

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

February 2022

Prepared for: United Nations

Prepared by: ICEM

CLIMATE RISK ASSESSMENT FOR SUBNATIONAL ADAPTATION AND
ESTABLISHMENT OF A LOCAL CLIMATE INFORMATION SYSTEM FOR
CLIMATE CHANGE ADAPTATION (LISA)



This report is one of a series reports prepared by ICEM as part of the United Nations (UN) project Climate risk assessment for subnational adaptation and establishment of a local climate information system for climate change adaptation (LISA).



Disclaimer

This document was prepared for the United Nations (UN) by ICEM to undertake the technical assistance project Climate risk assessment for subnational adaptation and establishment of a local climate information system for climate change adaptation (LISA). The views, conclusions and recommendations in the document are not to be taken to represent the views of the UN.

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Basic Information	
Title of response plan	Climate risk assessment for subnational adaptation and establishment of a local climate information system for climate change adaptation (LISA)
Technical assistance reference number	2021000015
Country/ countries	Cambodia
NDE focal point and organisation	Dr. Hak Mao Director of the Department of Climate Change General Secretariat of the National Council for Sustainable Development/ Ministry of Environment of the Kingdom of Cambodia maohakccd.se@gmail.com No. 503, Road along Bassac River, Sangkat Tonle Bassac, Chamkarmon, Phnom Penh, Cambodia
Sector(s) addressed	Possibly including agriculture, human health, water
Technologies supported	Development of web-based data platform to support mainstreaming of climate change into planning at municipal level
Implementation period and total duration	12-months implementation period from Dec 2021 to Nov 2022.
Total budget for implementation	209,490 USD
Designer of the response plan	Dr. Hak Mao Director of the Department of Climate Change General Secretariat of the National Council for Sustainable Development/ Ministry of Environment of the Kingdom of Cambodia
Implementer of response plan	ICEM – International Centre for Environmental Management

(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 1: Development of implementation planning and communication documents	(i) Detailed work plan (ii) Monitoring & evaluation (M&E) plan and impact statement (iii) Technical assistance closure report	Completion of 3 reports: (i) Detailed work plan (ii) Monitoring & evaluation (M&E) plan and impact statement (iii) Technical assistance closure report	N/A	N/A
Output 2: Identification of the current status of the	Preparation of report: Initial considerations and draft concept for LISA. Results of Activities 2.2-3	Preparation of report including identification and clarification of	Literature review, consultations with	

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climate information systems in Cambodia	to inform development of LISA platform.	potentially applicable core principles in developing concept for LISA	stakeholders	
Activity 2.1: A kick-off meeting and stakeholder consultations	(i) Report on the kick-off meeting and stakeholder consultations (ii) Feedback from RGC on current status of climate information generation and collection, and the process of its dissemination at local/national level	Report of meeting and stakeholder consultations to clarify needs and finalise work plan of this TA	Meetings with UN-CTCN, Royal Government of Cambodia (RGC), academia, NGOs	National support needed to identify and facilitate communications with important contacts
Activity 2.2: Review of the climate information systems in Cambodia	Report on the review of the climate information system in Cambodia	Descriptions and key features of 3+ working climate information systems in Cambodia	Consultations with Royal Government of Cambodia, academia, and NGOs	National support needed to identify and facilitate communications with important contacts
Activity 2.3: Investigation of best practices of operating local climate information systems	Report on the investigation of best practices of operating local climate information systems	Identification of 3+ best practices documented to inform LISA development	Consultations with national and regional government, academia, NGOs	
Output 3: Identification of stakeholder's needs and climate change risk assessment at the selected municipality	Results of Activities 3.1-3, and 3.5 to inform development of LISA platform	Identification and clarification of potentially applicable core principles in developing concept for LISA	Consultations with Royal Government of Cambodia, municipal government, academia, and NGOs	Assumptions: (i) participation by municipality staff
Activity 3.1: Consultations to select the most appropriate municipality to design LISA	Report on the consultations to select the most appropriate municipality to design LISA	Municipality to be informed by DCC preference and/or criteria on risk from climate change impacts on social, economic and environmental systems.	Literature review, consultations with national and regional government, academia, NGOs.	Assumptions: (i) participation by municipality staff
Activity 3.2: Mapping of the potential stakeholders at	(i) Report on the mapping of the potential stakeholders at the selected municipality and	Two reports addressing identification of stakeholders at	Consultations with Royal Government of Cambodia,	Assumptions: (i) participation by municipality staff



(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
the selected municipality and survey of their needs	survey of their needs (ii) Survey to identify climate information needs of potential stakeholders (i.e., decisions to be supported)	national and municipality levels, and climate information needs identified	academia, and NGOs	(ii) municipality staff appreciate the need to mainstream issues of climate change into planning across multiple sectors.
Activity 3.3: Climate change risk assessment at the selected municipality	Report on the climate change risk assessment at the selected municipality	The report will examine the exposure to hazards (dependent on municipality selected, e.g., coastal or inland setting), system sensitivity, and adaptive capacity of social, economic and environmental systems determined.	(i) Consultations with Royal Government of Cambodia, academia, and NGOs (ii) Existing flood, drought, storm, SLR model outputs (iii) Climate projections (e.g., max T, and precipitation, extreme climate indices) (iv) information on past disasters/ extreme events	Assumptions: (i) access to adequate quality data (ii) participation by municipality staff
Activity 3.4: Organisation of the stakeholder working group	Detailed description of the stakeholder working group, with name and contact details of the members, respective institutions, gender, etc.	Anticipated stakeholder group of 5-10 members, including at municipal level, who are potential future users of LISA.	Consultations with Royal Government of Cambodia, municipal government, academia, and NGOs	Assumption: (i) participation from municipal stakeholders
Activity 3.5: Organisation of a meeting with the stakeholder working group	Minutes of the stakeholder working group meeting with a list of participants disaggregated by gender, materials used, and summary of the discussions held	Report of meeting and stakeholder consultations to clarify needs of LISA platform for decision-making and potential features of platform	Consultations with Royal Government of Cambodia, municipal government, academia, and NGOs	Assumptions: Participation by municipality stakeholders
Output 4: Development of LISA at the selected municipality	LISA platform designed with stakeholder feedback, developed, and deployed online	A fully functioning LISA platform that is accessible and responsive online.	(i) Consultations with Royal Government of Cambodia, and stakeholder group.	Assumptions: (i) There is adequate technical capacity at local level in data



(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
			(ii) List of participants at workshops (activities 4.4 and 4.6)	management skills. (ii) Computer hardware and internet bandwidth are adequate at municipal level. (ii) There is adequate understanding of potential climate change impacts for different sectors at municipal level by government staff (ie. within the stakeholder group).
Activity 4.1: Design of contents and specifications for LISA	(i) Report on the design of contents and specifications for LISA, with the initial mock-up of the system (website) and testing results (ii) Mock-up website developed (iii) Terms of Reference (ToR) for the establishment/deployment of LISA at the selected municipality	Report, ToR, and mock-up website developed showing key features based on outputs from earlier activities	Results of Activities 2.2-3, 3.1-3, and 3.5 to inform design of LISA	Assumptions: Proposed LISA features and functionalities requested by stakeholders are reasonable for planned inputs
Activity 4.2: Design of the process of data management for LISA	Report on the design of the process of data management for LISA	Report that clarifies data sources, ownership, processing, quality control/assurance	Consultations with Royal Government of Cambodia, and municipal government.	Assumptions: There is adequate technical capacity at local level in data management skills.
Activity 4.3: Development of the management protocols for LISA	Report on the management protocols for LISA	This report will build on the output of activity 4.2, clarifying roles and responsibilities of government staff in ensuring the long-term	Consultations with Royal Government of Cambodia, and municipal government.	Assumptions: There is adequate technical capacity at local level in data management

(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
		management of LISA.		skills.
Activity 4.4: Development of the capacity building program for effective use of LISA	(i) Report on the capacity building program for effective use of LISA (ii) Delivery of 4 or 5 half-day sessions on the deployment and management of the LISA platform (iii) list of workshop participants by disaggregated by gender (iv) workshop materials	Report and delivery of workshops, and copy of workshop materials, with the members of government department trained in the management of the LISA platform.	List of government staff participating at training sessions	Assumptions: Government IT staff have adequate IT/GIS experience to benefit from project training and with capacity to manage LISA in the future.
Activity 4.5: Organisation of a meeting with the stakeholder working group	Minutes of the stakeholder working group meeting with a list of participants disaggregated by gender, materials used, and summary of the discussions held	Minutes of the stakeholder working group meeting	List of participants	Assumptions: Gender balance for meeting will depend on female participation within government
Activity 4.6: Organisation of a 1-day stakeholder workshop for government bodies and stakeholders	(i) Minutes of the stakeholder working group meeting with a (ii) list of participants disaggregated by gender (iii) satisfaction survey from participants (iv) Copy of all materials produced under this consultancy (including programming code and databases)	(i) Minutes of the stakeholder working group meeting with a (ii) list of participants disaggregated by gender (iii) satisfaction survey from participants (iv) Copy of all materials produced under this consultancy (including programming code and databases)	(i) Minutes of the stakeholder working group meeting (ii) list of participants disaggregated by gender (iii) satisfaction survey from participants (iv) Copy of all materials produced under this consultancy (including programming code and databases)	Assumptions: This session will focus on the users of the system ie the stakeholder working group established above, who are interested in applying the LISA platform outputs for adaptation purposes (this will likely be a different group of people to Activity 4.4 capacity building meetings)

Note: The Response Plan may contain information useful for the section below. 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_ag_forestry.final.pdf

Impact Statement	
Challenge	Though Cambodia has already established a climate change data portal, providing access to several climate relevant data sets (e.g., climate finance and vulnerability to climate hazards), there is still limited use of the information and data available to inform local adaptation planning. At present significant gaps still remain in creating the conditions for science-based climate-informed decision making, in particular related to the production, access and use of climate information at the local level.
CTCN assistance	<ul style="list-style-type: none"> to design a web-based local climate information system at municipality level in Cambodia conduct a climate risk assessment to establish a baseline that can support adaptation decision-making processes, and provide services for climate information delivery at the sub-national (local) level.
Anticipated impact	<ul style="list-style-type: none"> climate resilience enhanced at municipality level improved awareness of local government stakeholders to climate change impacts and adaptation evidence-based decision-making at local level enhanced through improved access to climate and data information integrated into the LISA platform
Anticipated co-benefits from the TA	Engagement of stakeholders in the development of a focused sub-national climate information system can help communities better understand climate change impacts and the benefits of investing in climate resilient development.
Gender aspects of the TA	<p>Importance of addressing gender issues: In the rural areas of Cambodia, more than half of women are dependent on local natural resources for their livelihoods.</p> <p>Outcome from developing LISA Establishment of LISA will increase opportunities for women to access climate information, which will help them enhance their knowledge to address vulnerabilities and risks to climate change. Information to be included in LISA is expected to assist in addressing and measuring impacts on key climate-related gender issues.</p>
Anticipated contribution to NDC	<p>The TA is in line with national strategies and plans of Cambodia for climate change response.</p> <p>Nationally Determined Contribution (2020)*:</p> <p>Adaptation contributions:</p> <ul style="list-style-type: none"> 3.3 Prioritised adaptation actions 3.3.1. Prioritised adaptation actions <p>Table 10 Priority adaptation actions</p> <ul style="list-style-type: none"> 31. Prepare spatial planning (city, district, municipality) guidelines at all levels for climate change adaptation (page 36) 34. Vulnerability assessment towards the development of climate change strategic plans to respond to the impacts on land, housing, coastal management and building due to climate change (page 36) 39. Strengthening climate resilient cities (page 37) <p>*Ref: https://ncsd.moe.gov.kh/sites/default/files/2021-01/20201231_NDC_Update_Cambodia.pdf</p>
The narrative story	<p>Cambodia is recognized as a country particularly vulnerable to natural hazards, ranking 16th at most risk globally. Due to limited adaptive capacity, poor infrastructure and substantial reliance on the use of natural resources, the country is particularly vulnerable to the impacts of climate change.</p> <p>This proposal addresses development of a local climate information system for climate change adaptation (LISA). LISA will involve development of an intuitive and user-friendly web-based data visualisation platform that enables users to</p>

Impact Statement	
	<p>explore future climate scenarios and to gain an appreciation of potential impacts and adaptation options for future climate resilient planning. The development of LISA will build on findings from a climate change risk assessment at a selected municipality.</p> <p>Combining future climate change scenarios derived from climate models, and informed by findings from the climate change risk analyses, the LISA platform will be targeted at policy makers, planners, and other practitioners working at sectoral and sub-national levels. Effective use of LISA will strengthen risk-informed decision making and the mainstreaming of climate change into policy making and planning at the local level.</p>
Contribution to SDGs	<p>SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable This TA will contribute to enhancing climate resilience at the selected municipality.</p> <p>SDG 13. Take urgent action to combat climate change and its impacts:</p> <p>13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries This TA will contribute to enhancing climate resilience at the selected municipality by providing climate change risk assessment and the baseline for establishing LISA</p> <p>13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning This TA will provide the 1-day stakeholder workshop for government bodies and stakeholders, supporting them to increase their knowledge on the local climate information system</p>
Reference to knowledge products	<p>Publications:</p> <p><i>2021: Compilation of good practices and lessons learned on international collaborative research, development and demonstration (RD&D) initiatives of climate technology</i></p> <p><i>2021: Building Capacities in Climate Technologies: Understanding Gaps, Needs, Challenges and Enabling Measures to Promote Endogenous Capacities and Technologies</i></p> <p><i>2020: Innovative approaches to accelerating and scaling up climate technology implementation for mitigation and adaptation</i></p> <p><i>2018: Developing and enhancing endogenous capacities and technologies: technology stakeholder's perspectives</i></p> <p><i>2016. - Guidance for preparing a technology action plan</i></p> <p>TEC Briefs:</p> <p><i>TEC Brief #14 - Innovative approaches to accelerating and scaling up implementation of mature climate technologies</i></p> <p><i>TEC Brief #10 – Technological innovation for the Paris Agreement</i></p> <p><i>TEC Brief #5 – Technologies for adaptation in the water sector</i></p> <p><i>TEC Brief #4 – Technologies for adaptation in the agriculture sector</i></p>



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