

Technical Assistance Closure Report

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	Tecnologías para el diseño y adaptación al cambio climático de un Plan Estratégico Regional de Manejo Costero en la Provincia de Buenos Aires.
Technical assistance reference number	2017000004
Country / countries	Argentina
NDE organisation	Ministerio de Ciencia, Tecnología e Innovación Productiva - Argentina.
NDE focal point	Gabriel Blanco
NDE contact information	gblanco@fio.unicen.edu.ar
Proponent focal point and organisation	Roberto Sciarrone, Departamento Costa Marítima (Dirección Provincial de Hidráulica), rsciarrone@gmail.com
Designer of the response plan	Mariano Re, Instituto Nacional del Agua (INA), m.re@ina.gob.ar
Implementer(s) of technical assistance	INA (Argentina) and IMFIA (Uruguay)
Beneficiaries	Departamento Costa Marítima – Dirección Provincial de Hidráulica – Ministerio de Infraestructura y Servicios Públicos (Provincia de Buenos Aires)
Sector(s) addressed	Coastal zones / Early Warning and Environmental Assessment

Technologies supported	Integrated coastal zone management / Hazard mapping / Monitoring systems / Protection (soft engineering)
Implementation start date	01/06/2018
Implementation end date	04/09/2020
Total budget for implementation	U\$D 182.000
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	<p>Output 1: Working Plan</p> <p>Output 2: Revision and update of the technological tools applied in 2013 for the evaluation of sustainable infrastructure investment in the Buenos Aires region</p> <p>Activity 2.1: Compilation of international experiences on coastal infrastructure risk analysis and design</p> <p>Activity 2.2: Revision and update of available technological tools.</p> <p>Output 3: Development of a structured database for Buenos Aires</p> <p>Activity 3.1: Database design. Structuring the data of the different coastal dynamics variables in an easily accessible and friendly database.</p> <p>Activity 3.2: Validation workshop. Meeting with the stakeholders to share the collection of information and the analysis of the coastal management state of the art.</p> <p>Output 4: Analysis of the effects of climate change and variability on marine variables in Buenos Aires</p> <p>Activity 4.1: Historical analysis of marine dynamics.</p> <p>Activity 4.2: Projections of climate change dynamics</p> <p>Activity 4.3: High resolution analysis of impacts and risks in Buenos Aires</p> <p>Output 5: Technology transfer</p> <p>Activity 5.1: Development of training material</p> <p>Activity 5.2: Training</p> <p>Output 6: Monitoring and evaluation</p>
Methodologies applied to produce outputs and products	Review of the state of the art - Database development – Numerical modelling - Surveys and structured interviews with key stakeholders
Reference to knowledge resources	None of the knowledge products of the UNFCCC Technology Executive Committee (TEC) were used in the development of the TA.
Deviations	There were no deviations from the activities, results and products implemented proposed in the response plan
Anticipated follow-up activities and next steps	<ul style="list-style-type: none"> - Dissemination of the results of the TA for different organizations of the province of Buenos Aires and local governments - Implementation of coastal monitoring practices suggested by the TA - Use of the diagnosis made in the AT to promote a coastal law in the province of Buenos Aires

	<ul style="list-style-type: none"> - Extend the study for the estuarine coasts of the Buenos Aires province - Support for the creation of the group 'Water and gender' at INA
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2. Lessons learned

	Lessons learned	Recommendations
Lessons learned from the CTCN TA process	<ul style="list-style-type: none"> - The development of products in the form of clearly timed deliverables contributed to a better production sequence. - The times established in the terms of reference were very demanding (the computational cost was one of the key variables). - Interaction with CTCN members was very respectful and collaborative (especially at the beginning and during the pandemic). 	<ul style="list-style-type: none"> - It would be important, at the beginning of the projects, an instance of presentation to the stakeholders about what CTCN is and what its objectives are. - Add support from the CTCN communication area, both for the dissemination of CTCN and for the project activities.
Lessons learned related to climate technology transfer	<ul style="list-style-type: none"> - The impact of TA will be seen even beyond its implementation period - Thanks to this TA, numerical modelling will be part of the tools to be used for coastal management in Buenos Aires. - The link between public management and science and technology bodies is strengthened 	<ul style="list-style-type: none"> - Choose local implementers (country or region) allow a better dialogue with managers and community. - The products of this TA (database and risk atlas) require continuity, as well as the monitoring activities suggested for coastal management. - Long-term coastal management strategies require strong institutional interaction.

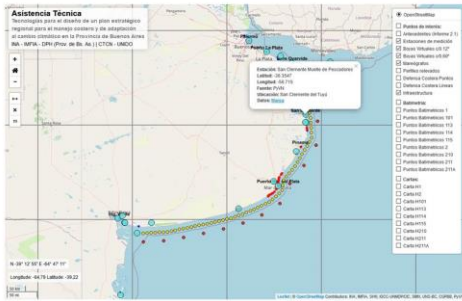
3. Illustration of the TA and photos

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.

Slides

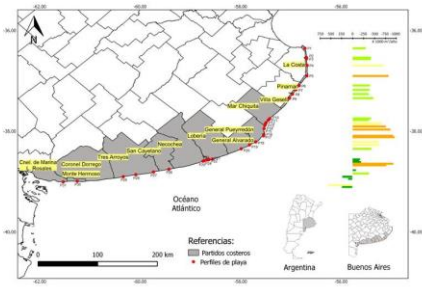


Output 3: Development of a structured database for Buenos Aires



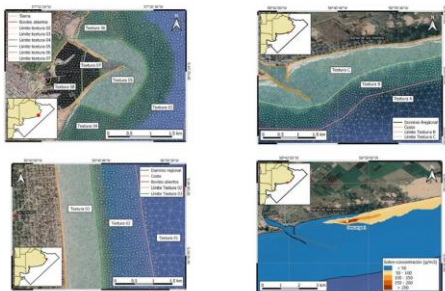
OUTPUT 3

Output 4: Analysis of the effects of climate change and variability on marine variables



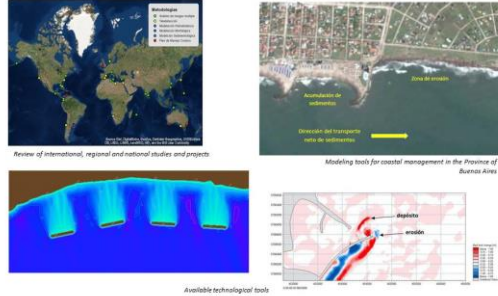
OUTPUT 4

Output 4: Analysis of the effects of climate change and variability on marine variables



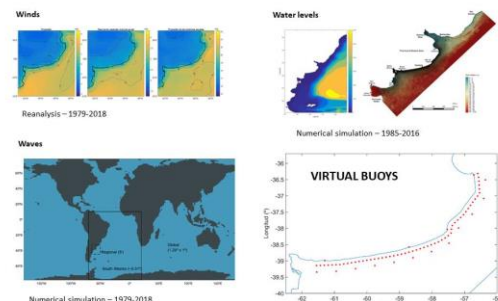
OUTPUT 4

Output 2: Revision and update of the technological tools applied in 2013 for the evaluation of sustainable infrastructure investment in the Buenos Aires region



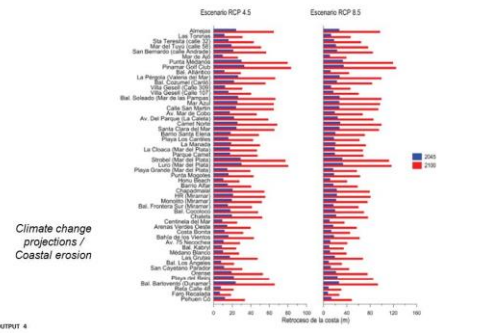
OUTPUT 2

Output 4: Analysis of the effects of climate change and variability on marine variables



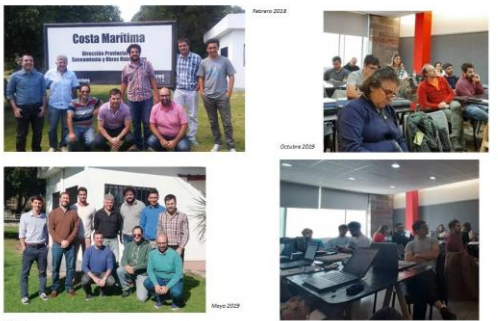
OUTPUT 4

Output 4: Analysis of the effects of climate change and variability on marine variables



OUTPUT 4

Output 5: Technology transfer

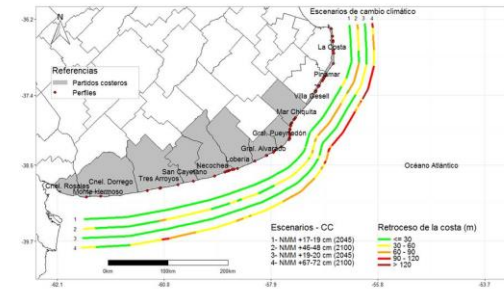


OUTPUT 5

Technology for the design of integrated strategies for the coastal management and adaptation to Climate Change in the Province of Buenos Aires

Technology for the design of integrated strategies for the coastal management and adaptation to Climate Change in the Province of Buenos Aires

Output 5: Technology transfer



OUTPUT 5

Output 5: Technology transfer

OUTPUT 5

Report on contributions to coastal management

Photos



Febrero 2018



May 2019



October 2019



November 2019

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.

<p>Challenge</p>	<p>The oceanic coast of the Buenos Aires province has a great diversity of beaches, with different wave and tide patterns, and where more than 30 towns are concentrated. Activities associated with tourism and commercial activities linked to the movement of ports are the main ones. This coastal region is affected by numerous environmental and climatic problems, mainly due to coastal erosion. This technical assistance has two general objectives: to diagnose the current state of the coastal dynamics and the implementation of a risk analysis due to Climate Change that serves as input for a Coastal Management Plan.</p>
<p>CTCN Assistance</p>	<ul style="list-style-type: none"> • Determine the changes happened in the dynamics coast during the last decades (sea level, swell, wind, morphological changes).

	<ul style="list-style-type: none"> • Estimate from Climate Change projections the possible future coastal scenarios. • Develop transfer work technological, training and training associated with the project. • Delineate a map of risk and vulnerabilities, as a starting platform to adapt the guidelines for an Integrated Coastal Management Plan.
Anticipated impact	<ul style="list-style-type: none"> • The project will contribute directly to the planning and exploitation of basic socioeconomic resources for the province's coast: tourism and port activity. • The coast of Buenos Aires is one of the main tourist destinations in the country (recreational use of the beaches). Their protection and adequate planning is important for the maintenance of this natural resource. • In the port activity, the Port of Mar del Plata (fishing) and the Port Quequen (cereal grains) stand out. The projections obtained will be indispensable for the verification and adaptation of port structures that guarantee their operation. • The elaboration of a comprehensive plan with a regional focus will serve as a reference for establishing contingency actions and assistance for the inhabitants (approximately 1 million) of the different municipalities in the face of the occurrence of severe weather events.
Co-benefits: Achieved or anticipated co-benefits from the TA	<p><i>Among TA activities, Climate Change projections were determined, generating the bases for the development of different types of adaptation measures. Although the TA's focus is on coastal erosion and floods, these projections could be used to evaluate problems associated with social and / or economic issues, biodiversity or ecosystem services, among others. This approach also has implications for the economic development of this region: more resilient coasts mean more and better tourism, trade and port operations. At local governments scale, the results of this TA may be used for the elaboration of local regulations related to the use and exploitation of the costing space. As a general co-benefit, the awareness of the population about the importance of caring for / protecting the marine environment and the need to adapt human activities to favor the natural development of coastal processes can be highlighted.</i></p>
Gender aspects of the TA	<p><i>The inclusion of the gender perspective in the monitoring and evaluation of TA (based on the analysis of secondary information and field surveys) sought to investigate the limitations - material and symbolic - that explain the low participation of women in the field of Hydraulic Engineering in general, and in the project in particular. Two out of twelve of the members of the technical team are women.</i></p>

	<p><i>Even though the relationship between coastal erosion management is neither direct nor evident, positive actions can be included that facilitates and promotes the participation of women in a more equal way.</i></p>
<p>Anticipated contribution to NDC</p>	<p>This technical assistance does not propose direct contributions to the NDCs of Argentina. It is part of the current efforts and adaptation needs linked to the NDCs of Argentina in the research and development aspects (mapping of vulnerabilities and risks as a tool for the management of adaptation to climate change) and institutional strengthening (capacity building in human resources and improvement in inter-institutional coordination for planning and management).</p>
<p>The narrative story</p>	<p>The maritime littoral of the Buenos Aires province (Argentina) is affected by several environmental problems: the main one is coastal erosion. The main forces of this dynamic are the action of the waves and the impact of severe storm surges.</p> <p>Anthropic activities such as the construction of coastal defences, urban growth over dunes, the extraction of sand and the exploitation of aquifers without proper management have aggravated erosional processes and increased vulnerability to Climate Change.</p> <p>The technical assistance requested by the Department of Maritime Coast of the Buenos Aires Province (Argentina) contemplates among its objectives to advance with current knowledge of the coastal dynamics of the Atlantic Coast, to assess the impact of climate change on this area, to determine the risks and to provide recommendations for a future Integrated Coastal Management Plan.</p> <p>The main products of these projects are the enhancement of the numerical modelling tools for the management department, the capacity building, the assessment of impacts of Climate Change in coastal erosion and the preparation of a manual of coastal management recommendations for the Buenos Aires Province maritime littoral.</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>This project contributes to the following Sustainable Development Goals (SDG):</p> <ul style="list-style-type: none"> • SDG 9: <i>Build resilient infrastructure, promote sustainable industrialization and foster innovation</i> <p>The implementation of numerical models will allow to design reliable, flexible and quality coastal defence infrastructure, which favour the sustainability of the beaches.</p> <ul style="list-style-type: none"> • SDG 11: <i>Make cities and human settlements inclusive, safe, resilient and sustainable</i> <p>The integral analysis of the coastal dynamics of Buenos</p>

	<p>Aires Province within the framework of Climate Change will allow us to think about actions to mitigate possible impacts in the coastal towns.</p> <ul style="list-style-type: none">• <i>SDG 13: Take urgent action to combat climate change and its impacts</i> <p>The assessment and projection of the dynamics of the coast and its forcings will allow anticipating the elaboration of adaptation measures to Climate Change in the Buenos Aires Province coast. The products to be generated during this technical assistance will be inputs for the preparation of a future Regional Strategic Plan for Coastal Management.</p>
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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 <i>Numerals only; disaggregates must sum to the total</i>	Qualitative description <i>List the various elements corresponding to the quantitative value as well as timelines and responsible institutions</i>
Please note indicators below highlighted as anticipated		
Total number of events organized by proponents and implementing partners	4	Feb 2018 (first meeting DPH Mar del Plata), may 2019 (validation workshop, DPH Mar del Plata), oct 2019 (workshop, UNMdP Mar del Plata) and sep 2020 (online conference - results of the TA)
Number of participants in events organized by proponents and implementing partners	11	-
a) Number of men	11	Two from IMFIA (Uruguay)
b) Number of women	0	-
Number of climate technology RD&D related events	1	Conference "Present and future of the beaches of the province of Buenos Aires: contributions towards an integrated management" (https://www.ina.gob.ar/index.php?seccion=54)
Number of participants in climate technology RD&D events	127	88 people from INA and 39 from Buenos Aires Province government and coastal local governments
a) Number of men	85	-
b) Number of women	42	-
Number of training organized by proponents and implementing partners	1	Herramientas de modelación numérica para el estudio de la dinámica costera (Numerical modeling tools for the study of coastal dynamics) – Mar del Plata University / DPH
Number of participants in trainings organized by proponents and implementing partners	17	The average age of the participants was 35 years
a) Number of men	12	-
b) Number of women	5	-
Total number of institutions trained	10	-
a) Governmental (national or subnational)	3	Provincial Hydraulics Direction (Buenos Aires), Buenos Aires City Government and Necochea Local Government

b) Private sector (bank, corporation, etc.)	1	COARCO SA (private company)
c) Nongovernmental (NGO, University, etc.)	6	SEGEMAR (Argentine Geological Mining Service), Naval Hydrography Service (SHN), National Institute for Fisheries Research and Development (INIDEP), CONICET, National University of Mar del Plata (UNMdP) and National University of La Plata (UNLP)
Percentage of participants reporting satisfaction with CTCN training (from CTCN training feedback form)	100%	Thirteen (13) ratings as very satisfied and four (4) as satisfied
Percentage of participants reporting increased knowledge, capacity and/or understanding as a result of CTCN training (from CTCN training feedback form)	94%	Sixteen (16) of seventeen (17)
a) Percentage of men	92%	-
b) Percentage of women	100%	-
Total number of deliverables produced during the assistance (excluding mission, progress and internal reports)	75	-
a) Number of communication materials, including news releases, newsletters, articles, presentations, social media postings, etc.	15	10 tweets and 5 news at INA website
b) Number of tools and technical documents strengthened, revised or developed	59	Numerical models: regional hydrodynamics (1), regional waves (1), local morphological models (3) and beach profile models (54)
c) Number of other information materials strengthened, revised or created (For example training and workshop reports, Power Points, exercise docs etc.)	1	Database for the coastal dynamics variables of Buenos Aires province
Total number of policies, strategies, plans, laws, agreements or regulations supported by the assistance	0	-
a) Adaptation related	0	0
b) Mitigation related	0	0
c) Both adaptation- and mitigation related	0	0
Anticipated number of policies, strategies, plans, laws, agreements or regulations proposed, adopted or implemented as a result of the TA	0	-
a) Adaptation related	0	-
b) Mitigation related	0	-

c) Both adaptation- and mitigation related	0	-
Anticipated number of technologies transferred or deployed as a result of CTCN support	6	<i>Early Warning and Environmental Assessment - Hazard mapping - Hazard mapping solutions</i> <i>Early Warning and Environmental Assessment - Monitoring systems - Climate change monitoring</i> <i>Coastal Zones - Integrated coastal zone – management - Sediment management</i> <i>Coastal Zones - Integrated coastal zone management - Coastal monitoring</i> <i>Coastal Zones - Protection (soft engineering) - Beach nourishment</i> <i>Coastal Zones - Protection (soft engineering) - Dune construction & stabilisation</i>
Anticipated number of collaborations facilitated or enabled as a result of technical assistance	6	-
a) Number of South-South collaborations	0	-
b) Number of RD&D collaborations	6	<i>Monitoring collaboration: SHN</i> <i>Monitoring collaboration: SEGEMAR</i> <i>Monitoring collaboration: UNMdP</i> <i>Monitoring collaboration: Necochea Local Government</i> <i>Monitoring collaboration: Pinamar Local Government</i> <i>Monitoring collaboration: Mar del Plata Local Government</i>
c) Number of private sector collaborations	0	-
Number of countries with strengthened National System of Innovation as a result of CTCN support	0	-
Insert any additional indicators here	-	-

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>
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	Anticipated metric tons of CO ₂ e reduced or avoided as a result of the TA on annual basis	Anticipated metric tons of CO ₂ e reduced or avoided as a result of the TA in total
Quantitative value (emissions reductions)	<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	-	-

Core indicator 2	<p>Anticipated increased economic, health, well-being, infrastructure and built environment, and ecosystems resilience to climate change impacts as a result of technical assistance</p> <p><i>Please provide a qualitative description of the anticipated impacts on the categories below</i></p>
<p>Infrastructure and built environment Anticipated increased infrastructure resilience (avoided/mitigated climate induced damages and strengthened physical assets)</p>	<p>The diagnosis made for the maritime coast of Buenos Aires allows the consideration of adequate maintenance for the existing infrastructure. In addition, it provides tools to think about new coastal infrastructure.</p>
<p>Ecosystems and biodiversity Anticipated increased ecosystem resilience (areas with increased</p>	-

resistance to climate-induced disturbances and with improved recovery rates)	
Economic Anticipated increased economic resilience (e.g. less reliance on vulnerable economic sectors or diversification of livelihood)	The technology developed in the TA, together with the climate change projections, allow better planning of the management of the two ports of Buenos Aires (Mar del Plata and Quequen) that involve a port movement of about 400.000 tons from fisheries (Mar del Plata) and 7.500.00 tons of cereals (Quequen).
Health and wellbeing Anticipated increased health and wellbeing of target group (e.g. improved basic health, water and food security)	The elements developed during the TA encourage a better management of the beaches of Buenos Aires, facilitating the access of millions of people to safe places of recreation.

Core indicator 3	Anticipated number of direct and indirect beneficiaries as a result of the TA	
	Quantitative value	Means of verification
Total beneficiaries	<i>Total number</i>	
Number of adaptation beneficiaries	10.000.000	One million inhabitants (1.000.000) along the entire maritime coast and about nine million tourists (9.000.000) per summer season as indirect beneficiaries.
Number of mitigation beneficiaries	-	<i>Describe calculation methods and assumptions made</i>
Number of adaptation-and mitigation beneficiaries	-	<i>Describe calculation methods and assumptions made</i>

Core indicator 4	Anticipated amount of funding/investment leveraged (USD) as a result of TA (disaggregated by public, private, national, and international sources, as well as between anticipated/confirmed funding)			
	Quantitative value confirmed in USD	Quantitative value anticipated in USD	Qualitative description <i>List the institutions, timelines, and description or title of the investment</i>	Methods <i>Describe methods used for quantification of funds leveraged</i>
Total funding	<i>Total number in USD (numerals only, no rounding or abbreviations)</i>	<i>Total number in USD (numerals only, no rounding or abbreviations)</i>	-	-
Anticipated amount of public funding mobilised from national/domestic sources	-	-	-	-
Anticipated amount of public funding mobilised from	-	-	-	-

international/ regional sources				
Anticipated amount of private funding mobilised from national/domestic sources	-	-	-	-
Anticipated amount of private funds mobilised from international/regional sources	-	-	-	-

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.