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	**Building up integrated monitoring and early warning forest fires detection system in the Borjomi - Kharagauli National Park by innovative remote sensing tools, in Georgia**
Technical assistance reference number	RFP No. 3100005138
Country / countries	Georgia
NDE organisation	Ministry of Environmental Protection and Agriculture
NDE focal point	Masho Kakhnelidze
NDE contact information	*Email address: masho.khakhnelidze@mepa.gov*
Proponent focal point and organisation	*Agency Protected Area of Georgia (APA) – email: daculebi@apa.gov.ge*
Designer of the response plan	Agency Protected Area of Georgia (APA) – *email: daculebi@apa.gov.ge*
Implementer(s) of technical assistance	International Business and Economic Development Center - IBEDC
Beneficiaries	Agency Protected Area of Georgia (APA)
Sector(s) addressed	**Fire prevention**
Technologies supported	An integrated monitoring and early warning forest fires detection system
Implementation start date	*14/08/2023*

CTCN AFRICA REGIONAL MANAGER

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Implementation end date	*14/06/2025*
Total budget for implementation	USD 248,440 Instruction: In addition to financial value of the technical assistance, please also include if any pro bono or in-kind support has been provided by either the implementer and/or the national counterparts.
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	The delivered outputs were: Output 1: Contextualize, map the stakeholders, analyze current practices used in Borjomi – Kharagauli National Park to monitor forest fires. Output 2: Benchmark, select and design of the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park Output 3: Develop and Test the system in one specific area of the National Park Output 4: Define a standard operation procedure for an efficient use of the designed integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park Output 5: Dissemination modules and training of trainers. The main product is the forest fire monitoring and early warning system (hardware and software components) that was implemented in the Borjomi – Kharagauli National Park. Before implementing the technical solution, a crucial step was the analysis of different systems used for early detection and warning of forest fires, their comparison form a technical, financial and operating capacity and the selection of the most suitable solution within the steak holders working group. In order to achieve these outputs and the final result, the following activities were carried out: - Activity 1.1 Map stakeholders - Activity 1.2: Organize an inception meeting - Activity 1.3: Develop a risk assessment of forest fires procedures and technologies used in Borjomi - Kharagauli National Park - Activity 1.4: Organize an in -person meeting with the stakeholder working group to present the results of the risk assessment - Activity 2.1: Benchmark existing integrated monitoring and early warning forest fires detection technologies. - Activity 2.2: Organize a prioritization meeting with the stakeholder working group - Activity 2.3: Design the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park - Activity 2.4 Organize a stakeholder meeting to introduce the draft architecture of the integrated monitoring and early warning forest fires detection system to be used in Borjomi - Kharagauli National Park - Activity 2.5 Establish a detailed cost analysis of the system - Activity 3.1: Organize a workshop to select the area in which the pilot will be implemented

	- Activity 3.2: Implement the integrated monitoring and early warning forest fires detection system in the selected location - Activity 3.3: Internal test the system by the implementer - Activity 3.4 Train the future users and administrators of the system during a 2-day workshops held onsite - Activity 4.1 Define a draft standard operation procedure for an efficient use of the designed integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park - Activity 4.2 Conduct an official review workshop - Activity 4.3 Incorporate comments and develop second draft of the procedures - Activity 4.4 Incorporate comments and develop final drafts of the procedures - Activity 5.1 Elaborate dissemination modules to demonstrate the advantages of integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park - Activity 5.2 Organize a workshop with national officers of the Ministry of Environmental Protection and Agriculture and the Agency of Protected Area of Georgia - Activity 5.3 Organize a stakeholder engagement workshop with finance agencies - Activity 5.4 Redact a concept note.
Methodologies applied to produce outputs and products	The main methodologies used involved: - Mapping the steak holders - Benchmarking existing forest fire monitoring and early warning systems - Cost-benefit analysis of the chosen technical solution - Development of a standard operation procedure for an efficient use of the system - Training the future users and administrators of the system - Dissemination of results. One of the most important tools was the constant feedback given by the members of the stake holders working group.
Reference to knowledge resources	- *UNFCCC & GEO 2024. Realising Early Warnings for All: Innovation and Technology in Support of Risk-Informed Climate Resilience Policy and Action. United Nations Climate Change Secretariat. Bonn*
Deviations	There are no deviations from the response plan against the actual implemented activities, outputs and products.

	The only change was an extension of the implementation period due to weather conditions in the target area.
Anticipated follow-up activities and next steps	The project will scale-up the forest fire monitoring and early warning system in the Borjomi – Kharagauli National Park and is therefore developing a Concept Note for funding within the Adaptation Fund. Another Concept note is developed and will be submitted for funding to different other financial bodies in order to implement a similar solution in the Kolkheti National Park.

2. Lessons learned

	Lessons learned	**Recommendations**
Lessons learned from the CTCN TA process	The main lesson that was learned from the steps of the TA process was the importance of the stakeholders' involvement and feedback upon the activities. Getting the stakeholders' involved during the whole period of the assignment was a main challenge. An essential factor contributing to a successful implementation was the support and the constant feedback provided by CTCN Secretariat.	From a regulatory point of view it would be recommended that financial support might be allocated also as a grant not only as a payment of provided services. Due to tax regulations in different countries the financial burden for implementers can be quite high.
Lessons learned related to climate technology transfer	The key factor was the identification of a technical solution that was feasible from a technical and financial point of view with the resources available within the TA process and which was also possible to operate with the available institutional and human resources of the Beneficiary (APA).	Up scaling the project with Adaptation Fund support would be of great interest.

3. Illustration of the TA and photos

The dissemination materials that are attached to the Report of the last two workshops (deliverables 5.2. and 5.3.) consist of PowerPoint presentations illustrating the activities, methodology, outputs and achieved results.

Pictures in jpg format, capturing technical assistance are attached.

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	*Among the targets of the National Determined Contributions of Georgia to the achievement of the objectives of the Paris Agreement is to study the most vulnerable areas of forest lands in some preselected territories.* *The Borjomi – Kharagauli National Park is an important national natural reserve which was affected by a massive wildfire in the summer of 2017 which lasted over a month.* *The main challenge of the TA is to provide a viable remote solution to monitor, detect and raise alarm on forest fires while complying with the financial limitations of the provided support.*
CTCN Assistance	*The CTCN assistance covers:* *- Benchmarking existing integrated monitoring and early warning forest fires detection technologies and prioritization of one technology for the pilot project* *- Design the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park and the implementation of a pilot project.* *- Defining a draft standard operation procedure for an efficient use of the designed integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park* *- Development of a concept note meant to support the application for further funding to extend the system in other areas of the National Park.*
Anticipated impact	*- The implementation of the pilot project of a forest fire detection and early warning system will contribute to increase adaptation and climate change risk related reduction in the target area.* *- As far as Core indicator 3 is concerned, there are about 174,055 direct and indirect beneficiaries, consisting of the 174,015 inhabitants in the target area according to last statistical data available and 40 people that will be actively involved in project activities, including representatives of the institutional*

	stakeholders and future users and administrators of the system. *- It is estimated that at least 5 institutions will have increased capacity by the end of the project to mitigate risks determined by forest fires, including:* *o Borjomi-Kharagauli National Park of the Agency for Protected Areas (APA)* *o Department of Biodiversity and Forestry of Ministry of Environmental Protection and Agriculture of Georgia* *o LEPL National Forestry Agency.* *o Ministry of Internal Affairs Emergency Management Service.* *o Adigeni Municipality*
Co-benefits: Achieved or anticipated co-benefits from the TA	As expected, the project enables a better management of the Borjomi Kharagauli National Park Administration, which is a protected area. The project supports the protection ofs the ecosystems and biodiversity of the National Park. Due to the implementation of the early warning and integrated monitoring system, procedures to inform the population leaving closed were defined. It is expected that the early warning system will enable to manage future forest fires more efficiently and avoid the destruction of future forest lands, as well as the emissions of unexpected GHG emissions which result from forest fires.
Gender aspects of the TA	Each workshop and meeting had gender disaggregated data to evaluate equal gender participation. During workshops, capacity building about gender mainstreaming in the TA were held. While during the project meetings the gender balance was difficult to ensure due to the fact that most key positions within the public bodies that were represented in the Stakeholders Working Group are held by men, the structure of participants to the two final workshops was better in terms of gender representation (39% women and 61% men). Considering that the project area is a mountainous area, other disadvantaged groups have better living conditions due to the project, that is people in remote

	communities and people working under harsh conditions such as the shepherds. At the level of the project team there were be equal opportunities for both women and men based strictly on their professional expertise. Both the TA applicant and the service provider have strict policies for gender equality and equal treatment.
Anticipated contribution to NDC	*Georgia's Updated Nationally Determined Contribution (NDC) is a national policy document of Georgia for the period of 2021-2030. Its main goal is to support the sustainable and balanced development of the country, equally taking into consideration climate change, environmental and socio-economic challenges.* *The implementation of the fire forest prevention and early warning system within this project covers 7,700 ha of the Borjomi – Kharagauli National Park as compared to an expected area of 5,400 ha.* *Two concept notes were drafted in order to further identify additional financial resources for scaling up the system in other areas of the park, as well as in the Kolkheti National Park.* *The project responds to the NDC's target of studying its adaptive capacity of different economic sectors to the negative effects of climate change, as well as to plan and implement the respective adaptation measures by mobilizing domestic and international resources for the sectors particularly vulnerable to climate change.*
The narrative story	*Georgia is a rich forested country (approximately 40% of area).* *The protected territory of Borjomi - Kharagauli is in a central part of the Caucasian throat and includes eastern part of the Lesser Caucasus mountains. It spans an area of 107 000 ha with a total length of 95 km from west to east and a width between 3 and 26 km.* *The problem the project aims to address is reducing the danger of uncontrolled forest fires upon the ecosystem of the protected target area.* *Short and long-term impacts on the specific values of the protected territories, especially natural fires, forest massif diseases caused by pests and climate change need special attention.*

	Administration of the protected territories should maintain balance and, on the one hand, allow to develop the natural processes to identify environmental condition of the protected territories and, on the other hand, focus on those specific values the protection, conservation, and maintenance of which is the responsibility of the Agency of Protected Areas, project proponent of this Technical Assistance.
Contribution to SDGs A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/	*SDG11 - Make cities and human settlements inclusive, safe, resilient, and sustainable.* *The project will benchmark and design an integrated monitoring system with the objective to limit forest fires and reduce their impacts, to protect the biodiversity and ecosystems but also to protect the population leaving in the area.* *SDG13 - Take urgent action to combat climate change and its impacts.* *The project contributes to the following sub-sustainable development goals:* *- SDG13.1. - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries: Forest fires increase the probability of heavy rains and extreme weather events. The integrated monitoring system should, once implemented, enable a better management of the forest, and limit the occurrence of forest fires.* *- SDG13.2. - Integrate climate change measures into national policies, strategies, and planning by establishing a procedure guide to describe the succession of events t- hat should be put in place in case of forest fires.* *- SDG13.3. b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities: the implemented system and the guidelines will support the improvement of living conditions of young people and women living in remote communities in the mountain area* *SDG15 - Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat*

	desertification, and halt and reverse land degradation and halt biodiversity loss. The early warning system and integrated monitoring system will focus on the protection of the forest from fires in a protected area in Georgia.

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 Please note indicators below highlighted as **anticipated**	**Quantitative value** *Numerals only; disaggregates must sum to the total*	**Qualitative description** *List the various elements corresponding to the quantitative value as well as timelines and responsible institutions*
Total number of events organized by proponents and implementing partners	*15*	- *Inception meeting – M3* - *In -person meeting with the stakeholder working group to present the results of the risk assessment – M3.* - *Prioritization meeting with the stakeholder working group – M4.* - *Stakeholder meeting to introduce the draft architecture of the integrated monitoring and early warning forest fires detection system to be used in Borjomi - Kharagauli National Park – M5* - *Workshop to select the area in which the pilot will be implemented – M7.* - *Official procedure guide review workshop – M16* - *Workshop with national officers of the Ministry of Environmental Protection and Agriculture and the Agency of Protected Area of Georgia – May 2025* - *Stakeholder engagement workshop with finance agencies – May 2025*

		The responsibility for organizing the events belongs to the service provider, i.e. IBEDC with the support of the Agency for Protected Areas as Beneficiary of the TA:
Number of participants in events organized by proponents and implementing partners	*40*	
a) Number of men	*28*	*Participants mainly from Georgia.*
b) Number of women	*12*	*Participants mainly from Georgia. 1 participant from Romania (the Gender expert)*
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*	
Number of participants in trainings organized by proponents and implementing partners	*25*	*Training for the future users and administrators of the system during a 2-day workshops held onsite* *Participants were from Georgia.*
a) Number of men	*20*	
b) Number of women	*5*	
Total number of institutions trained	*5*	
a) Governmental (national or subnational)	20	Borjomi-Kharagauli National Park of the Agency for Protected Areas; Department of Biodiversity and Forestry of Ministry of Environmental Protection and Agriculture of Georgia; LEPL National Forestry Agency; Ministry of Internal Affairs Emergency Management Service and Adigeni Municipality.
b) Private sector (bank, corporation, etc.)	3	
c) Nongovernmental (NGO, University, etc.)	2	
Percentage of participants reporting satisfaction with CTCN training (from CTCN training feedback form)	90%	
Percentage of participants reporting increased knowledge, capacity and/or understanding as a result of CTCN training (from CTCN training feedback form)	100 %	
a) Percentage of men	100 %	
b) Percentage of women	100 %	
Total number of deliverables produced during the assistance (excluding mission, progress and internal reports)	26	

a) Number of communication materials, including news releases, newsletters, articles, presentations, social media postings, etc.	1	*Visibility package consisting of:* *- PowerPoint of project presentation* *- press releases with the occasion of different events* *- social media content*
b) Number of tools and technical documents strengthened, revised or developed	1	D.2.3. Design of the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park
c) Number of other information materials strengthened, revised or created (For example training and workshop reports, Power Points, exercise docs etc.)	24	D.1.1 Stakeholder mapping report containing a complete stakeholder list. D.1.2.a. Inception meeting report with a list of participants disaggregated by gender. D.1.2.b. List of existing documents to be delivered by the stakeholders to the implementer with the entity responsible. D.1.3 Risk assessment of forest fires procedures and technologies used in Borjomi - Kharagauli National Park D.1.4.a. Stakeholder working group´s report with a list of participants disaggregated by gender. D.1.4.b. List of recommendations and measures identified with the stakeholders to mitigate the identified risks. D.2.1.b. Report summarizing all components requested for each category D.2.1.c. Cost analysis overview of each system D.2.1.d. Draft prioritization of the most suitable method(s) for the use in Borjomi - Kharagauli National Park D.2.2.a. Prioritization meeting report. D.2.4.a. Report on the meeting during which the draft architecture of the designed integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park will be presented to the stakeholder working group. D.2.4.b. Second version of the draft circulated and discussed during a virtual meeting (if

		necessary) D.2.4.c. Final architecture of the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park D.2.5.a. Detailed cost analysis of the designed integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park D.2.5.b. Report of the meeting D.3.1.a. Minute of the meeting with a list of participants disaggregated by gender D.3.1.b. Definition of the criteria used for the selection of the site and name of the location selected for the pilot. D.3.4.a. Minute of the workshop with a list of participants disaggregated by gender D.3.4.b. Materials developed for the workshop D.4.2: Review workshop report D.5.1: Dissemination module targeting the Ministry of Environmental Protection and Agriculture, and the Agency of Protected Area officers in English and Georgian D.5.2: Report of the workshop with Ministry of Environmental Protection and Agriculture, and the Agency of Protected Area officers D.5.3 Report of the workshop with financial sector D.5.4 Concept note to support access to finance for the implementation of the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park
Total number of policies, strategies, plans, laws, agreements or regulations supported by the assistance	1	
a) Adaptation related	-	
b) Mitigation related	-	
c) Both adaptation- and mitigation related	1	*D.4.1: Draft standard operation procedure for an efficient use of the designed integrated monitoring and early warning forest fires detection system for*

		the Borjomi - Kharagauli National Park *D.4.3 Second draft of the procedure, compiled feedback, and comments on second draft of the procedures* *D.4.4: Final procedures*
Anticipated number of policies, strategies, plans, laws, agreements or regulations proposed, adopted or implemented as a result of the TA	N/A	
a) Adaptation related	-	
b) Mitigation related	-	
c) Both adaptation- and mitigation related	N/A	
Anticipated number of technologies transferred or deployed as a result of CTCN support		Integrated forest fire detection and early warning system The system belongs to the following category according to CTCN taxonomy of climate sectors and technologies: Sector – Agriculture and Forestry Technology group - Terrestrial ecosystems management Technology – Forest fire control
Anticipated number of collaborations facilitated or enabled as a result of technical assistance	N/A	
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	Georgia
Insert any additional indicators here	N/A	

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 3	**Anticipated number of direct and indirect beneficiaries as a result of the TA**	
	Quantitative value	**Means of verification**
Total beneficiaries	*174,055*	
Number of adaptation beneficiaries	-	
Number of mitigation beneficiaries	-	

Number of adaptation-and mitigation beneficiaries	174,055	The figure represents the total population in the Borjomi – Kharagauli National Park according to the last available statistic information (174,015) and the 40 direct beneficiaries of the project consisting in the members of the stakeholders' working group and the trainees (future users and administrators of the implemented fire detection and early warning system). For the total population the verification means consist of statistical data. For the direct beneficiaries: lists of participants disaggregated by gender from the project events and training session.

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** *List the institutions, timelines, and description or title of the investment*	**Methods** *Describe methods used for quantification of funds leveraged*
Total funding	*Total number in USD (numerals only, no rounding or abbreviations)*	*Total number in USD (numerals only, no rounding or abbreviations)*		
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		500,000	Following the workshop with potential donors that was held on May 22 in Tbilisi, there is interest for the new project ideas from World Bank and UNEP. Concept notes will be	By assessing the actual needs for up scaling the project in the Borjomi – Kharagauli National Park and the implementation of a similar

			present in the following period.	project in the Kolkheti National Park an amount of about USD 1,400,000 is necessary for the infrastructure. No additional funding is needed for the software system but some financial provisions must be made for further training sessions of the new system administrators.

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.