CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

Country	**Sri Lanka**
Request ID#	2018000009
Title	Development of an urban adaptation plan for Kurunegala
NDE	Dr. R.D.S. Jayathunga, Director Climate Change Secretariat, Ministry of Mahaweli Development & Environment Municipal Tel: +94718574058/ +94112883368 Fax: +94 (0) 11207678 Email: climatesec@gmail.com Address: Climate Change Secretariat Ministry of Mahaweli Development & Environment, 416/1/C, Robert Gunawardena Mawatha, Battaramulla, Sri Lanka
Proponent	Mr. Pradeep Thilakarathne, Municipal Commissioner Municipal Council Building, Kurunegala, Sri Lanka Tel: +94717139660

Summary of the CTCN technical assistance

Kurunegala city is one of the most intensively developing economic and administrative capitals of Sri Lanka located in the North Western Province. Urban systems in Kurunegala city are facing climate vulnerabilities, the most crucial being extreme heat conditions, decrease in drinking water supply due to drought and gradually diminishing urban biodiversity. The city needs a broader range of feasible climate adaptation measures in terms of integrated planning for climate change adaptation. The current measures are limited by the existing governance system and lack of appropriate urban planning considering climate change adaptation measures.

To tackle these challenges, the Ministry of Mahaweli Development and Environment of Sri Lanka and Municipal Council Kurunegala requested CTCN Technical Assistance. In this CTCN Technical Assistance (TA), heat stress and vulnerability due to water scarcity are prioritized among climate issues, based on discussions regarding the most urgent climate issues with key stakeholders in Sri Lanka. The Technical Assistance has the aim to: i) identify the current effects of climate change in Kurunegala city, ii) assess climate change vulnerability and risk to prioritized issues (heat stress and water scarcity), iii) propose an adaptation action plan for addressing heat stress and water scarcity, and iv) build the capacity of city planners and policy makers in order to transform Kurunegala city into a climate-smart city.

By developing the adaptation action plan for addressing heat stress and water scarcity and training stakeholders in Kurunegala city, the adaptive capacity and climate resilience of the urban population will be enhanced in the long-term.

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Technical Assistance Response Plan – Terms of Reference

Agreement:

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

National Designated Entity to the UNFCCC Technology Mechanism
Name:
Title:
Date: 14.03.2019
Signature:

Dr. R.D.S. Jayathunga
Director (Climate Change)
Ministry of Mahaweli Development and Environment
"Sobadam Piyasa"
416/C1, Robert Gunawardana Mawatha,
Battaramulla

Proponent (signature of the Proponent is optional)
Name:
Title:
Date: 14.03.2019
Signature:

Pradeep Thilakarathne
Municipal Commissioner
Municipal Council
Kurunegala.

National Designated Entity to the UNFCCC Technology Mechanism (providing *pro bono* support)
Name: Mr. Min Pyo Kim
Title: Director
Date: 13/05/2019
Signature:

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date: 12/03/2019
Signature:

1. Background and context

Sri Lanka is an island country in Southern Asia that is extremely vulnerable to the impacts of climate change. Sri Lanka has been suffering from coastal erosion and inundation, heavy storms and severe floods and droughts caused by the variation in annual precipitation and weather pattern caused by climate change. Floods have triggered severe landslides in Sri Lanka. Over the last decade, nearly 13 million people have been distressed by extreme weather events due to climate change, and $8.5 million have needed to rely on relief.[1] The potential economic loss is expected to reach 6.5 per cent of the GDP of Sri Lanka by 2100.[2] The year 2016 was especially devastating for Sri Lanka in terms of climate change induced disasters: Sri Lanka experienced severe droughts and was hit by cyclone Roanu in May 2016. Floods and landslides took the lives of over 100 people and displaced half a million. The economic damages were estimated at US$ 2 billion.[3]

Sri Lanka has emphasized the importance of adaptation to climate change by establishing the National Climate Change Adaptation Strategy in 2011, which laid the groundwork for the National Adaptation Plan (NAP) (2016). Responding to the guideline of the UNFCCC, Sri Lanka sets nine key sectors and specific priority areas which need to be addressed for sustainable development. Compared with the previous adaptation plan, the NAP of Sri Lanka added a monitoring and evaluation mechanism in its implementation strategy from the sectoral and national levels to the regional and community levels to ensure the relevance and validity of the NAP.

The Public Investment Programme 2017–2020 (PIP) is one of the policies adopted in Sri Lanka that support climate adaptation actions. To achieve the target of economic growth of 7 per cent by 2020, the Ministry of National Policies and Economic Affairs established several main divisions including the division of environmental management. The division of environmental management includes disaster management, which addresses the reduction of vulnerability and risk caused by climate change such as floods, droughts, landslides, heavy storms and inundation. In addition, the Vision 2025, developed based on the National Economic Development Policy for Sustainable Era in 2017, also concentrates on the importance of climate adaptation especially in the sectors of food and energy security.

As an intersection of the south and the north districts of Sri Lanka, Kurunegala city (capital city of Kurunegala district with a population of more than 40 thousand) has a potential to become a major city (Greater Kurunegala).[4] The annual average population growth rate of 4 per cent and an increasing demand for skilled labor and transportation facilities display the dynamic economic activities of the city. The increasing economic activities together with the high population density (3,000/km²), on the other hand, have caused social and environmental problems such as air pollution and issues with water management. Against this context, the city established the Development Plan for Urban Development Area of Kurunegala 2006–2015. While this plan initiated the improvement of environmental quality and service functions, adaptive measures to climate change were not included in the plan.

[1] Ministry of National Policies and Economic Affairs Sri Lanka. 2017. Public Investment Programme. p.116.
[2] ADB. 2014. Assessing the Costs of Climate Change and Adaptation in South Asia. pp.76-78.
[3] The Global Climate Risk Index 2018; https://germanwatch.org/sites/germanwatch.org/files/publication/20432.pdf
[4] Kurunegala city is located in North Western Province near the central hill of Sri Lanka. The city is plain area with small size (11km²) but high population density (3,000/km²), and has huge rocky outcrops surrounding the city's central area.

Therefore, considering the NAP and current national development strategies, the Kurunegala Municipal Council (KMC) has the responsibility to develop and implement an appropriate urban action plan focusing on climate adaptation. For this purpose, the KMC requested CTCN to provide technical assistance to identify the vulnerabilities and risks of climate change and developing an action plan for climate adaptation. In view of the discussions regarding the most critical climate issues in the city with experts and key local/national stakeholders of Sri Lanka, this CTCN TA concentrates on adapting the city to the impacts of heat stress and water scarcity.

2. Problem statement

Kurunegala city has been adversely affected by climate change. The mean temperature of the city has risen by 0.6°C for the last 137 years[5], which is less than the global increase by 0.85°C for the same period[6]. The increase, however, can expose the city to climate change effects because of the specific climatic and geographic characteristics of the city: high temperature and humidity, and the rocky basin capturing the heat of the city. These features will amplify the frequency and intensity of heat stress. The variation of monthly rainfall pattern is also influenced by climate change and the dry season is gradually extended. These changes in climatic conditions result in the decrease of the yearly planting period (cropping season), and finally bring a negative impact on primary industries such as agriculture, horticulture, and forestry.[7] In addition, there is a possibility that other sectors (e.g. infrastructure, health, water supply etc.) will be affected by flash floods, droughts or other extreme events linked to climate change.

Accordingly, adaptive measures need to be implemented urgently to mitigate the damage caused by climate change. Despite the fact that there is a lack of a climate related Adaptation Plan for the city, measures have been taken by the KMC to address certain issues arising from the impact of climate change. The master development plan of Kurunegala city does not highlight the vulnerability of climate change and adaptive measures even though there are programmes that address adaptation and mitigation measures.

Challenges which restrict developing the adaptation plan and integrating the plan into the urban development plan are as follows:

i) Lack of coordination among different city stakeholder offices to integrate present and future climate change into city sectoral development plans;
ii) No assessment done of adaptive capacity of the city to address climate change vulnerability and risk;
iii) Non-prioritization of sectors which are the most vulnerable and urgently need proper measures;
iv) Lack of quantified baseline information to integrate climate change adaptation measures to the urban development plan of the city.

[5] W.A.J.M. De Costa. 2008. Climate change in Sri Lanka: myth or reality? Evidence from long-term meteorological data. Journal of the National Science Foundation of Sri Lanka, 36, p. 70.
[6] IPCC. 2013. Climate Change 2013: The Physical Science Basis.
[7] W.A.J.M. De Costa, op. cit., p. 77.

3. Logical Framework for the CTCN Technical Assistance:

(Guidance: Please note that multiple activities lead to one Output, and multiple Outputs lead to one Outcome. There can be several Outputs, but only one Outcome description capturing the CTCN technical assistance. Deliverables are the products or services to be delivered to the NDE/Proponent/CTCN based on the Activities and the Outputs.)

	Month											
	11	12	1	2	3	4	5	6	7	8	9	10
Objective: Increased resilience of Kurunegala city to local natural disasters due to climate change impact under the Climate Smart City Programme												
Outcome: This assistance ***supports the establishment of the Kurunegala city's climate change adaptation plan for addressing urban heat stress and vulnerability due to water scarcity***												
Output 1: ***Development of implementation planning and communication documents***												
Activity 1: All implementers must undertake the following activities at the beginning and at the end of the CTCN technical assistance i) A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organizations and a detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan; ii) Based on the work plan, a monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation, will be formulated in the beginning of the technical assistance. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan); iii) A two-page CTCN Impact Description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered (a template will be provided); iv) A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided).												

Deliverable 1: i) Detailed work plan (to be submitted in the beginning of the technical assistance) ii) Monitoring and evaluation plan (to be submitted in the beginning of the technical assistance) iii) CTCN Impact Description (to be submitted in the beginning of the technical assistance) iv) Closure and Data Collection report (to be submitted in the end of the technical assistance)												
Output 2: ***Engagement of key stakeholders***												
Activity 2.1: *Inception Workshop* Inception workshop with 70-80 stakeholders (Sri Lanka NDE, KMC, government officials from Kurunegala Divisional Secretariat, relevant local authorities including UDA, stakeholders from private sector, and etc.), aims to facilitate mutual understanding of the CTCN TA (e.g. activities/method/ expected outcome etc.), to collect the environmental issues and stakeholders' opinions for capturing the national and local environment conditions, and to understand the on-going efforts focused on the climate change adaptation.												
Activity 2.2: *City level kick off meetings* This activity will hold city level kick-off meeting(s) in Kurunegala city with stakeholders such as the Kurunegala Municipal Council (KMC), relevant officials of the public departments, and other experts. This meeting is to understand specific local needs and situations, and to prioritize the climate issues that are the most immediate in Kurunegala city.												
Activity 2.3: *Formation of a local consultancy team* A local consultancy team will be established. The team will be composed of focal points from the Kurunegala Municipal Council (KMC) and the local consultants recruited based on the TOR jointly developed by the project implementer, the Sri Lanka NDE, and the KMC. The local consultancy team will collect/organize, data, conduct surveys (interviews, questionnaires, etc.) for the vulnerability and risk assessment and prepare workshops and meetings.												
Deliverable 2: i) Report on the Inception Workshop (programme, participants list, findings and the key messages), and city level kick-off meetings												
Output 3: ***Collection of preliminary baseline information***												

Activity 3.1: *Literature review on relevant plan and on-going policies* To understand relevant background of Sri Lanka and Kurunegala city, the project implementer will lead a literature review to collect references and relevant information. The local consultancy team, with the guidance from the project implementer, will conduct a literature review on i) National Determined Contribution (NDC), National Adaptation Plan (NAP) and various national development strategies, ii) master plan for the development and relevant previous and on-going policies/projects of Kurunegala city and district, iii) relevant policies and projects in other cities and districts, and iv) relevant documents such as newspapers, reports from governments or research institutes, internal information, etc.	
Activity 3.2: *Review of indicators (proxy variables) and existing data in the prioritized issues* The technical assistance concentrates on two priority issues in Kurunegala city caused by climate change: vulnerability caused by heat stress and vulnerability due to water scarcity and how these affect different urban sectors and spatial/geographical locations in the city. After narrowing down numerous indicators considering the prioritized issues heat stress and water scarcity, the project implementer will send a draft of the inventory of indicators to local consultancy team to examine the suitability of each indicator, receive their feedback and find relevant data. During this activity, the international gender and vulnerable group expert will review the indicators from the point of view of different inhabitants: women, men, boys and girls as well as different vulnerable groups such as the elderly, disabled persons and minorities. The gender and vulnerable group expert will also give his/her recommendations for the inclusion of the needs of both genders and different groups of people.	
Activity 3.3: *Collection of baseline information and data* This activity will be conducted focusing on the result of activity 3.2. The local consultancy team will collect baseline information and data which are essential to analyse vulnerability and risk of different (urban sectors) spatial/geographical locations of Kurunegala city to heat stress and water scarcity. The information and data should include available secondary information of various material such as GIS map, documents, etc. and statistics describing the overall aspects of the prioritized issues heat stress and water scarcity and their impact to different urban sectors and spatial/geographical locations.	
Deliverable 3: i) Report on the result of literature review and collection of information and data for vulnerability and risk assessment –Local Consultancy Team	
Output 4: ***Assessment of climate change vulnerability and risk based on the available information and data*** (* subject to change depending on the data)	

Activity 4.1: *Identification of appropriate methodology and tool for assessment* Based on the collected information and data, case review and off-line meetings with assessment experts will be conducted to identify and decide the appropriate methods and tools for the vulnerability and risk assessment on the prioritized issues heat waves and water management. During this activity, a level of spatial features, scale, and dimension of GIS map will also be elaborated considering the data collection. This activity will be conducted by Project Implementer.	
Activity 4.2: *Weighting of indicators (proxy variables) in prioritized issues* This activity aims to weight each component and indicator of the prioritized issues heat waves and water management after conducting several surveys on experts with regards to these prioritized issues. After reviewing draft questionnaires, the local consultancy team will conduct the surveys with the guidance from the project implementer.	
Activity 4.3: *Evaluation of climate change vulnerability and risks and their impacts to related urban sectors and spatial/geographical locations most at risk.* Based on output 3, an assessment will be conducted by the Project Implementer to understand which indicators display higher vulnerability and risk than others. As one of the components to assess the risk, the vulnerability assessment will mainly consider sensitivity and adaptive capacity, which comprise of an evaluation on the vulnerable social group, critical infrastructure, key environmentally sensitive areas, current adaptive capacity, etc. The risk assessment will be based on the integration of different information and data for the different components of the vulnerability, hazard, and exposure. In case of a lack of information and data, the risk assessment will be a qualitative analysis based on a survey targeting specific experts in the prioritized issues, which includes crucial risk drivers for the Kurunegala city adaptation action plan. Identify impacts of climate change on the components in highest risk.	
Activity 4.4: *Visualization of each result* A result of the assessment will be visualized in the most adequate way. With the support of the international GIS expert, a vulnerability (sensitivity and adaptive capacity) map of different urban sectors and spatial/geographical locations will be designed focusing on relevant indicators related to the prioritized issues heat stress and water scarcity. The risk assessment will be visualized by adding different layers for the different components (exposure, hazard, vulnerability including sensitivity and adaptive capacity, impacts) on existing land use map or others. In case of a lack of information and data, the risk assessment focusing the survey will be visualized as a risk-matrix graph for comparing the scores of each component and indicator.	
Activity 4.5: *Field survey and mini-training workshop* During this activity vulnerable places/regions and the areas where policies have been already implemented to reduce the impact of climate change will be visited. This can be an opportunity to check a degree of similarity	

between the real problems and the result of assessment. During this activity, a mini-training workshop will be conducted by the project Implementer with 15-20 key stakeholders for a half day to facilitate their understanding on the process of the assessment including detailed information such as the methodology, indicators, results, etc.												
Activity 4.6: *Capacity gap analysis* Based on the analysis conducted during activity 4, the local consultancy team, with guidance from the project implementer, will define and analyse major gaps and obstacles that prevent Kurunegala city from becoming climate smart and resilient city focusing on climate change adaptation. The analysis will include institutional set- up, financial support, infrastructure, public awareness, policies and laws, and others. Considering the result, the capacity building needs of local authorities, professionals, and other relevant stakeholders will be identified.												
Deliverable 4 i) Report on methodology, the results of the vulnerability and risk assessment, and the field survey with annexes for the data arrangement –Project Implementer ii) Report on the capacity gap analysis –Local Consultancy team												
Output 5: ***Development of action plan for addressing heat waves and water management focusing on adaptation with the result of the assessment***												
Activity 5.1: *Establishment of adaptation measures against the impact of climate change* On the basis of the assessments, the international urban planning expert will suggest appropriate adaptation measurements focusing on priority matters most at risk and with the greatest negative impacts. He/she will identify a list of potential adaptation options relevant to the most vulnerable matters and analyse these in relation to other planning documents.												
Activity 5.2: *Development of an urban action plan for addressing heat stress and water* scarcity This activity will supplement the city development plan with an urban adaptation action plan that considers the adaptation of different urban sectors and spatial/geographical locations that are most at risk to the impacts of heat stress and water scarcity. The strategic urban adaptation action plan for addressing heat stress based on Urban Heat Island (UHI) and water scarcity due to climate vulnerability will describe how to improve the resilience of the relevant sectors and spatial locations most at risk in the city. The action plan for the prioritized issues will include information about timeliness, needed budget for short-term and long-term adaptation options, quick win projects, etc.												

Activity 5.3: *Stakeholder consultation workshop to share the suggested action plan* A half-day consultation workshop with a maximum of 50 relevant stakeholders upon a discussion with NDE and KMC (including governmental officials, local community, NGOs, and other key stakeholders) will be held to discuss the suitability and applicability of the suggested urban adaptation action plan on heat stress and water scarcity.												
Deliverable 5 i) Report on the action plan including adaptation measures –Project Implementer ii) Assessment guidelines including the methodology used during the project presented as a step by step tool that can be used to scale up the methodology in other contexts –Project Implementer iii) Report on the stakeholder consultant workshop – Project Implementer												
Output 6: ***Capacity building of city planners on the integration of climate-resilient aspects into city development plan***												
Activity 6.1: *Development of training manual for the city planning and decision support module* During this activity the project implementer will develop a training manual on the process of the data collection, synthesis and analysis for climate change vulnerability and risk assessment including adaptive capacity assessment and risk drivers.												
Activity 6.2: *Training workshop (for two days)* This activity aims to give guidance for using the assessment guideline tool to repeat the assessments periodically and conduct them for other climate issues and risks and how to integrate future climate change adaptation measures to the urban development plan of the city. During the training, guidance will be given on how the identified priority adaptation actions can be added to the development plan and be implemented in Kurunegala city. The training will also include guidance on how to integrate gender aspects to adaptation assessments and identify actions that would be the next steps for the stakeholders of Kurunegala to address. During the training event, the outputs of previous activities will be shared with a maximum of 20 city planners and policy makers to strengthen the adaptation capacity of the city. The local consultancy team will present the results of the capacity building gap analysis conducted during activity 4.6 to help the stakeholders to comprehend the gaps in the current adaptive capacity of the city and provide specific direction for the future.												
Deliverable 6 i) Training manual to guide city planners in Kurunegala city in integrating the city specific adaptation action (highlighting heat stress and water scarcity) to the development plan and how to analyze other issues - Project Implementer ii) Report on programs, contents, and the key discussions of the training workshop - Project Implementer												

4. Resources required and itemized budget:

Please provide an indicative overview of the resources required and itemized budget required to implement the CTCN technical assistance, including for M&E-related activities, using the table below. Important to note that minimum 1% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). Once the Response Plan is completed, a Response Implementation partner(s) will be selected by the Climate Technology Centre (CTC). A detailed activity-based budget for the CTCN assistance will be finalized by the CTCN and selected Implementer.

Activities and Outputs	**Input: Human Resources** *(Title, role, estimated number of days)*	**Input: Travel** *(Purpose, national vs. international, number of days)*	**Inputs: Meetings/events** *(Meeting title, number of participants, number of days)*	**Input: Equipment/Material** *(Item, purpose, buy/rent, quantity)*	**Estimated cost** *Please accumulate the costing at Activity and Output level and provide an estimated costing range for each activity and the total Response Plan*	
					Minimum	**Maximum**
Output 1: ***Development of implementation planning and communication documents*** *(*Including USD 1,000 for a review for the response plan and final deliverables)*					*USD 9,010*	
Output 2: ***Engagement of key stakeholders***					*USD 6,000*	
Output 3: ***Collection of preliminary baseline information and identification of methodologies for vulnerability and risk assessment***					*USD 11,800*	
Output 4: ***Assessment of climate change vulnerability and risk based on the available information and data*** *(*Including USD 1,070 for gender issues focusing adaptation in the survey for risk assessment)*					*USD 17,800*	
Output 5: ***Development of action plan focusing adaptation with the result of the assessment***					*USD 35,600*	
Output 6: ***Capacity building of city planners on integration of climate resilient aspects into city development plan***					*USD 26,700*	
Estimated range of costing for the entire Response Plan					*USD 106,910*	

5. Profile and experience of experts

Based on the required Human Resources identified in section 4 (Resources required and itemized budget) please provide a description of the required profile of all involved experts for the implementation of the CTCN Response Plan.

Experts required	Brief description of required profile
Expert in analysis of vulnerability and risk	At least Master's degree (equivalent/extensive experience or expertise) in a relevant discipline: Expertise area: climate change, assessment of vulnerability and risk, risk survey Minimum 10 years relevant experience
Expert in urban planning	At least Master's degree (or equivalent/extensive experience or expertise) in a relevant discipline: Expertise area: urban planning, climate change adaptation, GIS approach Minimum 10 years relevant experience
GIS expert	At least Master's degree (equivalent/extensive experience or expertise) in a relevant discipline: Expertise Area: GIS, urban planning Minimum 10 years relevant experience
Local Consultancy team in adaptation and urban planning	A representative of a relevant agency or research institute with extensive experience or expertise in a relevant discipline: Expertise area: climate change adaptation, urban planning, surveys Abundant experience to collaborate with: i) International organizations and agencies, or external research institutes on climate change in urban contexts ii) Government think tank or local government on climate change or urban planning

6. Intended contribution to impact over time

The CTCN TA is expected to contribute to the enhancement of climate resilience of Kurunegala city. The urban adaptation action plan considering the prioritized issues developed based on the results of climate vulnerability and risk assessment will provide the practical information needed to plan for the resilience of urban areas of Kurunegala city. The proposed urban action plan would guide policymakers and stakeholders in each relevant department of the city government on how to increase the climate resilience of identified sectors to the impacts of climate change. The direct beneficiaries of the development of the urban adaptation action plan regarding relevant sectors will be 40,000 citizens living in Kurunegala city. The population of current Kurunegala Divisional Secretariat is 100,000 people including approximately 30,000 women and children[8] and if the planned city expansion to Greater Kurunegala will materialize, the impacts will address also these people. Additionally, the annual average population growth rate is 4 per cent which indicates a population of 56,000 in Kurunegala city in 10 years' time and in the case of Greater Kurunegala 140,000 in ten years' time.

In addition, the identified priority adaptation actions, incorporated into city development plans, could be mainstreamed in the regional agenda.

Additionally, on the basis of the assessment guideline and training manual, the increased capacity of the policymakers and stakeholders can lead them to conduct several assessments for themselves for other issues and support the integration of climate adaptation aspects in urban development planning in the future. When other local governments of Sri Lanka attempt to update their action plans including adaptive measures, the experience of Kurunegala city can be one of the good examples. The assessment guideline will support other local governments to conduct similar assessments. These assessments will eventually be able to contribute to the achievement of the goal of the NDC and the NAP in the context of the improvement of adaptive capacity in the local level.

Finally, the CTCN TA will promote climate resilience of the city with improved adaptive capacity by helping decision makers of the city government to properly and timely make investments related to the decision in the prioritized issues. The approach used in this technical assistance has the potential to be scaled up in other urban areas of Sri Lanka, potentially benefitting larger segments of the Sri Lankan population.

7. Relevance to NDCs and other national priorities

According to the Global Climate Risk Index[9], Sri Lanka was among the 10 most affected countries in year 2016, because climate change has intensified the damages from disasters (cyclones, landslides, floods, droughts, etc.) Because of the perpetual extreme weather events and disasters, the recent national development strategies (PIP and Vision 2025) specify climate related risks as one of major obstacles to hinder the sustainable development. The awareness of these extreme weather events and disasters and their adaptation, has already been considered since the establishment of several significant national adaptation plans: National Climate Change Adaptation Strategy (2010), National Climate Change Policy (2011), Technology Needs Assessment (2011;

[8] Census of Population and Housing – 2012: http://www.statistics.gov.lk/PopHouSat/CPH2012Visualization/htdocs/index.php?usecase=&action=

[9] The Global Climate Risk Index 2018: https://germanwatch.org/sites/germanwatch.org/files/publication/20432.pdf

2012), Nationally Determined Contributions (2016), and Nation Adaptation Plan (2016). However, the use of these national strategies and plans in city level urban planning has not been sufficient.

The National Determined Contribution (NDC) of Sri Lanka sets an adaptation target to build climate resilience of the sectors such as health, water management, urban infrastructure and settlement, which are vulnerable to the adverse impact of climate change. The NDC also emphasizes the development of proper local mechanisms against the impacts of climate change while specific explanation of the methodology is not specified. Based on the NDC, the NAP suggests a reinforced proposal consisting of nine adaptation sectors and their activities, and the cross-cutting national needs for adaptation (e.g. governance issues, institutional coordination, resource mobilization etc.).

Therefore, in alignment with the NDC and the NAP, this technical assistance aims to support Kurunegala city's effort of building climate resilience by developing suitable urban development plans focusing on the prioritised urban climate adaptation measures.

8. Linkages to relevant parallel on-going activities:

The government of Sri Lanka has carried out several projects on climate change adaptation in collaboration with domestic and international partners including multilateral development banks, bilateral ODA agencies, and other expert agencies.

In 2009, responding to a request from the Government of Sri Lanka (GOSL), the Asian Development Bank (ADB) initiated a Technical Assistance (TA) project titled "Strengthening Capacity for Climate Change Adaptation" to increase Sri Lanka's resilience to climate change impacts. The primary outputs of the TA were Sector Vulnerability Profiles (SVPs), the National Climate Change Adaptation Strategy (NCCAS) and the Information Education and Communications (IEC) Strategy. The TA assessed climate change vulnerability of prioritized issues with collected data including i) Urban Development, Human Settlements and Economic Infrastructure, ii) Water, iii) Agriculture and Fisheries, iv) Health, and v) Biodiversity and Ecosystem Services.

Also, the project, 'Strengthening the Resilience of Post Conflict Recovery and Development to Climate Change Risks in Sri Lanka', was designed and implemented from 2015 funded by the Special Climate Change Fund (SCCF) of GEF, the government of Sri Lanka (through its Divi Neguma), and the UNDP (through EU-SDDP10). The project aimed to build the resilience of rural development programmes (2 village development programmes: Divi Neguma and Gama Neguma) and to deliver concrete adaptation measures in Puttlam, Kurunegala and Ratnapura districts, which are highly vulnerable to climate change.

There are past and on-going efforts at the sectoral level including e.g. in the water, and agriculture sectors.

The 'Climate Resilient Integrated Water Management Project' is being implemented by the UNDP and the Ministry of Mahaweli Development and Environment of Sri Lanka from 2016 to 2024 through the support of the Green Climate Fund (total USD 52.1 million). The project aims to develop the infrastructure and irrigation and raise the awareness of smallholder-farmers on climate change in the dry zone in Sri Lanka including in the Kurunegala district.

Recently, the 'Climate Smart Irrigated Agriculture Project' is planned to be funded by the World Bank and the project will be implemented in 11 districts11 (including Kurunegala district) of 6 provinces from 2018 to 2024 to improve climate resilience of farming communities and productivity of irrigated agriculture in selected climatically vulnerable hot-spot areas in Sri Lanka. The project is comprised of 4 main components: i) Climate Smart Irrigated Agriculture Production and Marketing, ii) Efficient Water Management for Agriculture, iii) Project management, and iv) Emergency response.

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

Anticipated follow up activities are expected as follows:

[10] EU Funded project – Support to Reconstruction and Development in selected Districts in North and East Sri Lanka (SDDP)

[11] 11 districts: Polonnaruwa, Anuradhapura, Hambantota, Kilinochchi, Kurunegala, Moneragala, Mullaitivu, Puttalam, Trincomalee, Batticaloa and Ampara

a) The report including the vulnerability and risk assessment will be utilized as the tool to implement follow-up project or monitor the result of implementation. The report can also be used as a guide for the KMC when the Kurunegala city attempts to share relevant news or information with citizens.

b) An additional workshop can be held to improve the capacities of city planners, policy makers, NGOs and stakeholders by introducing the cases for establishing the adaptation plan, enhancing awareness of citizens on climate change, and applying alternative measures for relevant sectors.

c) The city can implement follow-up activities to implement the action plan developed through the TA. The activities could include conducting a feasibility assessment of the individual actions in the action plan in terms of cost, time, and co-benefits. Also, these actions could be developed as specific project concepts with detailed project design documents to attract finance. Pilot projects could be developed and implemented before scaling up.

d) The city can apply for other funding and assistance programme to carry out adaptation measures and urban action plans developed during this TA or to establish those of sectors not addressed.

e) A Green Climate Fund concept note could be developed based on the outputs of the TA to mainstream the findings into different key plans, programmes and policies; to the implementation of specific adaptation actions in Kurunegala city and/ or to upscaling the urban climate adaptation action plan development approach to other cities in Sri Lanka etc.

10. Gender and co-benefits:

Imbedded in design of the activities:	This response will be reviewed by a gender expert before the implementation starts. The survey on the understanding the climate change risk will include articles for gender issues to investigate gender inequality and the survey questionnaires will be reviewed by a gender expert. The final deliverables of the technical assistance will be reviewed by a gender expert.
Gender and co-benefits intended as result of the activities:	Enhanced adaptation capacity of Kurunegala city will provide improved services to both genders against the impact of climate change. The specific needs of both genders in terms of climate adaptation will be analysed and therefore the sectors identified will be relevant for both male and female citizens of the city.

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

Using the table below, please list and describe the role of in-country stakeholders, participants and beneficiaries who will be involved in or directly consulted during implementation of the assistance.

In country stakeholder	**Role in implementation of the technical assistance**
Climate Changes Secretariat, Ministry of Mahaweli Development and Environment	Provide assistance during the CTCN TA implementation

Municipal Council Kurunegala (KMC)	Provide political leadership and support, assist with access to data for determining baseline information, facilitate stakeholder, and support in the consultations and implementation of actions as the request proponent of this CTCN TA
Urban Development Authority, Kurunegala	Support to integrate national circumstances into Kurunegala's adaptation action planning and support in providing data for determining baseline information, facilitate stakeholder, and support in the consultations and implementation of actions
Land Use Planning Department, Kurunegala	Provide and prepare adequate scale spatial maps and ground verification work
Road Development Authority, Kurnegala	Support to integrate climate change concerns into city planning, and introduce relevant maps and plans for minimizing traffic congestion
Local Consultant (*undecided)	Assist the CTCN TA and provide technical support
Provincial base NGOs and CBOs	Support in mobilizing people for consultations.

12. SDG Contributions:

Instructions: Please complete the grey section below for ***a maximum of three SDGs*** *that will be advanced through this TA. A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/.*

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	
6	Ensure availability and sustainable management of water and sanitation for all	
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	
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	The CTCN TA will develop an urban adaptation plan for improving the resilience of Kurunegala city.
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	The CTCN TA will contribute to the enhancement of the city's resilience and adaptive capacity by suggesting an urban action plan with the adaptation measures for the related sectors.
	13.2 - Integrate climate change measures into national policies, strategies and planning	The purpose of this CTCN TA is to integrate the result of the assessment into the local urban development plan.
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	
	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	Identified result from the assessment will encourage the local government to establish an urban action plan on adaptation with consideration for gender issues.

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 indicate primary type of technical assistance. Optional: If desired, indicate secondary type of technical assistance.

Please tick off the relevant boxes below	*Primary*	*Secondary*
☐ 1. Decision-making tools and/or information provision	☐	☒
☐ 2. Sectoral roadmaps and strategies	☒	☐
☐ 3. Recommendations for law, policy and regulations	☐	☐
☐ 4. Financing facilitation	☐	☐
☐ 5. Private sector engagement and market creation	☐	☐
☐ 6. Research and development of technologies	☐	☐
☐ 7. Feasibility of technology options	☐	☐
☐ 8. Piloting and deployment of technologies in local conditions	☐	☐
☐ 9. Technology identification and prioritisation	☐	☐

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

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