

Technical Assistance Closure Report Template

Objective of the technical assistance (TA) Closure Report:

- To communicate publicly in one document a summary of progress made and lessons learned during the TA towards the anticipated impact (sections 1-4).
- To document qualitative and quantitative data collected during TA, for use in donor and UN reporting (Annex 1).

Steps for completing the TA closure report:

1. The lead TA implementer submits the closure report at the end of the technical assistance as a final deliverable. The TA closure report will capture outputs, outcomes and impacts of all activities conducted under the TA. Please copy and summarise relevant material from previous TA outputs/deliverables and the Response Plan, as relevant.
2. A CTCN Manager will review and revise the closure report before final approval by the CTCN Deputy Director.

Important note on public and internal use of the closure report:

Once approved by the CTCN Deputy Director, the TA closure report will be a public document available on the CTCN website www.ctc-n.org. Selected content will be used for targeted communication activities. Annex 2 is for internal use only and will not be publicly available.

Closure Report for CTCN Technical Assistance

1. 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 organisation	Department of Climate Change
NDE focal point	Dr. Chu Thi Thanh Huong Deputy Head of the GHG Emission Reduction and Ozone Layer Protection Division Department of Climate Change Ministry of Natural Resources and Environment No 10 Ton That Thuyet, Ha Noi, VietNam
NDE contact information	<i>chuthanhhuong@gmail.com</i>
Proponent focal point and organisation	<i>Nguyen Chi Nghia, NWATER, nguyenchinghia@gmail.com</i>
Designer of the response plan	<i>CTCN</i>
Implementer(s) of technical assistance	<i>DHI A/S</i>
Beneficiaries	<i>NAWAPI, CEWAFO and NVWATER</i>
Sector(s) addressed	<i>Water, Energy, Agriculture</i>

Technologies supported	<i>For WRM and Planning</i>
Implementation start date	<i>29th April 2022 to the</i>
Implementation end date	<i>29th of October 2023</i>
Total budget for implementation	<i>USD 192,999.00</i>
Description of delivered outputs and products as well as the activities undertaken to achieve them. In doing so, review the log frame of the original response plan and refer to it as appropriate	<ul style="list-style-type: none"> • <i>Report on the kick-off meeting, stakeholder consultations and site visit</i> • <i>Report on the review of challenges and climate change risk to transboundary water resource management in the Hong-Thai Binh river basin</i> • <i>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</i> • <i>Data needs assessment report</i> • <i>Report on the review of the advanced technologies providing water resource data in a transboundary river basin context</i> • <i>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</i> • <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</i> • <i>Establishment of the selected technologies and baseline information in the Hong-Thai Binh river basin</i> • <i>Provision of data sharing protocols, and of the selected transboundary water resource data and reports on data quality and management issues for 6 months (frequency to be determined)</i> • <i>Technical manual for use of the selected technologies (in English and Vietnamese)</i> • <i>Report on the capacity needs assessment and development of the capacity building program for use of the selected technologies</i> • <i>Materials for the training (e.g., training curriculum, presentations, satisfaction survey template, etc.)</i> • <i>Report on the training of government bodies and stakeholders for use of the selected technologies</i>
Methodologies applied to produce outputs and products	<ul style="list-style-type: none"> • <i>Structured interviews with key stakeholders</i> • <i>Literature Review</i> • <i>High-level meetings with entity leaders</i> • <i>Technical training with national experts</i> • <i>Online demo sessions during development with key experts for closer following of activities</i> • <i>Monthly (approx.) progress meetings</i>
Reference to knowledge resources	-
Deviations	-

<p>Anticipated follow-up activities and next steps</p>	<ul style="list-style-type: none"> • <i>Dissemination of work carried out in a webinar.</i> • <i>Use of new expertise acquired during training led by CTCN.</i> • <i>Use of the system during the next seasons for a few years and attempt at improving performance with new data generated in the meantime.</i>
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2. Lessons learned

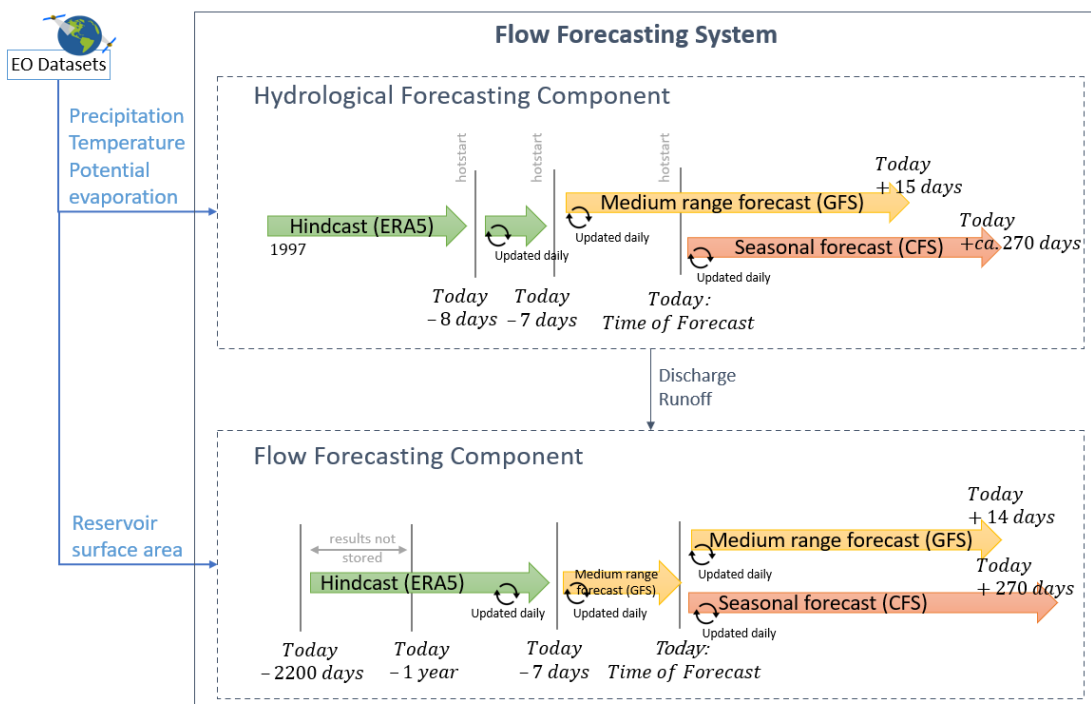
	Lessons learned	Recommendations
<p>Lessons learned from the CTCN TA process</p>	<p>In the response planning, it was assumed there was no need for translation and interpretation services, this was accurate to a certain extent in the case of the direct beneficiaries and was partially resolved with our team having national experts – nonetheless these are technical and not translation experts. However, during the first meetings with the broader pool of stakeholders it was clear, interpretation services are a resource of utmost importance to work in Vietnam. Without it, it would have been impossible to complete outputs 2 and 3 which relied heavily on stakeholder interaction.</p>	<p>Include an Interpreter as a required TA team member to assist with meetings or workshops with stakeholders, and translation of as many project materials as possible.</p>
	<p>Organizational changes at the NDE rendered the following of the TA progress and deliverables very complex. It was recognized that there was a lack of knowledge by implementing partners of the highly complex and time expensive protocols and requirements of the NDE to be able to operate.</p>	<p>If possible, it is recommended that only after an NDE contact person is assigned to work with the implementing entity, and all required protocols operationalized and understood by all parties, may the TA implementation start. Perhaps an activity within Output 1 with appropriate budget for meetings and interpreters, should be added for formalizing the TA operationalization between NDE and implementing partners.</p>
<p>Lessons learned related to climate technology transfer</p>	<p>The TA team, during every stakeholder meeting and capacity building session, always promoted a balanced gender break down of participation in terms of attendance as well as contributions during the sessions.</p>	<p>For similar TAs, it is recommended to have a specific Gender Expert position as has been done in this TA, that applies surveying tools to draw conclusions on the participants' expected ability to sustain and apply learnings after the TA.</p>

	<p>A critical aspect to the success of this technological implementation, was the fact that the new technology only used software the beneficiaries already possessed and were used to.</p>	<p>In technical assistances (TAs) requiring technology and software development, a review of existing tools being used by the beneficiaries should be included and a provision to at the minimum try to use as many as possible – should the existing functionality allow – versus bringing in totally new tools for the new technology development.</p>
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3. Illustration of the TA and photos

For communication purposes, please provide 2-4 Power Point slides, including illustrations or charts, describing barriers, opportunities, methodology, activities, outputs and achieved results. The illustrations must be copied into the TA Closure report but must also be delivered as power point files. Also, please provide at least five high-resolution pictures in jpg format, capturing technical assistance. The pictures should illustrate how the TA has impacted the lives of the beneficiaries in particular and the communities in general.





More included in attached file: "Illustration_of_TA_photos.pptx"

4. Impact Statement

The information in the table below will be used to communicate results and anticipated impacts of this technical assistance publicly. Please copy information from impact statement developed in the M&E Plan and update as relevant.

Challenge	<i>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.</i>
CTCN Assistance	<ul style="list-style-type: none"> • <i>Identification of climate change risk and challenges to WRM in the Hong-Thai Binh river basin</i> • <i>Identification of the most appropriate technologies to provide the missing science-based information</i> • <i>Customization of the selected technology</i> • <i>Capacity building in its application</i>
Anticipated impact	<ul style="list-style-type: none"> • <i>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.</i> • <i>Contribute to address a current knowledge gap and provide an essential platform for integrated WRM planning.</i>
Co-benefits: Achieved or anticipated co-benefits from the TA	<i>Science-based information on transboundary water resources, provided through the TA, can be used in developing a more informed water resource management plan in the Hong-Thai Binh river basin, Vietnam. 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 may be made with support by the technology developed. Moreover, during the flood season, improved border flow estimates may be used in the monitoring and warning in the Hong-Thai Binh river basin.</i>
Gender aspects of the TA	<i>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 had a Gender Expert to guide preparation of stakeholder interviews and every stakeholder engagement process including the technical training. The Gender Expert participated in the training and carried out an analysis based on a survey conducted at the end.</i>
Anticipated contribution to NDC	<ul style="list-style-type: none"> • <i>3.3.1. Improving adaptation efficiency through strengthening state management and resources (page 20)</i> • <i>3.3.2. Enhancing resilience and adaptive capacity of communities, economic sectors, and ecosystems (page 20)</i> • <i>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)</i>
The narrative story	<i>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</i>

	<p><i>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.</i></p>
<p>Contribution to SDGs</p> <p>A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/</p>	<p><i>SDG 6: Ensure availability and sustainable management of water and sanitation for all</i></p> <ul style="list-style-type: none"> • <i>Identify and customize the most appropriate technologies to provide science-based information on transboundary water resources in the Hong-Thai Binh river basin.</i> <p><i>SDG 13: Take urgent action to combat climate change and its impacts</i></p> <p><i>13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</i></p> <ul style="list-style-type: none"> • <i>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.</i> <p><i>13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</i></p> <ul style="list-style-type: none"> • <i>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.</i>

Annex 1 Technical assistance data collection

Please add quantitative and qualitative values for the indicators selected in the M&E plan and monitored throughout the technical assistance in the tables below. Indicators which have been monitored in addition to the proposed indicators below may be added at the end of table A. Non-relevant indicators should be left blank.

A. Output and outcome indicators

Indicator	Quantitative value	Qualitative description
Please note indicators below highlighted as anticipated	<i>Numerals only; disaggregates must sum to the total</i>	<i>List the various elements corresponding to the quantitative value as well as timelines and responsible institutions</i>
Total number of events organized by proponents and implementing partners	20	<i>Kick-off meeting, stakeholder interviews, online demos, progress meetings, capacity building sessions</i>
Number of participants in events organized by proponents and implementing partners	36	
a) Number of men	20	
b) Number of women	16	
Number of climate technology RD&D related events	-	-
Number of participants in climate technology RD&D events	-	-
a) Number of men	-	-
b) Number of women	-	-
Number of training organized by proponents and implementing partners	1	<i>List the title of the training sessions and capacity strengthening activities</i>
Number of participants in trainings organized by proponents and implementing partners	25	
a) Number of men	12	
b) Number of women	13	
Total number of institutions trained	6	
a) Governmental (national or subnational)	6	<i>NAWAPI: Department Science Technology and International Cooperation Department Planning CEWAFO: Department Warning and forecast in the North side Department Warning and forecast in the Middle side Department Warning and forecast in the South side NVWATER: Investigation Department</i>

b) Private sector (bank, corporation, etc.)	-	-
c) Nongovernmental (NGO, University, etc.)	-	-
Percentage of participants reporting satisfaction with CTCN training (from CTCN training feedback form)	66%	<i>Satisfied</i>
Percentage of participants reporting increased knowledge, capacity and/or understanding as a result of CTCN training (from CTCN training feedback form)	66%	<i>Increased knowledge, capacity and/or understanding</i>
a) Percentage of men	39%	
b) Percentage of women	61%	
Total number of deliverables produced during the assistance (excluding mission, progress and internal reports)	<i>List total number here</i>	
a) Number of communication materials, including news releases, newsletters, articles, presentations, social media postings, etc.	-	-
b) Number of tools and technical documents strengthened, revised or developed	1	<i>Flow forecasting System</i>
c) Number of other information materials strengthened, revised or created (For example training and workshop reports, Power Points, exercise docs etc.)	12	<ul style="list-style-type: none"> • <i>Report on the kick-off meeting, stakeholder consultations and site visit</i> • <i>Report on the review of challenges and climate change risk to transboundary water resource management in the Hong-Thai Binh river basin</i> • <i>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</i> • <i>Data needs assessment report</i> • <i>Report on the review of the advanced technologies providing water resource data in a transboundary river basin context</i> • <i>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</i> • <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</i>

		<ul style="list-style-type: none"> • Provision of data sharing protocols, and of the selected transboundary water resource data and reports on data quality and management issues for 6 months (frequency to be determined) • Technical manual for use of the selected technologies (in English and Vietnamese) • Report on the capacity needs assessment and development of the capacity building program for use of the selected technologies • Materials for the training (e.g., training curriculum, presentations, satisfaction survey template, etc.) • Report on the training of government bodies and stakeholders for use of the selected technologies
Total number of policies, strategies, plans, laws, agreements or regulations supported by the assistance	1	
a) Adaptation related		<i>National Water Resources Management Plan</i>
b) Mitigation related		
c) Both adaptation- and mitigation related		
Anticipated number of policies, strategies, plans, laws, agreements or regulations proposed, adopted or implemented as a result of the TA	1	
a) Adaptation related		<i>National Water Resources Management Plan</i>
b) Mitigation related		
c) Both adaptation- and mitigation related		
Anticipated number of technologies transferred or deployed as a result of CTCN support	1	<i>Seasonal to interannual weather forecast</i> <i>Downscaling of climate model projections</i> <i>Basin level planning Integrated Water Resources Management</i> <i>Hydrological modelling</i> <i>Basin level modelling for water allocation</i>
Anticipated number of collaborations facilitated or enabled as a result of technical assistance	0	
a) Number of South-South collaborations	-	
b) Number of RD&D collaborations	-	
c) Number of private sector collaborations	-	
Number of countries with strengthened National System of Innovation as a result of CTCN support	1	<i>Vietnam</i>

Insert any additional indicators here		
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B. Core impact indicators

Please fill in the tables for anticipated impacts of the CTCN assistance. Every technical assistance should contribute to at least one of the indicators below. For guidance on how to report on core indicators see the [‘M&E Guidance Document for TA Implementers’](#).

Core indicator 1	Anticipated metric tons of CO₂ equivalent (CO₂e) emissions reduced or avoided as a result of CTCN TA	
	<i>Please add your calculations in word or excel format as an Annex to this Closure Report, where applicable.</i>	
	Anticipated metric tons of CO₂e reduced or avoided as a result of the TA on annual basis	Anticipated metric tons of CO₂e reduced or avoided as a result of the TA in total
Quantitative value <i>(emissions reductions)</i>	<i>Total number (numerals only, no rounding or abbreviations)</i>	<i>Total number (numerals only, no rounding or abbreviations)</i>
Unit	tCO ₂ e	tCO ₂ e
GHG assessment boundary (project emissions) Identify expected post-TA activities, associated effects and assess boundary for quantification of GHG emission reductions		
Baseline emissions Describe baseline scenario, baseline candidates, emission factors and emissions calculated		
Methodology Explain the method or process of verifying the indicator and how data was gathered		
Assumptions Describe assumptions made during calculation and		

quantification of GHG reductions		
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Core indicator 2	Anticipated increased economic, health, well-being, infrastructure and built environment, and ecosystems resilience to climate change impacts as a result of technical assistance
	<i>Please provide a qualitative description of the anticipated impacts on the categories below</i>
Infrastructure and built environment Anticipated increased infrastructure resilience (avoided/mitigated climate induced damages and strengthened physical assets)	-
Ecosystems and biodiversity Anticipated increased ecosystem resilience (areas with increased resistance to climate-induced disturbances and with improved recovery rates)	For improved water availability for the environment and ecosystem services: <ul style="list-style-type: none"> Consistently monitor and take stock of the status of the quantity of water and seasonal dynamics entering Vietnam Improved ability to evaluate impacts from climate change on the water resources and overall understanding of transboundary flow, low and high, which is a critical aspect of sustainable management
Economic Anticipated increased economic resilience (e.g. less reliance on vulnerable economic sectors or diversification of livelihood)	-
Health and wellbeing Anticipated increased health and wellbeing of target group (e.g. improved basic health, water and food security)	For improved water security for domestic use and economic sectors: <ul style="list-style-type: none"> Strengthen the basis for water allocation actions in the basin in Vietnam Enable the beneficiaries to use satellite data and innovative forecasting technology to support the existing ground station data for better informed water management actions

Core indicator 3	Anticipated number of direct and indirect beneficiaries as a result of the TA	
	Quantitative value	Means of verification
Total beneficiaries	25	<i>Report on the training of government bodies and stakeholders for use of the selected technologies</i>
Number of adaptation beneficiaries	25	<i>Number of national experts effectively trained in the application of the developed technology, who have strengthened understanding of innovative techniques for transboundary flow calculation or are active using the technology to improve their national flow estimates and consequently, national planning.</i>
Number of mitigation beneficiaries		

Number of adaptation-and mitigation beneficiaries		
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Annex 2 (for internal use – to be filled in by the CTCN)

CTCN evaluation

This section will be completed by the relevant CTCN Technology Manager.

- Evaluation of the timeliness of the TA implementation as measured against the timeline included in the response plan;
- Evaluation of TA quality as defined in the response plan;
- Overall performance of the Implementers;
- Overall engagement of the NDE and Proponent;
- Lessons learned on the CTCN process and steps taken by the CTCN to improve.