

# 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](http://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	Development of a Framework and Roadmap for a National Innovation System to foster low-carbon and climate resilient economic development in Zambia
Technical assistance reference number	2022000001
Country / countries	Zambia
NDE organisation	Ministry of Technology and Science (MTS)
NDE focal point	Mwansa Chilambwe
NDE contact information	Chilambwe.Mwansa@mots.gov.zm
Proponent focal point and organisation	Mwenya K. Mulenga, Ministry of Technology and Science (MTS), Mwenya.Mulenga2@mots.gov.zm
Designer of the response plan	Valentin Rudloff, CTCN, valentin.rudloff@un.org
Implementer(s) of technical assistance	Science and Technology Policy Institute (STEPI)
Beneficiaries	Ministry of Technology and Science (MTS)
Sector(s) addressed	Cross-sectoral
Technologies supported	Sectoral roadmaps and strategies
Implementation start date	01/01/2023
Implementation end date	31/12/2024
Total budget for implementation	USD 295,000
Description of delivered outputs and products as well as the activities undertaken to achieve	The followings were successfully performed and delivered:

<p>them. In doing so, review the log frame of the original response plan and refer to it as appropriate</p>	<ul style="list-style-type: none"> <li>• Implementation Planning and Communication Documents (Output 1) including i) Revised Response Plan, ii) Detailed Work Plan, iii) Monitoring and Evaluation Plan, iv) CTCN Impact Description, v) Closure and Data Collection Report</li> <li>• Evaluation of the national innovation environment for climate action (Deliverable 2)</li> <li>• Development of a framework and roadmap for the establishment of a National Innovation System (Output 3)</li> <li>• Concept development of an innovation support agency (Output 4.1)</li> <li>• Identification of funding and cooperation opportunities (Output 4.2)</li> <li>• Introduction of schemes to enhance innovation capacity (Output 5)</li> </ul>
<p>Methodologies applied to produce outputs and products</p>	<p>The following methodologies were adopted:</p> <ul style="list-style-type: none"> <li>• Literature review</li> <li>• SWOT analysis</li> <li>• Quantitative diagnosis using the UNIDO toolkit</li> <li>• Stakeholder workshops for surveys and discussions with the Zambia NIS Working Group</li> <li>• Case studies</li> </ul>
<p>Reference to knowledge resources</p>	<p>N/A</p>
<p>Deviations</p>	<p>The 3<sup>rd</sup> NIS Working Group workshop, initially scheduled to be held in Zambia, was relocated to Korea following a proposal from the Zambia NIS Working Group. As a result of this change, the project timeline was extended until the end of 2024.</p>
<p>Anticipated follow-up activities and next steps</p>	<p>The following are some examples of next steps:</p> <ul style="list-style-type: none"> <li>• Submission of a draft NIS framework and roadmap developed by the NDE to the Zambian government</li> <li>• Follow-up discussions on the funding proposal, an innovation support agency, and a web-based platform on innovation drafted with support from the CTCN/STEP I</li> <li>• Implementation of an innovation communication and capacity building strategy and plan drafted with support from the CTCN/STEP I</li> <li>• Dissemination of report drafted by the CTCN/STEP I</li> </ul>

## 2. Lessons learned

	<b>Lessons learned</b>	<b>Recommendations</b>
<p>Lessons learned from the CTCN TA process</p>	<p>NDE's proactive approach to the CTCN TA project and its communication strategies proved essential. We enhanced the quality of our outputs by incorporating feedback and insights from the Zambia NIS Working Group. While email communication posed some difficulties, we mitigated these</p>	<p>Recommendations include</p> <ul style="list-style-type: none"> <li>• Maintaining a proactive stance in all communications to foster collaboration and address issues promptly</li> </ul>

	<p>issues by conducting more than four official meetings both online and offline, thereby streamlining the process.</p> <p>It is crucial to have a dedicated focal point for each TA to ensure consistent and timely communication which facilitates prompt decision-making and prevents any delay in project progress.</p> <p>Interactions with CTCN officials were largely effective, enabling seamless discussions regarding deliverables, deadlines, and project extensions. However, the disbursement of payments was slower than anticipated.</p>	<ul style="list-style-type: none"> <li>• Ensuring that each focal point of TA is committed to managing communications and addressing issues promptly</li> <li>• Implementing accountability mechanisms which can help ensure that focal points remain engaged and responsive throughout the project lifecycle</li> <li>• Establishing comprehensive guidelines for reporting to avoid confusion and ensure consistency</li> </ul>
<p>Lessons learned related to climate technology transfer</p>	<p>In the energy sector, Zambia relies heavily on hydropower, but frequent and prolonged power outages have become a common problem due to recurrent droughts. In this regard, Zambia needs to promote a renewable energy sector, which is currently in its infancy. In addition, Zambia's mining sector, the country's main industry, needs to move towards more sustainable and climate-friendly practices.</p> <p>However, Zambia does not have the relevant technological and policy capacity to promote climate-friendly energy and the mining sector, which is a critical constraint to the implementation of relevant policies and the development of relevant technologies (i.e. solar, wind, etc.) in Zambia.</p> <p>There is also a need to improve the institutions of laws and systems facilitating climate technology transfer.</p>	<p>Recommendations to diversify energy source, develop the renewable energy sector, promote sustainable mining practice, enhance technological and policy capacity and strengthen institutions and legal frameworks include</p> <ul style="list-style-type: none"> <li>• Building technological and policy capacity for long-term sustainability</li> <li>• Improving the institutions of laws and systems to facilitate climate technology transfer as risk mitigation measures</li> </ul>

### 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.

#### CHAPTER 1. Project Overview

- Objectives**
  - To provide a **clear strategy and direction** to establish a Framework and Roadmap for a National Innovation System (NIS) to foster low-carbon and climate resilient economic development in Zambia
  - To enhance endogenous **capacity for innovation** through effective innovation policies, institutional innovation support and an enhancement of the innovation capacities across relevant stakeholders
- Outcomes**
  - Development of a **NIS Framework and Roadmap**
  - Creation of **Platforms** for continuous engagement
  - Introduction **Schemes for Innovation Support**

#### CHAPTER 2. Project Activities

**Activity 1. Development of Implementation Planning and Communication Documents**

**Activity 2. Evaluation of the National Innovation Environment for Climate Action**

**2.1. Analysis of the national innovation environment for climate action**

- Research of STI national policies and regulations related to climate change and sustainable development
- Research of innovation-related organizations and initiatives
- Research and technology assessment (economic sector & high-potential sector)

**2.2. Assessment of strengths, weaknesses, opportunities and threats**

- Assessment of strengths, weaknesses, opportunities and threats

**Activity 3. Development of a Framework and Roadmap for the Establishment of a National Innovation System**

**3.1. Formulation of the NIS Working Group and inception workshop**

**3.2. Quarterly NIS Working Group meetings**

- Meeting 1: Drafting the NIS Policy Framework
- Meeting 2: Drafting the NIS Policy Framework
- Meeting 3: Approval institutional innovation support schemes
- Meeting 4: Final input institutional innovation capacity schemes

**3.3. Development of the NIS Policy Framework**

- Identifying objectives, success targets, activities of short- medium- and long-term innovation and R&D priorities
- Designing of the NIS on a macro (innovation policy), meso (institutional innovation support) and micro (innovation capacity level)

**3.4. Development of the NIS Implementation Roadmap**

- Planning of policies, support mechanisms and capacity development programmes on a timeline
- Defining the involved stakeholders, budget and the performance/impact indicators

**Activity 4. Introduction of Institutional Innovation Support Schemes**

**4.1. Concept development of an innovation support agency**

- Identifying objectives and activities, types of support, institutional governance
- Identifying roles and functions (funding, knowledge, networking, and exposure to national and international markets)
- Identifying a business model (including institutional and private capital, resource streams and cooperative models)

**4.2. Identification of funding and operation opportunities**

- Developing a funding proposal for a specific sector, Public-Private Partnership (PPP), etc)

**Activity 5. Introduction of Schemes to Enhance Innovation Capacity**

**5.1. Development of an innovation communication and capacity building strategy and plan**

- Developing communication strategy (objectives, activities, target audiences, performance measures and a timeline)
- Consulting to attract innovation from (public, private, venture capital, host institutions, costs)

**5.2. Concept development of a web-based platform on innovation**

- Conceptualizing a web-based platform

#### Zambia National Innovation System (NIS) \_ Governance Framework

#### SWOT Analysis

	POSITIVE	NEGATIVE
<b>INTERNAL</b>	<ul style="list-style-type: none"> <li>Government's commitment</li> <li>Tech adoption</li> <li>Disruptive</li> <li>Mixing sector with high potential</li> <li>No path dependency on the fossil-fuel energy system</li> <li>No stranded assets</li> <li>Growth in fixed-capital formation</li> <li>Rising numbers of flexible structures</li> </ul>	<ul style="list-style-type: none"> <li>Lack of Policy capability, skilled STEM workforce, Data</li> <li>Weak Coordination, Linkage, Investment</li> <li>Low preference for STEM</li> <li>Absence of strategies for resource mobilization</li> <li>Low domestic access to energy</li> <li>Environmental impact and food security</li> <li>Increasing carbon intensity of energy production</li> </ul>
<b>EXTERNAL</b>	<ul style="list-style-type: none"> <li>Increasing interactions with neighbouring countries</li> <li>Market expansion from regional integration and free trade agreements</li> <li>Technology transfer to mitigate climate change</li> <li>Increasing demand of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>Donor fatigue</li> <li>Severe competition with neighbouring Global (US-China)</li> <li>Technological rivalry and competition</li> <li>Higher technical barriers to trade (TBT)</li> </ul>

#### Part 3 SUGGESTION STI Governance Structure of Zambia

#### Zambia NIS Roadmap

Domains	Policy Targets
<b>Governance</b>	<ul style="list-style-type: none"> <li>Align all research funding</li> <li>Operationalize and coordinate the NRA</li> <li>Design a robust legal and policy framework for STI</li> <li>Establish a STI three task</li> </ul>
<b>Science &amp; Technology</b>	<ul style="list-style-type: none"> <li>Strengthen linkages between and among STI stakeholders</li> <li>Enhance practical application of STI in all economic sectors</li> <li>Enhance intellectual property regimes</li> <li>Acquire and upgrade STI training infrastructure R&amp;D academic institutions</li> </ul>
<b>Human Capital</b>	<ul style="list-style-type: none"> <li>Promote STEM graduates and skilled technicians in the core sectors (Agriculture, Manufacturing, Mining and Tourism) to 70%</li> </ul>
<b>Research</b>	<ul style="list-style-type: none"> <li>Set up a National Research Fund</li> <li>Increase R&amp;D investments to 2% of GDP</li> <li>Increase number of researchers and scientists by 20%</li> <li>Create a data base for all scientific research in Zambia</li> </ul>

#### Part 3 Strategic Directions of ZIA Strategy



**VISION**: A national leader in innovation support to build a healthy innovation ecosystem for sustainable development in Zambia

**MISSION**: Contribute to advancing innovation and sustainable development by supporting the STI ecosystem in Zambia

**VALUES**: Transparency, Inclusiveness, Sustainability

**FUNCTIONS**

- Research & Development Analysis & Planning
- Research & Development Activity Support
- R&D Commercialization
- Capacity Development (Output 5)
- Innovation Funding and Investment

<p><b>Part 1 Innovation Communication &amp; Capacity Building Strategy</b> <b>KISTI: Research, Infrastructure, and Service</b></p> <ul style="list-style-type: none"> <li>Information collection, analysis and service on science, technology and industry</li> <li>Research on technology, policy and standardization of information analysis and management</li> <li>Development and management of advanced R&amp;D infrastructure</li> </ul> 	<p><b>Part 2 Concept of a Web-based Platform</b></p> <p><b>REPUBLIC OF KOREA</b> <b>Climate Technology Information System (CTIS)</b></p>  <p><b>INTRODUCTION</b></p> <ul style="list-style-type: none"> <li>CTIS is an information portal and online platform to support global climate technology cooperation, established in 2017.</li> <li>CTIS provides an information related to climate technology cooperation.</li> <li>CTIS has been developed to support to the new climate regime by providing information about climate technology cooperation.</li> </ul> <p><b>MAIN FUNCTIONS</b></p> <ul style="list-style-type: none"> <li><b>Trends:</b> Major domestic and international climate change response policy trends, news from international organizations, research data and publications.</li> <li><b>Climate Technology:</b> Major domestic and international climate change response technology trends, technology demand information from developing countries, domestic climate technology information, and investment status in the national R&amp;D industry.</li> <li><b>Climate Projects:</b> Business information and project cases related to domestic and international climate technology cooperation.</li> <li><b>Statistical Analysis:</b> Provide various visualization data and customized analysis functions based on statistical data related to climate change and climate technology cooperation.</li> </ul>
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#### 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><b>Challenge</b></p>	<p>Climate change has become a major threat to sustainable development in Zambia. The country is already experiencing climate induced hazards such as drought, floods and extreme temperatures, adversely impacting livelihoods of the people, especially in rural communities. The estimated total GDP loss by sector is in the range of USD 4,330-5,440 million. In response, Zambia has committed to a low-carbon pathway of reducing emissions by 25% to 47% by 2030, seeking more sustainable economic development.</p>
<p>CTCN Assistance</p>	<p>This TA aims to enhance a National Innovation System (NIS) to foster low-carbon and climate resilient economic development in Zambia with the following activities:</p> <ul style="list-style-type: none"> <li>• Assessment of the national innovation environment for climate action.</li> <li>• Development of a framework and implementation roadmap for the establishment of a NIS</li> <li>• Introduction of innovation support agency and identification of funding and cooperation opportunities</li> </ul> <p>Development of an innovation communication and capacity building strategy and plan and concept of a web-based platform</p>
<p>Anticipated impact</p>	<ul style="list-style-type: none"> <li>• CI 2: Anticipated increased policy infrastructure and built environment resilience to climate change impacts as a result of TA. This will be assessed by the quality of a policy framework, roadmap for an effective NIS with the improvement of communication strategy</li> <li>• Enhancement of institutional capacity to coordinate innovation activities</li> <li>• Contribution to achieving the NDC target of Zambia</li> <li>• ≥100 direct and indirect beneficiaries as a result of the TA</li> </ul> <p>Establishing a foundation for enhancing institutional innovation support through the proposal of appropriate funding allocation and utilization strategies</p>
<p>Co-benefits: Achieved or anticipated co-benefits from the TA</p>	<p>Apart from the core impact indicators, the following co-benefits are expected over the project lifetime from the TA:</p> <ul style="list-style-type: none"> <li>• Environmental co-benefits: Reduction of air-pollution and enhanced capacity responding to climate change from low-carbon and climate-friendly innovation activities</li> <li>• Social co-benefits: Enhanced capacity for adaptation to climate change and general sustainable economic growth can lead to improved livelihoods, etc.</li> <li>• Economic co-benefits: More sustainable and inclusive economic development by enhanced technological capacity for endogenous innovations. Better education</li> </ul>

	and innovation support system that brings forward entrepreneurs and strengthens innovation exchange between different institutions. This leads to endogenous innovation resulting in sustainable economic growth
Gender aspects of the TA	The TA is expected to produce a NIS Policy Framework that is gender-sensitive and increases opportunities for the gender equal participation and employment in Zambia. It will also develop a plan to design capacity building strategy to promote participation from women engineers, scientists, and policymakers
Anticipated contribution to NDC	The TA contributes to Zambia's NDC, by enhancing policy capacity to better plan mitigation and adaptation programs in 4. (a), thereby reducing GHG emissions from sectors in 3. (b) of Zambia's NDC report. <ul style="list-style-type: none"> <li>• Improvement of the NIS in Zambia to promote low-carbon and climate resilient innovation activities.</li> <li>• Establishment of an innovation support agency to fund and facilitate climate-friendly innovations.</li> </ul> Development of capacity building strategy and the concept of a web-based platform to share information and best practices of innovations to enhance capacity to respond climate change.
The narrative story	Sustainable development in Zambia is now seriously threatened by climate variability and change. In response, the country is seeking more sustainable economic development, committing to a low-carbon pathway of reducing emissions by 25% to 47% by 2030. Recognizing innovation as a key tool, Zambia in 2020 established Science, Technology, and Innovation (STI) Policy to enhance the effectiveness of the National Innovation System (NIS). However, to date, most initiatives to increase its innovative capacities were uncoordinated with limited success. The main challenges and barriers include an asymmetry of information, lack of collaboration among innovation actors and private sector engagement, and limited funding and support system. <p>Therefore, Zambia requires a structured NIS to effectively foster innovation activities in the country for a low-carbon and climate resilient economic development. This TA aims to address the challenges and barriers above by developing necessary policy framework and roadmap for enhanced NIS and to create schemes for innovation support and innovation capacity building.</p>
Contribution to SDGs	This Technical Assistance (TA) directly contributes to the following United Nations Sustainable Development Goals (SDGs): SDG 4, SDG 8, SDG 9, and SDG 13. <p>This TA aims to build an effective NIS in Zambia to foster low-carbon and climate resilient economic development. An effective NIS can be constructed</p>

	<p>through inclusive and equitable education and therefore, this TA contributes to SDG4 (Ensure inclusive and equitable quality education and promote life- long learning opportunities for all).</p> <p>This TA can also contribute to SDG8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all). An effective NIS will promote endogenous innovation for a low-carbon economy and foster climate resilient economic development in Zambia. This enables sustainable economic growth and corresponding productive employment.</p> <p>Furthermore, this TA supports SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation). By developing an NIS, the TA enhances Zambia's capacity for innovation and technological advancement. This facilitates the establishment of resilient infrastructure and promotes sustainable industrialization, which are essential for long-term economic stability and growth.</p> <p>Lastly, this TA directly contributes to SDG13 (Take urgent action to combat climate change and its impacts). By mainstreaming climate innovation within this NIS Policy Framework, this TA will support to enhance the NIS of Zambia that is more suitable to low-carbon and climate resilient economic development.</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**

<b>Indicator</b>	<b>Quantitative value</b>	<b>Qualitative description</b>
Please note indicators below highlighted as <b>anticipated</b>	<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	5	<ul style="list-style-type: none"> <li>NIS Working Group inception workshop and meetings               <ul style="list-style-type: none"> <li>(1<sup>st</sup>) 19-20 July 2024, Zambia</li> <li>(2<sup>nd</sup>) 17 Jan 2024, Online</li> <li>(3<sup>rd</sup>) 25-28 Mar 2024, Korea</li> <li>(4<sup>th</sup>) 17-19 June 2024, Zambia</li> <li>(5<sup>th</sup>) 17 Oct 2024, Online</li> </ul> </li> </ul>
Number of participants in events organized by proponents and implementing partners	64	
a) Number of men	40	<i>Disaggregate by country</i> All Zambia
b) Number of women	24	All Zambia
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	“NIS Working Group (NIS-WG) Invitational Workshop in Korea – Visiting Global Knowledge Exchange and Development Center (GKEDC), National Institute of Green Technology (NIGT), SK T.um (Future Tech Centre) etc.”
Number of participants in trainings organized by proponents and implementing partners	10	
a) Number of men	5	
b) Number of women	5	
Total number of institutions trained	16	
a) Governmental (national or subnational)	11	<ul style="list-style-type: none"> <li>National Institute for Scientific and Industrial Research</li> </ul>

		<ul style="list-style-type: none"> <li>• Zambia Agriculture Research Institute</li> <li>• Ministry of Agriculture</li> <li>• National Science and Technology Council</li> <li>• National Remote Sensing Centre</li> <li>• Ministry of Green Economy and Environment</li> <li>• Center for Veterinary Research Institute</li> <li>• National Technology Business Centre</li> <li>• Zambia Environment Management Agency</li> <li>• Ministry of Technology and Science</li> <li>• Animal Science Research Centre</li> </ul>
b) Private sector (bank, corporation, etc.)	1	<ul style="list-style-type: none"> <li>• Jacaranda Hub</li> </ul>
c) Nongovernmental (NGO, University, etc.)	4	<ul style="list-style-type: none"> <li>• Technology Development Advisory Unit, University of Zambia</li> <li>• Natural Resources Development College</li> <li>• University of Lusaka (UNILUS)</li> <li>• Zambia Academy of Sciences</li> </ul>
Percentage of participants reporting satisfaction with CTCN training (from CTCN training feedback form)	-	
Percentage of participants reporting increased knowledge, capacity and/or understanding as a result of CTCN training (from CTCN training feedback form)	-	
a) Percentage of men		
b) Percentage of women		
Total number of deliverables produced during the assistance (excluding mission, progress and internal reports)	55	
a) Number of communication materials, including news releases, newsletters, articles, presentations, social media postings, etc.	8	<ol style="list-style-type: none"> <li>1) CTCN News (April 5, 2024) “ Learning from Successful NIS: Zambian Delegation on a Week-long Visit to South Korea”</li> <li>2) STEPI Photonews (June 17-19, 2024) “RoK-Zambia S&amp;T Cooperation Partnership Workshop”</li> <li>3) STEPI News Release (June 21, 2024) “STEPI Supports the Establishment of National Innovation System Roadmap in Zambia”</li> </ol>

		<p>4) Dailyan (June 21, 2024)</p> <p>5) Electronic Newspaper (June 21, 2024)</p> <p>6) Herald Economy (June 21, 2024)</p> <p>7) Yonhap News (June 21, 2024)</p> <p>8) ChosunBiz (June 22, 2024)</p>
b) Number of tools and technical documents strengthened, revised or developed	4	<ul style="list-style-type: none"> <li>• Zambia NIS Policy Framework and Implementation Roadmap</li> <li>• Innovation Support Agency – ZIA</li> <li>• Funding Proposal - Building Resilient Renewable Energy Research Infrastructure for Enhanced Energy Security in Zambia</li> <li>• Schemes to Enhance Innovation Capacity</li> </ul>
c) Number of other information materials strengthened, revised or created (For example training and workshop reports, Power Points, exercise docs etc.)	43	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> WG Workshop (6)</b> <ul style="list-style-type: none"> <li>- Session 1. 2020 STI Policy Presentation</li> <li>- Session 2. Introduction of TA</li> <li>- Session 3. NIS of Zambia</li> <li>- Session 4. SWOT Analysis</li> <li>- PEST Analysis of 5 Groups</li> <li>- Minutes and attendance list</li> </ul> </li> <li>• <b>2<sup>nd</sup> WG Workshop (2)</b> <ul style="list-style-type: none"> <li>- STI Suggestions form SWOT Analysis</li> <li>- Minutes and attendance list</li> </ul> </li> <li>• <b>3<sup>rd</sup> WG Workshop (23)</b> <ul style="list-style-type: none"> <li>- Opening. Korea STI driven Carbon Neutral &amp; Green Growth strategy</li> <li>- Session 1. NIS Governance Framework</li> <li>- Session 2. Constructing Implementation Roadmap</li> <li>- Session 3. Innovation Support Agency and Platform</li> <li>- 7 Zambian institutions presentation materials</li> <li>- 2 NIGT presentation materials</li> <li>- 7 CTCN PALO presentation materials</li> <li>- CTCN PALO Sheet for Expression of Interest</li> <li>- GCF Zambia and Readiness programme</li> <li>- Minutes and attendance list</li> </ul> </li> <li>• <b>4<sup>th</sup> WG Workshop (11)</b> <ul style="list-style-type: none"> <li>- (Output 3)_NIS Governance Framework_12 June</li> <li>- (Output 3)_NIS Roadmap_13 June</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- (Output 4)_ Innovation Support Agency_18 June</li> <li>- (Output 5)_ Innovation Communication and Capacity Building Strategy_17 June</li> <li>- 4 Group Work Materials</li> <li>- Minutes and attendance list</li> <li>• 5<sup>th</sup> WG Workshop <b>(1)</b></li> <li>- Output 5_IC and CB Strategy and a Web-based Platform_Oct 17</li> </ul>
Total number of policies, strategies, plans, laws, agreements or regulations supported by the assistance	-	
a) Adaptation related		
b) Mitigation related		
c) Both adaptation- and mitigation related		
<b>Anticipated</b> number of policies, strategies, plans, laws, agreements or regulations proposed, adopted or implemented as a result of the TA	4	
a) Adaptation related	-	
b) Mitigation related	-	
c) Both adaptation- and mitigation related	4	<ul style="list-style-type: none"> <li>• Zambia NIS Policy Framework and Implementation Roadmap</li> <li>• Innovation Support Agency – ZIA</li> <li>• Funding Proposal - Building Resilient Renewable Energy Research Infrastructure for Enhanced Energy Security in Zambia</li> <li>• Schemes to Enhance Innovation Capacity</li> </ul>
<b>Anticipated</b> number of technologies transferred or deployed as a result of CTCN support	-	
<b>Anticipated</b> number of collaborations facilitated or enabled as a result of technical assistance	-	
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	Zambia
<b>Insert any additional indicators here</b>		

## 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’](#).

<b>Core indicator 1</b>	<b>Anticipated metric tons of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) emissions reduced or avoided as a result of CTCN TA</b>
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	<i>Please add your calculations in word or excel format as an Annex to this Closure Report, where applicable.</i>	
	Anticipated metric tons of CO <sub>2</sub> e reduced or avoided as a result of the TA <b>on annual basis</b>	Anticipated metric tons of CO <sub>2</sub> e reduced or avoided as a result of the TA <b>in total</b>
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 <sub>2</sub> e	tCO <sub>2</sub> e
<b>GHG assessment boundary (project emissions)</b>  Identify expected post-TA activities, associated effects and assess boundary for quantification of GHG emission reductions	-	-
<b>Baseline emissions</b>  Describe baseline scenario, baseline candidates, emission factors and emissions calculated	-	-
<b>Methodology</b>  Explain the method or process of verifying the indicator and how data was gathered	-	-
<b>Assumptions</b>  Describe assumptions made during calculation and quantification of GHG reductions	-	-

<b>Core indicator 2</b>	<b>Anticipated increased economic, health, well-being, infrastructure and built environment, and ecosystems resilience to climate change impacts as a result of technical assistance</b>  <i>Please provide a <b>qualitative</b> description of the anticipated impacts on the categories below</i>
<b>Infrastructure and built environment</b> Anticipated increased infrastructure resilience (avoided/mitigated climate induced damages and strengthened physical assets)	The development of a framework and roadmap for the establishment of a national innovation system will promote low-carbon and climate-resilient economic development in Zambia. It will facilitate effective policy design and implementation, support endogenous innovation activities and enhance the innovation capacity of relevant stakeholders in the country.

	<p>The proposed concept of an innovation support agency and web-based innovation platform can also promote climate-resilient innovation activities, innovation communication and capacity building, thereby contributing to responding to and mitigating the adverse impacts of climate change and generating economic growth.</p> <p>As a result, key industries in Zambia, such as energy and mining, can contribute to more sustainable and inclusive economic development by being transformed into low-carbon and climate-resilient industries.</p>
<p><b>Ecosystems and biodiversity</b> Anticipated increased ecosystem resilience (areas with increased resistance to climate-induced disturbances and with improved recovery rates)</p>	<p>By transitioning to of a national innovation system that can foster low-carbon and climate-resilient economic development, Zambia can mitigate the climate induced hazards such as droughts, floods, and extreme temperatures to its ecosystem and biodiversity. This shift will lead to healthier and more sustainable ecosystem and biodiversity.</p>
<p><b>Economic</b> Anticipated increased economic resilience (e.g. less reliance on vulnerable economic sectors or diversification of livelihood)</p>	<p>The development of a framework and roadmap for the establishment of a national innovation system can contribute to Zambia's economic resilience in two ways. First, by promoting new low-carbon and climate-resilient innovations, it will stimulate the diversification of the Zambian economy into more climate-resilient and sustainable sectors. Second, by facilitating the adoption of low-carbon and climate-resilient practices in existing industries, it will also promote the transformation of these industries into more sustainable and inclusive ones.</p>
<p><b>Health and wellbeing</b> Anticipated increased health and wellbeing of target group (e.g. improved basic health, water and food security)</p>	<p>The development of a framework and roadmap for the establishment of a national innovation system that can promote low-carbon and climate-resilient economic development in Zambia will help to mitigate the adverse effects of climate change and, as a result, improve the health and well-being of the Zambian people.</p>

Core indicator 3	Anticipated number of direct and indirect beneficiaries as a result of the TA	
	Quantitative value	Means of verification
Total beneficiaries	200	
Number of adaptation beneficiaries		
Number of mitigation beneficiaries		
Number of adaptation-and mitigation beneficiaries	200	Number of participants in the Zambia NIS Working Group Meetings (direct beneficiaries) + Number of co-workers of the participants (indirect beneficiaries)

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)
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	<b>Quantitative value confirmed in USD</b>	<b>Quantitative value anticipated in USD</b>	<b>Qualitative description</b> <i>List the institutions, timelines, and description or title of the investment</i>	<b>Methods</b> <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.