CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

Country	**Bhutan**
Request ID#	**2016000046**
Title	*Flood risk assessment for Dungsumchu Basin in Samdrupjhomkar District*
NDE	*National Environmental Commission Secretariat (Mr. Karma Tshering)*
Proponent	**Department of Engineering Services (Mr. Tenzin)**

Summary of the CTCN technical assistance

The Government of Bhutan has recognized the need to urgently manage the recurring flood problems in the country. A combination of steep topography and the projected increase in rainfall in the coming decades due to climate change poses major threats, particularly during the monsoon season. In addition to direct flood damages to life and property, these events also trigger subsequent hazards such as landslides. To address this challenge, the Government of Bhutan has approved a budget of Nu.728 million in the 11th Five Year Plan for flood protections works throughout the country, and established the Flood Engineering and Management Division (FEMD) to oversee all flood management works in the country.

A key flood-vulnerable area, the Basin of Dungsumchhu, in the Samdrupjhomkar District of Bhutan, has suffered from a persistent flood problem. Recognizing the issue, the Government, over the years, has made substantial investment for flood protection there. However, the problem still persists. One of the reasons is the lack of a proper detailed engineering study for the Dungsumchu River Basin that would help understand the technicalities of flood impacts and its mitigation, before implementation of flood protection structures. The newly established FEMD lacks the technical capacity to carry out the flood risk assessment studies, which is crucial in developing flood management plans to mitigate the impacts of floods.

This technical assistance seeks to address this gap by enhancing the skills of the relevant engineers in FEMD and Samdrupjongkhar municipality to indigenously undertake flood risk assessment and to translate this assessment into flood adaptation interventions. For example, the Government has approved a budget of Nu.728 million in the 11th Five Year Plan for flood protections works throughout the country. The CTCN assistance comprises of four main activities:

- Guide FEMD and local municipality engineers in collecting the required primary and secondary data for the flood risk assessment study.
- Conduct a capacity building workshop to train the engineers in the various elements of flood risk assessment, and design of flood alleviation interventions.
- Develop flood hazard and risk plans for the Dungsamchhu Basin in the Samdrupjhonkar District in Bhutan.
- Mentor FEMD engineers in the design of a pilot flood intervention measures.

The results produced by the assistance will be used to develop a flood management plan for Samdrupjongkhar District consisting of (a) flood hazard map which identifies the flood prone areas, (b) vulnerability assessment based on questionnaire survey in the target district, and (c) the flood risk assessment and subsequent mapping, based on which adaptation measures can be designed to reduce the flood impacts. Furthermore, because this work will act as a pilot project, which can be cross-scaled to other regions. This will ultimately help reduce vulnerability of the Bhutanese communities to climate change induced flooding.

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Agreement:

(If possible, please use electronic signatures in Microsoft Word file format)

National Designated Entity to the UNFCCC Technology Mechanism for which the Climate Technology Centre and Network is the operative arm

Name: Karma Tshering
Title: NDE
Date: 27 March 2017
Signature:

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date: 02/03/2017
Signature:

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1. Background and context

In mountainous countries like Bhutan, floods are of greater concern when compared to other areas. Floods not only cause direct damage to life and property, but also trigger subsequent hazards such as landslides. In Bhutan, a combination of steep topography and the projected increase in rainfall in the next 2-3 decades poses major threats, particularly during the monsoon season. The main water resources in Bhutan are primarily in the form of rivers. The rainy and dry seasons result in large seasonal variations in river flows (IPCC, 2013) that make the management of floods difficult. This situation will be aggravated under the impacts of climate change. Climate change is already happening. Bhutan's 24 weather stations show a rise in temperature of about 1 degree C in summer and 2 degrees in winter since 2000. Other global warming effects—shifting precipitation patterns, changing growing zones, more severe weather, worsening of air and water pollution and water scarcity—are also on the increase. Some of Bhutan's lakes are glacial lakes, and occasional outbursts from them have resulted in enormous flash floods, leading to significant damage to lives and property. In recent years, Bhutan has seen an increase in landslides due to heavier rains, and some glacial lake outburst floods (GLOFs) as glaciers retreat. Climate change is expected to intensify this further.

Bhutan's **National Adaptation Programme of Action** (NAPA, 2012) highlights the fact that the very backbone of the nation's economy is at the mercy of climate change hazards. This view was also corroborated in Bhutan's **Technology Needs Assessment** and **Technology Action Plans** for Climate Change Adaptation**,** (TNA, 2013), which emphasized on reducing the vulnerability of people, infrastructure and agricultural fields to natural disasters such as flash floods.

The Government of Bhutan has recognized the need to urgently manage the recurring flood problems in the country. Hence, after the mid-term review of the ***10th Five Year Plan***, the Government passed a resolution to establish a new institution to oversee all flood management works in the country. Accordingly, the Flood Engineering and Management Division (FEMD) under the Department of Engineering Services was formed in 2012. The Division has been mandated with the responsibility of protecting communities from flood, as envisaged in the Government's ***11th Five year Plan*** Further, the Government has approved a budget of Nu.728 million in the 11th Five Year Plan for flood protections works throughout the country.

This CTCN technical assistance to Bhutan will address a specific component of flood management—flood risk assessment. Flood risk assessment in context of this technical assistance is a function of **flood hazard**, **vulnerability,** and **exposure**. The flood hazard will be estimated using hydrodynamic and hydrological models, the vulnerability will be gauged through a questionnaire based survey, and the exposure will be assessed through visual inspection.

2. Problem statement

This CTCN assistance to Bhutan will focus on only one Basin in the country—Dungsumchhu—in the Samdrupjhomkar District. Samdrupjhomkar is located in the South Eastern part of Bhutan and shares a border with an Indian state of Assam (Figure 1). Flooding has been a persistent problem in Samdrupjongkhar. For example, in August 2015, flash floods in Samdrupjongkhar caused heavy damages to flood protection walls, roads, bridge and other infrastructure. Recognizing the problem, the Government, over the years, has made substantial investment made for flood protection works along the banks of Dungsumchu River.

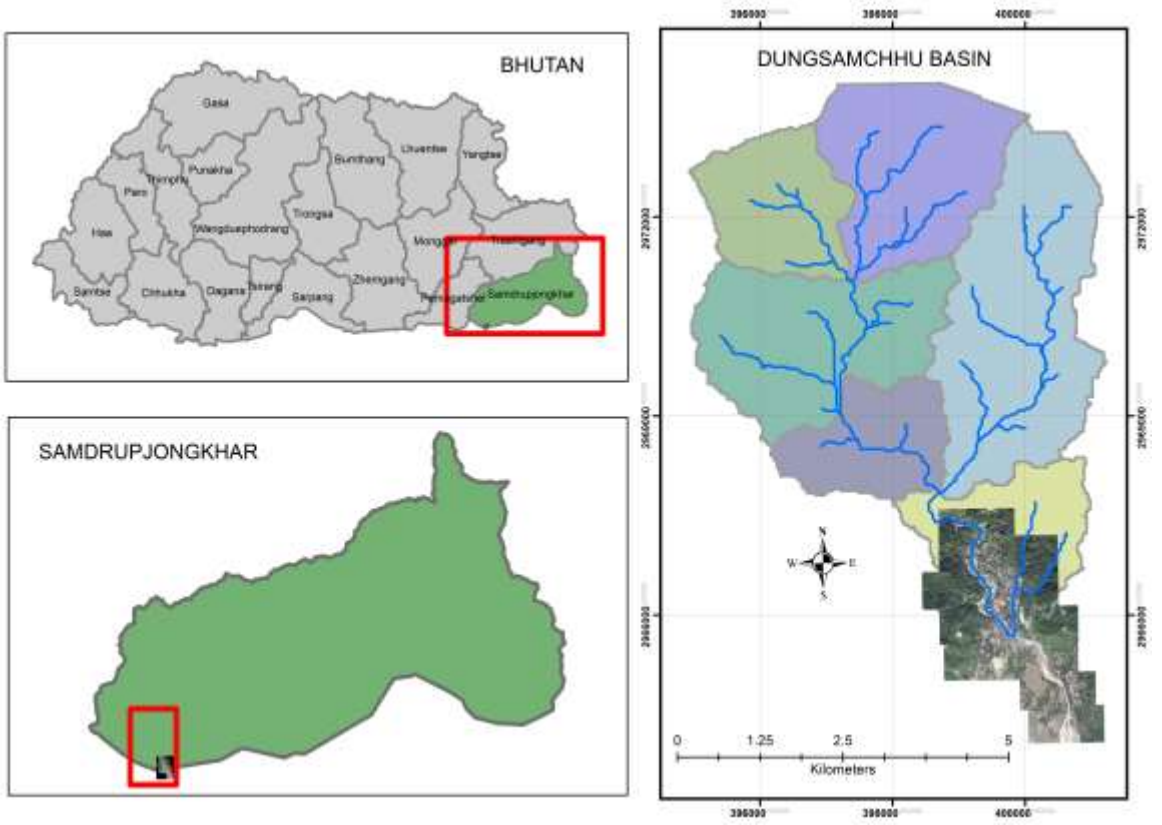

Figure 1: Target area for CTCN technical assistance

This issue has also featured in regional policies and plans— for example the Urban ***Development Plan for Samdrupjongkhar Thromde 2013-2033*** that highlights the need to identify feasible technical solutions to address the flooding problems. However, the problem still persists. One of the reasons, as identified by local stakeholders (FEMD), is the lack of a proper detailed engineering study for the Dungsumchu River Basin that would help understand the technicalities of flood impacts and its mitigation, before implementation of flood protection structures. The newly established FEMD lacks the technical capacity to carry out the flood risk assessment studies, which is crucial in developing flood management plans to mitigate the impacts of floods. This technical assistance seeks to address this gap by enhancing the skills of the relevant engineers in FEMD and Samdrupjongkhar municipality to indigenously undertake flood risk assessment and management works.

3. Logical Framework for the CTCN Technical Assistance:

	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Objective: The objective of this TA is to enhance the skills of engineers in the Flood Engineering and Management Division and Samdrupjhonkar municipality of Bhutan in the knowledge and application of flood risk assessment and management works.												
Outcome: *It is expected that the Technical Assistance will feed into the integrated flood management plan that will be developed for the Samdrupjhonkar District, as well as serve as a reference for other flood risk assessment works carried out for other Basins in Bhutan. This will ultimately help reduce vulnerability of the Bhutanese communities to climate change induced flooding.*												
Output 1: Data collected for flood risk assessment works												
Activity 1.1: ***Secondary data collection from known and reputed sources*** This will include data for streamflow discharge, land use/land cover, rainfall, Digital Elevation Models (DEM), demographics, infrastructural development, and other ancillary data related to the Dungsumchhu Basin.	x	x										
Activity 1.2: ***Primary data collection*** This will include data on river cross sections at the upstream and downstream locations in the Dumgsumchu River. Primary data will also be required in the form of questionnaire survey in the Basin to assess the vulnerability. Officials from Samdrupjhonkar thrombe will be responsible for collecting the data.	x	x										
*Deliverable 1*a: An inventory of secondary data collected, and the river cross sections data *Deliverable 1b*: A report on the questionnaire survey analyzing the vulnerability of population to flood related hazards		x	x									
Output 2: Capacity building program on "Flood risk assessment and management"												
Activity 2.1: A 10-day training workshop for 8 engineers from FEMD and Samdrupjhonkar municipality The workshop will be organized in a place where it will be easy to complement theoretical training with site visits (e.g**. Bangkok**). Hence, the workshop will include: (a) Theoretical training in various topics related to flood risk assessment. These include (but are not limited to) Hydro-meteorological hazards, their formation and predictability; Climate change and flood vulnerability challenges in implementing flood risk reduction interventions under challenging circumstances of climate change; Developing climate outlook/scenario and finding option for adaptation to climate change; Process of flood vulnerability and capacities assessment; Process of flood hazard mapping and assessment; Process of flood risk assessment; Tools for flood plan management; Integrated watershed management in a changing climate: a non-structural intervention for flood risk mitigation. (b) Practical hydrodynamic and hydrological modeling using HEC RAS (free software) or other similar software, to assess flood hazards.				x								

(c) Site visits to observe real time flood management systems in operation (e.g. Royal Irrigation Department's telemetry systems for flood management) See Annex A for the detailed workshop structure and contents.												
Deliverables 2: Workshop report with emphasis on pilot flood alleviation intervention.					x							
Output 3: Flood hazard and flood risk maps												
Activity 3.1: On-the-job mentoring of FEMD and Samdrupjhonkar engineers to indigenously develop the flood hazard and risk maps for the target Basin.				x	x	x						
Deliverable 3a: Flood hazard map for the Dungsamchhu Basin in Samdrupjhonkar District *Deliverable 3b:* Flood risk map for the Dungsamchhu Basin in Samdrupjhonkar District						x						
Output 4: Preliminary design for pilot flood alleviation intervention and closure report												
Activity 4.1: On-the-job mentoring of FEMD engineers to develop a preliminary design of a pilot flood alleviation intervention in a selected location.						x	x	x				
Deliverable 4a: Draft design of pilot flood alleviation intervention.								x				
Deliverable 4b: Closure report and data collection filled at the end of the technical assistance (a template will be provided)									x			

4. Resources required and itemized budget:

Activities and Outputs	Input: Human Resources	Input: Travel	Inputs: Meetings/events	Input: Equipment/Material	Estimated cost	
					Minimum	Maximum
Inception workshop		*International travel for response plan implementers + local travel for participants from Samdruphjonkar*	*Workshop*		*6,000*	
Output 1: Data collected for flood risk assessment works	*Flood Management Expert (2-3 days)* *Social Development Expert (2-3 days)*			*Data procurement (satellite data)* *Questionnaire surveys (sample size: approx 300)*	*6,000*	

Output 2: Capacity building program on "Flood risk assessment and management"	*Flood Management Expert (4 days)* *Social Development Expert (1 days)* *GIS Expert (3 days)* *Structural Designer (1 days)* *Watershed Development Specialist (1 days)*	*International travel for 8 engineers from Bhutan to Bangkok (10 days)* *Per diem @$100/day/participant*	***"Flood risk assessment and management"** training workshop.*	*Training material, Venue, Field trip costs*	*26,000*	
Output 3: Flood hazard and flood risk maps	*Flood Management Expert (3-5 days)* *GIS Expert (3-5 days)*				*5,000*	
Output 4: Preliminary design for pilot flood alleviation intervention and closure report	*Flood Management Expert (2-3 days)* *Structural Designer (3-5 days)* *Watershed Development Specialist (2-3 days)*				*7,000*	
Estimated range of costing for the entire Response Plan					*50,000*	

5. Profile and experience of experts

Experts required	Brief description of required profile

Flood Management Expert	Substantial experience and expertise required in flood control, flood forecasting and flood disaster management. Prior experience in capacity building in hydrodynamic and hydrological modeling will be an advantage. Regional experience is highly desired. PhD preferred.
GIS Expert	Extensive experience in GIS applications for multi-hazard risk assessment and Disaster Risk Reduction as applicable to floods. Regional experience is highly desired. PhD preferred
Watershed Development Specialist	Extensive experience in integrated water resources management and green infrastructural solutions. Regional experience is highly desired. PhD preferred
Social Development Expert	Experience in carrying out community-based questionnaire surveys. Regional experience is highly desired. PhD preferred
Structural Designer	Experience in designing flood mitigation measures (both structural and non-structural). Regional experience is highly desired. PhD preferred.

6. Intended contribution to impact over time

The ultimate outcome of the assistance is to reduce the vulnerability of communities in the Dungsumchhu Basin of the Samdrupjhonkar District to climate change induced flooding. It is also envisaged that the assistance would serve as a pilot for scaling up to other districts of Bhutan, thereby mitigating the flood risk for the entire country. The UNISDR probabilistic risk assessment (http://www.preventionweb.net/countries/btn/data/) suggests that the annual average loss in Bhutan as a result of flooding will be USD 54.65 Million. The technical assistance, thus, has the potential to reduce this number. Samdrupjhonkar is home to around 7,500 people whose lives are affected by flooding problems periodically. The technical assistance thus alleviate the flood risk faced by these communities, and improve their quality of life. The Bhutan Environment Outlook (2008) suggests that because of climate change there will be an increase in summer flows in the rivers over the short run but a decrease in the long run. Such a scenario will be disastrous for the hydro-centric economy of Bhutan (presently 40% of national revenue). Having adequate flood management systems will help reduce this fluctuation in river flows, thereby safeguarding the hydropower potential in the country. Flooding, through more intense rainfalls can also increase outbreaks of microorganisms, sedimentation and pollution loads, and stress sewer systems. During the period 2003-2006, there were more than 505,000 water-borne disease related referral cases and 71 deaths in accordance to the morbidity reports compiled by the Ministry of Health. Water-borne diseases accounted for about 15% of the total health referral cases and for 3% of the deaths caused by all diseases. The technical assistance, through better flood management, can thus contribute to minimizing the spread of water-borne diseases.

7. Relevance to NDCs and other national priorities

Bhutan's development is highly dependent on climate-sensitive sectors such as agriculture, hydropower and forestry. The melting of the Himalayan glaciers (as a result of climate change) increases risks of flooding in the wet season and water scarcity in the dry season, both of which will impact these sectors. These changes are a threat to people's livelihoods and the rural economy.

This CTCN TA directly supports Bhutan's NDC to "Develop a monitoring, assessment, and warning systems for flash flood and landslide hazards and risks", under the section on strengthening resilience to climate change hazards. It is also in line with Bhutan's **Technology Needs Assessment** and **Technology Action Plans** for Climate Change Adaptation**,** (TNA, 2013), which emphasizes on reducing the vulnerability of people, infrastructure and agricultural fields to natural disasters such as flash floods. Furthermore, this technical assistance is very much in line with Bhutan's NAPA which recommends the installation of early warning systems; **hazard mapping of key watershed areas**; installation of hardware; real time monitoring (unmanned) with automatic data transmission in order to alleviate climate induced flood related risks in the country.

8. Linkages to relevant parallel on-going activities:

At the national level, this CTCN technical assistance complements Bhutan's ***Eleventh Five Year Plan (2013-2018)***, where one of the areas of interest, in terms of the overall national development, is engineering adaptation and disaster risk reduction. The major activities to be undertaken during the plan period are construction of flood protection walls and land reclamation along major flooding rivers, disaster risk assessment and mapping and development of guidelines and manuals. Flood risk assessment and vulnerability mapping will also be carried out. These are aimed to reduce the vulnerability of people and places to floods. Successful implementation of this technical assistance, in the target district, will thus make a strong case for cross-scaling of project outputs to other regions in Bhutan. The Eleventh Five Year Plan also emphasizes on training and capacity building of engineers, architects and other professionals in the construction sector. This CTCN assistance thus

has strong synergies with this aspect of the Plan as well. The Bhutanese Government has also approved a budget of Nu.728 million in the 11th Five Year Plan for flood protections works throughout the country. Hence, upon successful completion of the technical assistance, there can be a possibility to secure internal funding for structural measures and interventions identified during the implementation of the technical assistance.

At regional level, the CTCN assistance will complement the Urban ***Development Plan for Samdrupjongkhar Thromde 2013-2033*** that emphasizes on technical solutions and capacities to address the rampant flooding problems. The project outputs (e.g. flood hazard maps) will play an important part the developmental strategies for the basin. As per the plan, Samdrupjongkhar town has an abundance of flat developable land, however there is a threat to development from the flooding of the Dungsam Chhu river. It is also recommended in the plan that the identification of vulnerable and hazard prone zones are to be done at the Municipality (Thromde) level. Hence, the flood hazard maps will have a direct role in helping adopt this recommendation.

9. Anticipated follow up activities after this technical assistance is completed:

FEMD anticipates to develop a flood management plan for Samdrupjongkhar District consisting of (a) flood hazard map which identifies the flood prone areas, (b) vulnerability assessment based on questionnaire survey in the target district, and (c) the flood risk assessment and subsequent mapping, based on which adaptation measures can be designed to reduce the flood impacts. This TA has the potential to feed into this plan. Furthermore, because the TA outputs are a relatively new concept in Bhutan, this can be seen as a pilot project, which can be cross-scaled to other regions. The post assistance plans include:

1) The risk map as a function of vulnerability and hazard would be shared to the Department of Disaster Management (DDM) for awareness to the settlements located along the basin. As mandated by the Disaster Management Act of Bhutan (2013), DDM is responsible for creating awareness programs thus preparing settlement along the basin against the flood disaster.
2) The maps produced shall also be shared to the Department of Human Settlement (DHS) under the Ministry of Works and Human Settlement (MoWHS) to be incorporated during the settlement planning phase. As of now, the planners have never considered flood as the factor for the town planning and this could be mainly because of the inadequate technical expertise on flood analysis. The capacity developed through this TA therefore would also benefit the planning department whereby the flood issues could also be included while settlement planning is being carried out from this time forth.
3) The outputs will be shared with the Department of Hydro-met Service (DHMS) under the Ministry of Economic Affairs, who are responsible for setting up the early warning systems in the country.
4) Developing guidelines for scaling up the pilot project, upon successful completion, to other Basins in Bhutan.
5) Funding for the actual implementation of adaptation interventions identified during the period of assistance will be sought from national sources. For example, the Government of Bhutan has set aside an unspecified budget for flood protection works in the country.

10. Gender and co-benefits:

Imbedded in design of the activities:	In Bhutan, gender equality is not a major issue. In the Social Institutions and Gender Index 2014 Edition, Bhutan's score was 0.1142, placing it among countries with a low level of discrimination in social institutions though women remained at a disadvantage in a number of areas. Nevertheless, this CTCN assistance endeavors to address gender equality in the following ways: 1. As far as possible, equal number of male and female engineers will be provided with the training in flood risk assessment. If equal gender balance is difficult to achieve (given staffing constraints), at least one female engineer each from FEMD and Samdrupjhonkar municipality will be engaged. It will be the responsibility of FEMD to ensure this balance. 2. Specific questions will be designed to elicit the 'women's vulnerability' as part of the questionnaire survey for the vulnerability assessment. This gender disaggregated data will be analyzed independently to extract relevant information pertaining to women that can then feed into the overall flood risk assessment.
Gender and co-benefits intended as result of the activities:	Women-specific vulnerability will be evaluated, through questionnaire survey, as part of the vulnerability assistance. Hence, the CTCN assistance will offer a unique opportunity for decision makers to address this vulnerability through the climate change adaptation plans that will be subsequently developed based on the climate risk assessment (see point 3 in section 9).

11. Main in-country stakeholders in implementation of the technical assistance activities:

In country stakeholder	**Role in implementation of the technical assistance**
National Environment Commission Secretariat	Chief focal point for administrative matters.
Flood Engineering and Management Division under the Department of Engineering Services	Lead implementing agency and chief technical beneficiary
Samdrupjongkhar Thromde	Provide support in conducting questionnaire survey; beneficiary.
Department of Disaster Management	Provide support in disseminating project information among the communities.
Department of Hydrometeorological Services	Data support

12. SDG Contributions:

Goal	**Sustainable Development Goal**	**Direct contribution from CTCN TA** (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
3	Ensure healthy lives and promote well-being for all at all ages	

4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	
5	Achieve gender equality and empower all women and girls	The CTCN TA seeks to evaluate women-specific vulnerability to flooding threats.
6	Ensure availability and sustainable management of water and sanitation for all	Flood management is a core component of any sustainable water management strategy. The theme of the CTCN TA is focused to improve flood management in the Somdrupjhonkar District of Bhutan.
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	
	7.3 - By 2030, double the global rate of improvement in energy efficiency	
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	An important precursor to infrastructural development is assessing the risk. This CTCN TA endeavours to evaluate the flood risk for the Dungsumchhu Basin in Samdrupjhonkar District, which will form the basis for infrastructural or other development, when the time comes.
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	*All TAs should indicate relevance to Goal 13 and at least one target below (13.1 to 13.b).*
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	The CTCN TA directly addresses this point by building capacities of national level and regional level engineers in Bhutan to help build resilience to climate-related hazards such as flooding.
	13.2 - Integrate climate change measures into national policies, strategies and planning	The CTCN TA is a pilot project, which upon successful completion, can be strategically cross-scaled to other regions and areas in Bhutan.
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	The flood hazard map developed through this CTCN TA will be used to create awareness on the flood hazards among public, local authorities and other agencies.
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	
	13.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	
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	

16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13. Classification of technical assistance:

Please tick off the relevant boxes below	*Primary*	*Secondary*
☐ 1. Technology identification and prioritization	☐	☐
☐ 2. Research and development of new climate technologies	☐	☐
☐ 3A. Feasibility studies for specific known climate technology options	☐	☐
☐ 3B. Piloting of known technologies in local conditions	☒	☐
☐ 4A. Law, policy and regulatory reform recommendations	☐	☐
☐ 4B. Sector specific roadmap or strategy design	☐	☒
☐ 5. Finance facilitation and market creation	☐	☐

14. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; (ii) the Lead Implementer about the knowledge and learning gained through delivery of technical assistance; and (iii) the CTCN Director about timeliness and appropriateness of the delivery of the activities and outputs.