

Monitoring & Evaluation (M&E) Plan and Impact Statement Template

Objective of the M&E Plan and Impact Statement:

- The M&E Plan and Impact Statement must be designed based on the Technical Assistance Response Plan and must enable the Implementer to complete the Closure Report at the end of the assistance.

Process for filling in the template:

- The Implementer must identify relevant quantitative and qualitative indicators as specified in the Closure Report. A sub-set of indicators to monitor and assess must be chosen among these.
 - The Implementer may also identify other specific, measurable, achievable, relevant, and time-bound indicators suitable to monitor Activities, Outputs and anticipated Outcomes from the technical assistance and add to the M&E Plan and Impact Statement.
 - During implementation of the TA or FTA, the Implementer must collect all relevant data as described in the Monitoring & Evaluation Plan. Aggregated data on selected indicators as well as an updated version of the Impact Statement will be presented in the Closure Report at the end of the assistance.
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Basic Information	
Title of response plan	Development of a Multi-Hazard Platform for forecasting Local level climate extremes and physical hazards for Iskandar Malaysia
Technical assistance reference number	LTR/2022/807/CTR
Country/ countries	Malaysia
NDE focal point and organisation	Ministry of Natural Resources, Environment and Climate Change (NRECC)
Sector(s) addressed	Disaster risk reduction
Technologies supported	Multi-Hazard Risk Assessments and Forecasting
Implementation period and total duration	18 months
Total budget for implementation	USD 232,414. -
Designer of the response plan	Deltares + UTM (sub-consultant)
Implementer of response plan	Deltares + UTM (sub-consultant)

(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
Output 2: Develop technical specifications to design and integrate information on local climate extremes and hazard risks in a multi-hazard platform (MHP) for Iskandar Malaysia (IM)	It is known and understood by key-stakeholders what are the functional and technical requirements for developing a Multi-Hazard Early Warning Platform.	A report describing the functional and technical design of the multi-hazard platform.	Input will be collected during the stakeholder workshop where we will monitor number of participants from key stakeholders and via collecting feedback on the concept technical and functional design report.	
Activity 2.1 Select the hydro-meteorological and hazard models based on the climatic conditions of the selected five local authorities in IM	Hydro-meteorological hazard model selected for 5 local authorities in IM are known and reported.	For each local authority a list of relevant hydro-meteorological hazards is created. These lists are based on an assessment of the local climate conditions.	Collect feedback on reported hydro-meteorological hazards from key stakeholders.	
Activity 2.2 Establish threshold values for climate induced coastal hazards in IM	Threshold values for climate induced coastal hazards are known.	Based on the analysis of available data and information, important threshold values are derived and reported.	Collect feedback on reported threshold values from key stakeholders.	
Activity 2.3 Generate probabilistic hazard maps for IM or the selected five local authorities in IM	Probabilistic flood hazard for a set of pre-defined return periods (2, 5, 20 and 100 years) maps are available for the selected 5 local authorities.	There will be a set (5 x 4) of digital / GIS based flood maps available that can be used as input to the Multi-Hazard Early Warning Platform.	Count number of available flood maps, reported in the functional and technical design report.	
Activity 2.4 Design	Design documents	1 functional and 1	Collect feedback on	

localized hazard forecasting integrated into the MHP for IM	(functional and technical) are available	technical design report.	functional and technical design document.	
Activity 2.5 Update/develop vulnerability curves for different types of infrastructure and demography in IM (e.g. buildings in the economic zones of IM)	Vulnerability curves are available and updated with available (global) data.	We will develop vulnerability curves for difference land use classes based on available (global) data information.	Collect feedback on reported vulnerability curves from key stakeholders.	
Output 3: Develop a prototype and establish the financing requirements to develop the MHP for IM	A Multi-Hazard Early Warning Platform is developed and delivered to implementing agencies.	A prototype of the Multi-Hazard Early Warning Platform is available for the key stakeholders that can be used for demonstration and training purpose.	We will ask for feedback from key stakeholders on the availability of the MHEWP. During training session we will monitor number of participants that received a copy of the system.	
Activity 3.1 Develop a knowledge and decision support system for the establishment of prototype of MHP for IM	Number of prototypes MHP systems developed	This project will develop 1 prototype MHP system that can be installed and used by several users.	Count the number of users that have the working system installed on their computer.	
Activity 3.2 Assess the financing needs to develop the fully operational MHP	Financing needs to develop a fully operational MHEWP are known to key stakeholders.	All key stakeholders understand the requirements for developing a fully operational MHEWP, including financing requirements to develop, maintain and use the MHEWP.	Input will be collected during the stakeholder workshop where we will monitor number of participants from key stakeholders and via collecting feedback on the financing requirements report.	
Activity 3.3 Conduct a stakeholder consultation	At least 1 stakeholder consultation organized.	There has been at least 1 stakeholder consultation organized with	Count the number of key stakeholders present during the workshop(s)	

		key stakeholders.		
Output 4: Improve local capacities in implementing a people-centred forecasting system using social innovation	Number of people familiar with implementation requirements of a MHP	At least 2 people from each key stakeholder are familiar with implementation requirements of MHP	Count number of people at workshops and trainings + feedback form.	
Activity 4.1 Conduct a gap assessment on the MHP with impact-based forecasting	Knowledge gaps identified	Training needs and knowledge gaps have been assessed and reported	Collect feedback from key stakeholders on the reported knowledge gap and training needs assessment.	
Activity 4.2 Build gender-sensitive institutional and technical capacities to implement the MHP with impact-based forecasting				
Activity 4.3 Develop early action protocols applicable to 5 authorities including shock-responsive social protection	Number of early action protocols	We will develop at least 2 different early action protocols, targeting different key stakeholders	Count the number of early action protocols	
Activity 4.4 Develop knowledge products and information, education and communication (IEC) materials on the MHP with impact-based forecasting	Number of knowledge products	We will develop at least 3 different knowledge products (e.g. bulletins, or information brochure), targeting different groups and/or organizations.	Count the number of knowledge products	

Note: The information in the table below will be used by the CTCN for public communication of the achieved and expected results of the Technical Assistance through the CTCN website www.ctc-n.org and other communication channels. See for example: https://www.ctc-n.org/sites/www.ctc-n.org/files/benin_a_ag_forestry.final_.pdf

Impact Statement

<p>Challenge</p>	<p>The Climate Technology Centre and Network (CTCN), being the operational arm of the United Nations Framework Convention on Climate Change, received and awarded a request from Malaysia to provide Technical Assistance (TA) on Development of a Multi-Hazard Platform for forecasting Local level climate extremes and physical hazards for Iskandar Malaysia. The objective of the TA is to enable Iskandar Malaysia to take early actions to mitigate climate risk through a decision support system designed in an inclusive manner and based on the understanding of the local level climate extremes and their impacts by integrating them into a prototype Multi-Hazard Platform (MHP) focusing on coastal hazards.</p> <p>Coastal areas in Malaysia are largely affected by various hazards (floods, droughts, erosion, etc.) affecting its growing population and increasing number of assets. Combined with climate change and sea level rise, these hazards threaten the fast-growing coastal developments in Malaysia.</p> <p>The TA will deliver a prototype decision support tool which will demonstrate how a multi-hazard platform for five zones of Iskandar Malaysia can help address growing climate change risks of this important coastal economic zone.</p> <p>The overall goal of the project is to (1) develop technical specifications to design and integrate information on local climate extremes and hazard risks in a multi-hazard platform (MHP) for Iskandar Malaysia (IM), (2) develop a prototype and establish the financing requirements to operationalize the MHP for IM, and (3) improve local capacities in implementing a people-centered forecasting system using social innovation.</p>
<p>CTCN assistance</p>	<ul style="list-style-type: none"> • Liaison with NRECC • Updated CTCN website dissemination of the MHEWS
<p>Anticipated impact</p>	<ul style="list-style-type: none"> • Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses. • Information available to cover targeted population groups with adequate risk reduction systems
<p>Anticipated co-benefits from the TA</p>	<ul style="list-style-type: none"> • Capacity building of IRDA staff in IM
<p>Gender aspects of the TA</p>	<p>An assessment will be made of the gender aspects related to the flood hazard and risk assessment. The project will develop hazard and risk maps, identifying land use zones and building types at risk. Based on available information about the population and the gender aspects we will assess how flood risk affects men and women in the 5 selected regions in Iskandar Malaysia.</p>
<p>Anticipated contribution to NDC</p>	<ul style="list-style-type: none"> • The implementation of climate change adaptation in Malaysia focuses on the management of water resources and security, coastal resources, agriculture and food supply, urban and infrastructure resilience, public health, forestry and biodiversity and key adaptation cross sectoral areas. • Minimizing flood impacts by incorporating climate change factors into flood risk assessment and protection projects are important for Malaysia. In this regard, weather-flood forecasting and early warning

	<p>system based on future climate conditions will be improved.</p> <ul style="list-style-type: none"> • Sea level rise (SLR) poses threat to Malaysia’s coastal resources. SLR and storm surge projections will be mainstreamed into the Integrated Shoreline Management Plan and for the planning of coastal protection and development projects. • In managing future risks and potential loss from climate change, Malaysia is mainstreaming climate resilience into urban planning and development of infrastructures. This will include emphasizing infrastructure integrity assessments and revisions of the existing manuals and guidelines.
<p>The narrative story</p>	<p>Coastal areas in Malaysia are largely affected by various hazards (floods, droughts, erosion, etc.) affecting its growing population and increasing number of assets. Combined with climate change and sea level rise, these hazards threaten the fast-growing coastal developments in Malaysia.</p> <p>This TA will deliver a prototype decision support tool which will demonstrate how a multi-hazard platform for five zones of Iskandar Malaysia can help address growing climate change risks of this important coastal economic zone. Having such information available is a required first step towards becoming climate resilient.</p> <p>The overall goal of the project is to (1) develop technical specifications to design and integrate information on local climate extremes and hazard risks in a multi-hazard platform (MHP) for Iskandar Malaysia (IM), (2) develop a prototype and establish the financing requirements to operationalize the MHP for IM, and (3) improve local capacities in implementing a people-centered forecasting system using social innovation.</p> <p>Through this TA the local capacity of key stakeholders will be strengthened. The prototype supports on the job enhancement of the capacity to deal with climate risks.</p>
<p>Contribution to SDGs</p>	<p>Contribution is to SDG13: The TA provides information and tools that can be used to develop climate actions to reduce the impact of climate induced hazards. This includes the development of risk knowledge and translating this knowledge into real-time information.</p> <p>Contribution to SDG5: This TA will assess gender aspects related to flood risk in Iskandar Malaysia. This information could be used later to improve gender equality, e.g. by targeting men and women with specific risk information products.</p> <p>Contribution to SDG11: This TA targets communities in Iskandar Malaysia. The TA will provide these communities with actionable information to improve their climate resilience. The flood risk knowledge developed in this TA can provide information to make human settlements safe and resilient.</p>