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

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 form:

- 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.

Basic Information	
Title of response plan	**Localization of water resources management technology to adapt to climate change in Hong-Thai Binh River basin**
Technical assistance reference number	**AF-2021000099**
Country/ countries	**Viet Nam**
NDE focal point and organisation	**Pham Van Tan, Deputy Director General, Department of Climate Change, Ministry of Natural Resources and Environment, Viet Nam**
Sector(s) addressed	**Water, Energy, Agriculture**
Technologies supported	**For WRM and Planning**
Implementation period and total duration	**29th April 2022 to the 29th of October 2023**
Total budget for implementation	**USD 192,999.00**
Designer of the response plan	**CTCN**
Implementer of response plan	**DHI A/S**

#	(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: Add title from the Response Plan (e.g. CTCN planning and monitoring documents)	*Select relevant indicators from the Closure Report (at least one core indicator, section B). You may also define additional relevant indicators to be added.*	*Add the expected quantitative or qualitative target/value of the indicator (e.g. number of studies, policy recommendations, etc.).*	*Describe the expected method and frequency for data collection (e.g. survey, head count at a training workshop, application of a standard methodology etc.)*	*Describe any assumptions made or anticipated challenges for collecting quantitative and qualitative data*
	Output 1: Development of implementation planning and communication documents				
1	Activity 1: All implementers must undertake the following activities at the beginning and at the end of the CTCN technical assistance (TA).	Total number of events organized by proponents and implementing partners	At least 1 meeting	Minutes from meeting	Including online meetings
	Output 2: Identification of climate change risk and challenges to transboundary water resource management in the Hong-Thai Binh river basin				
2	Activity 2.1: A kick-off meeting, stakeholder consultations and site visit	Total number of events organized by proponents and implementing partners	At least 3 institutions	i) Report on the kick-off meeting, stakeholder consultations and site visit	Including online meetings
3		Number of participants in events organized by proponents and implementing partners a) Number of men b) Number of women	At least 7 participants in total	i) Report on the kick-off meeting, stakeholder consultations and site visit	
4	Activity 2.2: Review of challenges and climate change risk to transboundary water resource	Total number of deliverables	1 report	ii) Report on the review of	

	management in the Hong-Thai Binh river basin	produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed		challenges and climate change risk to transboundary water resource management in the Hong-Thai Binh river basin iii) Report on the investigation of case studies on the use of different models of data management and sharing for transboundary water resource management at the river basin level iv) Data needs assessment report (merged into 1)	
5	Activity 2.3: Investigation of case studies on the use of different models of data management and sharing for transboundary water resource management at the river basin level	Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	Same as above	Same as above	
6	Activity 2.4: Assessment of data needs	Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) Number of tools and technical documents strengthened, revised or developed	Same as above	Same as above	

	Output 3: Identification of the most appropriate technologies to provide science-based information on transboundary water resources in the Hong-Thai Binh river basin				
7	Activity 3.1: Enumeration and review of the advanced technologies providing water resource data in a transboundary river basin context	Total number of events organized by proponents and implementing partners	At least 2 stakeholder meetings	Minutes from meeting	Including online meetings
8		Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	1 report	i)Report on the review of the advanced technologies providing water resource data in a transboundary river basin context ii)Report on the selection of the most appropriate advanced technologies to be used for providing transboundary water resource data in the Hong-Thai Binh river basin (merged into 1)	
9	Activity 3.2: Selection of the most appropriate advanced technologies to be used for providing transboundary water resource data in the Hong-Thai Binh river basin	Total number of events organized by proponents and implementing partners	Same as above	Same as above	
10		Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	Same as above	Same as above	

	Output 4: Customization of the selected technologies to provide science-based information on transboundary water resources in the Hong-Thai Binh river basin				
11	Activity 4.1: Determination of the scope of intervention of the selected technologies in transboundary water resource management and planning in the Hong-Thai Binh river basin	Total number of events organized by proponents and implementing partners	At least 2 stakeholder meetings	Minutes from meeting	Including online meetings
12		Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	1 report	i) Report on the determination of the scope of intervention of the selected technologies in transboundary water resource management and planning in the Hong-Thai Binh river basin	
13	Activity 4.2: Establishment of the selected technologies and baseline information in the Hong-Thai Binh river basin.	Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	1 established technology to support WRM and planning	Selected technology deployed	
15		**Anticipated** number of technologies transferred or deployed as a result of CTCN support	Same as above	Same as above	
16	Activity 4.3: Report and verification of information on transboundary water resources in the Hong-Thai Binh river basin	Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and	1 report	iii) Provision of data sharing protocols, and of the selected transboundary water resource data and reports on data quality and	

		technical documents strengthened, revised or developed		management issues for 6 months (frequency to be determined)	
17	**Output 5: Capacity enhancement for use of the selected technologies in the Hong-Thai Binh river basin**	Total beneficiaries (Core indicator 3)	At least 5 participants enrolled and actively engaged in the training From at least 3 institutions	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	
18	*Activity 5.1: Development of the technical manual for use of the selected technologies*	Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	1 report	i) Technical manual for use of the selected technologies (in English and Vietnamese)	
19	*Activity 5.2: Capacity needs assessment and development of the capacity building program for use of the selected technologies*	Total number of events organized by proponents and implementing partners	At least 2 stakeholder meetings	Minutes from meeting	Including online meetings
20		Total number of deliverables produced during the assistance (excluding mission, progress and internal reports) b) Number of tools and technical documents strengthened, revised or developed	1 report At least 3 materials for training sessions	ii) Report on the capacity needs assessment and development of the capacity building program for use of the selected technologies iii) Materials for the training (e.g., training curriculum, presentations, satisfaction survey template, etc.)	
21	*Activity 5.3: Training of government bodies and*	Total number of events	At least 4 half days	iv) Report on the training	

	stakeholders for use of the selected technologies	organized by proponents and implementing partners	online and 3 full days face-to-face	of government bodies and stakeholders for use of the selected technologies	
22		Number of training organized by proponents and implementing partners	Same as above	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	
23		Number of participants in trainings organized by proponents and implementing partners a) Number of men b) Number of women	At least 5 participants enrolled and actively engaged in the training From at least 3 institutions	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	
24		Total number of institutions trained a) Governmental (national or subnational) b) Private sector (bank, corporation, etc.) c) Nongovernmental (NGO, University, etc.)	At least 3 governmental institutions	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	
25		Percentage of participants reporting satisfaction with CTCN training (from CTCN training feedback form)	At least 50% very satisfied	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	
26		Percentage of participants reporting increased knowledge, capacity and/or understanding as a result of	At least 50% with increased knowledge and/or understanding of covered topics	iv) Report on the training of government bodies and stakeholders for use of the selected technologies	

		CTCN training (from CTCN training feedback form) a) Percentage of men b) Percentage of women			

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_a_ag_forestry.final_.pdf

Impact Statement	
Challenge	*Approximately 500 characters with space* *The Hong-Thai Binh river basin shared by China, Laos and Viet Nam, has over 50% located in Viet Nam. NAWAPI is responsible for developing Water Resource Management (WRM) plans. Accessing reliable, up-to-date information on transboundary flows and quantification of how water resources development in China has and will affect these flows is very important and plays a decisive role in WRM planning. However, there is no data sharing agreement between the countries yet.*
CTCN assistance	*2 to 4 bullet points. Approximately 450 characters with space* • *Identification of climate change risk and challenges to WRM in the Hong-Thai Binh river basin* • *Identification of the most appropriate technologies to provide the missing science-based information* • *Customization of the selected technologies* • *Capacity building in their application*
Anticipated impact	*2 to 4 bullet points. Approximately 250 characters with spaces. Include at least one of the core impact indicators from the Closure Report.* • *Over 5 government experts are expected to be impacted by having access to state-of-the art data that they can apply in their WRM activities.* • *Contribute to address a current knowledge gap and provide an essential platform for integrated WRM planning.*
Anticipated co-benefits from the TA	*Instruction: Please indicate expected co-benefits as described in the response plan and in the relevant deliverables* *Science-based information on transboundary water resources, provided through the TA, could be used in developing a transboundary water resource management plan in the Hong-Thai Binh river basin. In particular, water capacity and availability in the river basin during dry season could be more accurately estimated, and therefore a better plan for water supply to communities and households living in the river basin areas could be made. Moreover, outputs from the TA could improve the capacity of flood monitoring and warning in the Hong-Thai Binh river basin. Proactive actions for flood prevention and impact reduction could be provided to vulnerable groups, including women and youth, living in the transboundary river basin areas, reducing casualties and property damage.*
Gender aspects of the TA	*Instruction: Please indicate if technical assistance will be supported by a gender analysis. Describe expected gender benefits as described in the response plan and in the relevant deliverables* *Narrowing the gender gap in terms of access to information, through training activities, by ensuring an equitable number of women involved and by using a gender approach in the implementation of the activities. The TA team has a Gender Expert to guide preparation of stakeholder interviews and every stakeholder engagement process including the technical training.*

Anticipated contribution to NDC	*2 to 4 bullet points. Approximately 350 characters with spaces.* • *3.3.1. Improving adaptation efficiency through strengthening state management and resources (page 20)* • *3.3.2. Enhancing resilience and adaptive capacity of communities, economic sectors, and ecosystems (page 20)* • *3.3.3. Reducing disaster risks and minimizing damage, increasing preparedness to respond to increasing natural disasters and climate extremes due to climate change (page 20)*
The narrative story	*Approximately 1200 characters with spaces* *Please provide a brief description of the background and context for the technical assistance. Describe the main problems and barriers for climate change mitigation and/or adaptation in terms of climate technologies that the CTCN technical assistance will address.* *To acquire data on amount of water flow from China into Viet Nam in the Hong-Thai Binh river basin, Viet Nam has applied a hydrological model to convert rainfall data into runoff data. The rainfall data has been extracted from meteorological stations near the border of Viet Nam and from satellite-based global sources. Due to limitations in data availability, the simulations of water flow from China into Viet Nam have errors greater than 50%, compared with in-situ data. Viet Nam is currently using a statistical method, applying in-situ data from monitoring stations located at the border areas between two countries; however, this is a temporary solution, because the reliability of this method is still low. With this TA, the amount of historical, current and future water flows from China into Vietnam will be assessed and better understand the impact of climate change. NVWATER, NAWAPI and designated stakeholders will have access for science-based information on transboundary water resources to support IWRM basin planning.*
Contribution to SDGs	*To the extent possible, please describe contribution to approximately 3 SDGs, including SDG13, with a few sentences for each SDGs concerned.* *A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/.* *SDG 6: Ensure availability and sustainable management of water and sanitation for all* • *Identify and customize the most appropriate technologies to provide science-based information on transboundary water resources in the Hong-Thai Binh river basin.* *SDG 13: Take urgent action to combat climate change and its impacts* *13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries* • *Enhancing climate resilience in the Hong-Thai Binh river basin by providing science-based information on transboundary water resources, which will be used in developing a water resource management plan in the river basin.* *13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning* • *Provide a technical manual (or guideline) and a capacity building program to train central/local government officials and relevant stakeholders for effective use of the selected technologies.*
Reference to knowledge	*Please indicate if any UNFCCC Technology Executive Committee*

products	*(TEC) knowledge products (publications, briefs, tools etc.) were used in the development of the TA request and/or are envisaged to be used during implementation of the technical assistance.* *Link to TEC knowledge database:* *https://unfccc.int/ttclear/tec/documents.html* *Which knowledge products do you envisage to use? Please list*