	<p>A5.2 Number and level of effective coordination mechanisms</p>	<p>National and local directives activating the Emergency Operation Center(s)</p> <p>Situation reports</p>	<p>Existing EWS coordinating bodies and mechanisms to be assessed at the project commencement (inception phase)</p>	<p>One inter-agency national committee for MH-IBF-EWS established</p> <p>One task force/committee established and led by the local government authority in the project sites</p> <p>Coordination mechanisms improved to Level of Effectiveness 2</p>	<p>One inter-agency national committee for MH-IBF-EWS established</p> <p>One task force/committee established and led by the local government authority in the project sites</p> <p>Coordination mechanisms improved to Level of Effectiveness 3</p>	<p>Stakeholders at national level and project sites are willing to participate in the Committees/Task Forces</p> <p>Committees and mechanisms established at the national level and difference project sites are effective</p> <p>The scale of measure the Level of Effectiveness is: 0 – no coordination mechanism 1 – coordination mechanism in place; 2 – coordination mechanism in place, meeting regularly with appropriate representation (gender, sector and decision-making authorities) 3 – coordination mechanism in place, meeting regularly with appropriate representation (gender, sector and decision-making authorities), with appropriate information flows and monitoring of action items/issues raised</p>
<p>A6.0 Increased generation and use of climate information in decision-making</p>	<p>A6.1 Use of climate information products/services in decision-making in climate sensitive sectors</p>	<p>Surveys among sectors and end-users</p> <p>National climate change and DRM/DRR policies, plans and</p>	<p>Current climate information products /services in DRM decision-making in climate-sensitive sectors are</p>	<p>The DRM sector uses improved CP-CS in each country, leading to at least 20% (5'848'295) of the total beneficiaries / population</p>	<p>Annual agriculture sector plans in each country are updated using hydromet data and MH-IBF-EWS, and relevant sectoral and extension workers are trained in the application of the plans, leading to reduction of losses</p>	<p>NMHSs, DRM institutions and sectors work together to co-produce improved user-friendly CP-CS, and to implement MH-IBF-EWS at regional, national and local levels</p>

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		<i>situation reports</i>	<i>hazard-based</i>  <i>CP-CS are not used in decision-making in agriculture sector</i>  <i>Absence of MH-IBF-EWS across the four target countries in the SWIO region</i>	<i>MH-IBF-EWS piloted in selected vulnerable communities in the four countries, leading to the reduction of the damage to economic assets by 10% or USD 5 million and reduce loss of life to less than 40</i>	<i>in the agriculture production amounting to USD 400.000/year (total for the four target countries)</i>  <i>MH-IBF-EWS implemented at regional, national and local levels, , leading to the reduction of the damage to economic assets by 30% or USD 15 million and reduce loss of life to less than 16</i>	<i>Sector authorities are willing to use the CP-CS developed</i>
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools instruments, strategies and activities to respond to climate change and variability	<i>Surveys among selected communities , sectors and local government s on early warning/risk perception survey</i>  <i>Situational reports</i>  <i>Local government s' annual reports</i>	<i>0 – No use of fund-supported tools</i>  <i>0 – No formal use of MH-IBF-EWS &amp; other climate-related information</i>	<i>Local government s at the project sites have access and use MH-IBF-EWS knowledge and decision support system</i>	<i>Local governments in the 4 countries have access to MH-IBF-EWS knowledge information</i>  <i>500 households in the project sites who have introduced CP-CS in their agriculture plans have an average increase of annual income of 5%</i>	<i>The CP-CS developed during the project are still being used/maintained beyond the project's lifetime</i>  <i>There is continued commitment and uptake of the information by target communities in the project sites</i>
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	A7.2 Number of males and females reached by [or total geographic coverage of] climate-related early warning systems and other risk reduction measures established/strengthened	<i>Baseline and endline surveys among selected communities , sectors and local government s on early warning/risk perception survey</i>  <i>Situation reports</i>	<i>0 - A baseline study of CP-CS use in each target country will be undertaken under Activity 1.4.</i>	<i>10% of the target population, i.e. 2'924'147 (total in the 4 countries' project sites) (50% male and 50% female) with access to CP-CS, including MH-IBF-EWS for tropical cyclones</i>	<i>67% of the target population, i.e. 19'453'286 (total in the 4 countries nationwide) (50% male and 50% female) ) with access to CP-CS, including MH-IBF-EWS for tropical cyclones</i>	<i>MH-IBF-EWS reach relevant population using adequate dissemination channels</i>  <i>There is continued commitment and uptake of the information by target communities in the project sites</i>  <i>Project sites will be defined at the project commencement (inception phase)</i>
A8.0 Strengthened awareness of climate threats and risk-reduction processes	A8.1 Number of males and females made aware of climate threats and related appropriate responses	<i>Public Surveys</i>	<i>0 - A baseline study of CP-CS use in project sites in the four target countries will be undertaken under Activity 1.4.1</i>	<i>For project sites in the 4 countries: Male: additional 250 Female: additional 250 (or +10% male/ female of the baseline)</i>	<i>For project sites in the 4 countries: Male: additional 750 Female: additional 750 (or +25% male/ female of the baseline) with access to CP-CS</i>	<i>Interactions between CP-CS providers and end-users is effective, through the UIP, NCOF, SWIOCOF and other means</i>  <i>Awareness of climate threats and risk-reduction responses is defined as the number of males and females who have attended the project workshops and</i>

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				<i>with access to CP-CS</i>		<i>meetings, and have received knowledge products and outreach materials</i>
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The following Project performance indicators will be tracked as part of Project monitoring to assess progress towards achieving the stated Project outcomes. The information required for these indicators will be based on reports from RPSC and NPSC reports with sample verification undertaken during site visits by IOC/PMU and AFD staff. Costs associated with monitoring performance indicators are included within staff time and travel costs.

Table 3. Project outcome performance indicators

Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
1. Generation, dissemination and uptake of climate-related information supported by effective organizational and institutional capacities, regional cooperation, and enabling environment	1.1 Established RCC-Network for generating reliable regional CP-CS	Report of the pilot phase of the RCC-Network RCC-Network endorsed by WMO	No RCC or RCC-Network in the SWIO region	1 RCC-Network (pilot phase)	1 RCC-Network (designated by WMO)	Partner countries agree on a strategy and operating plan to set up the structure and functions of the RCC-Network, and to maintain the RCC-Network functions beyond project's lifetime
	1.2 Adopted national hydromet laws with mechanisms for supporting O&M of NMHSs	Reports of workshops of public consultations Hydromet Laws drafted and adopted	No National Hydromet Laws revised or prepared with mechanisms for supporting O&M of NMHSs	Drafted national Hydromet Laws revised or prepared with mechanisms for supporting O&M of NMHSs	Adopted national Hydromet Laws revised or prepared with mechanisms for supporting O&M of NMHSs	Stronger institutions provide an adequate environment to generate profit and retain staff  Hydromet Laws support the functioning of NMHSs & CIEWS fund supports O&M further investments required
2. Upgraded obs. & monitoring, and information systems capacities secure reliable capacity to monitor climate-related hazards & assess trends	2.1 Percentage of networks set up (i.e. procured, installed and operating) to improve the monitoring capabilities	Audit reports of the on-site inspections Reports of the Factory Acceptance Tests (FAT), Site Inspections Tests (SAT), and Operational Tests (OT)	Hydromet observation networks outdated and inadequate  Number of networks to be determined/fine-tuned based on the assessments done under Activity 1.4.1	At least 20% of the Hydromet observation network expanded (total for the 4 countries)	At least 80% of Hydromet observation network upgraded and expanded (total for the 4 countries)	The upgrade and expansion of the hydromet observation network will be upgraded and expanded using innovative technologies for cost-effectiveness  Government commitment to secure adequate O&M for the monitoring equipment are fulfilled on a continuous basis both during the project implementation and afterwards
	2.2 A centralized platform in place to secure reliable capacity to monitor and forecast climate-related hazards systems integration in place to improve the process of generating forecasts	Audit reports of the on-site inspections Reports of the Factory Acceptance Tests (FAT), Site Inspections Tests (SAT), and Operational Tests (OT)	No Systems integration	N/A	Full Systems integration through a centralized platform in place to secure reliable capacity to monitor and forecast climate-related hazards	The existing systems will be upgraded and new will be set-up using innovative technologies for cost-effectiveness, to facilitate their integration  Government commitment to secure adequate O&M for the data management and other information systems are fulfilled on a continuous basis both during the project implementation and afterwards
3. Generation of science-based multi-hazard weather, climate and water risk info improve the quality of forecasts and warning, and	3.1 Number of farmers with access to CP-CS target for agriculture (gender-sensitive)	Reports of Training sessions and lists of participants;	Absence of target CP-CS for agriculture	Weather and climate advisories integrating the needs of farmers (both men and	1'000'000 farmers (of which 50% are women) with access to CP-CS target for agriculture	Trained staff members are retained in the NMHSs

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<i>impact-based decision-making</i>		<i>training materials/content</i>		<i>women), and tailored delivery and communication methods designed</i>		<i>Staff members of NMHSs collaborate with stakeholders and CP-CS users to develop target CP-CS products for agriculture</i>
	3.2 Number of site-specific forecasts/warnings generated and issued daily by NMHSs	Reports of Training sessions and lists of participants; training materials/content	Lack of site-specific forecasts	Site-specific forecasts/warnings generated and issued daily by NMHSs for the capital city of each country	Site-specific forecasts/warnings generated and issued daily by NMHSs to the municipality level in each country	<p>Capacities built through the project are maintained and periodically updated</p> <p>Trained staff members are retained in the NMHSs</p> <p>Capacities built through the project are maintained and periodically updated</p>
4. Improved community resilience through the implementation of people-centered MH-IBF-EWS at regional, national and local levels and improved/prepared preparedness & adaptation plans	4.1 Implemented nation-wide MH-IBF-EWS covering tropical cyclones, heavy rainfalls/floods, storm surges and droughts in the four target countries	Regulatory framework for MH-IBF-EWS, SOPs, communication protocols; preparedness & adaptation plans	<p>Level 2 – nation-wide EWS for Tropical Cyclones, not impact based</p> <p>No institutional responsibilities and communication protocols</p>	<p>National framework for MH-IBF-EWS for the individual countries, which will guide the implementation at the local level</p> <p>Developed/ updated early warning protocols from hazard to impact-based for issuance, communication and dissemination for each hazard in the project sites</p> <p>MH-IBF-EWS piloted in the project sites (Level of Implementation 7)</p>	<p>Operationalized national framework for MH-IBF-EWS for the individual countries</p> <p>MH-IBF-EWS rolled-out nationwide (Level of Implementation 8)</p>	<p>Governments have political will to implement relevant legal-regulatory reforms for effective and efficient MH-IBF-EWS</p> <p>Levels of implementation of the MH-IBF-EWS are defined as:</p> <p>Level 0 – No MH-IBF-EWS</p> <p>Level 1 – EWS for Tropical Cyclones in project sites, not impact based</p> <p>Level 2 – nation-wide EWS for Tropical Cyclones, not impact based</p> <p>Level 3 – EWS for multi-hazards (e.g. Tropical Cyclones and floods) in project sites, not impact based</p> <p>Level 4 – nation-wide EWS for multi-hazards (e.g. Tropical Cyclones and floods), not impact based</p> <p>Level 5 – IBF-EWS for Tropical Cyclones in project sites</p> <p>Level 6 – nation-wide IBF-EWS for Tropical Cyclones</p> <p>Level 7 – MH-IBF-EWS in project sites</p> <p>Level 8 – nation-wide MH-IBF-EWS</p>
	4.2 A centralized/dedicated User Interface Platform (UIP), including a “meteoalarm”-type for dissemination of warning established and operating [yes/no]	<p>Progress reports for the UIP development</p> <p>Reports of training sessions; lists of participants; and</p>	No dedicated UIP; only very limited climate information at the IOC website	Dedicated UIP established for dissemination CP-CS	UIP upgraded to include the DSS for the MH-IBF-EWS	

## Annex 11. Monitoring and Evaluation Plan – HYDROMET IOC

		<i>training materials/content</i>				
	4.3 Improved NMHSs weather and climate services	Surveys among users and communities in project sites	User satisfaction index to be determined at the first SWIOCOF session supported by the project; and baseline survey in the project sites	User satisfaction with the UIP and SWIOCOF > 40%	User satisfaction index with the UIP > 72%	The “user satisfaction index” is defined in the World Bank/ GFDRR (2019): <i>Weathering the Change: how to improve hydromet services in developing countries</i> ( <a href="https://www.gfdrr.org/en/publication/weathering-change-how-improve-hydromet-services-developing-countries">https://www.gfdrr.org/en/publication/weathering-change-how-improve-hydromet-services-developing-countries</a> ), and considers communications, perceived accuracy and usefulness of NMHSs’ products and services for both professional partners and vulnerable groups exposed to natural disasters

The following activities are included in the Project and the indicators related to each one are described in the deliverables column. The data needed to track progress towards these indicators will be IOC Annual Performance Reports (APR).

