Please note that this request was initially made by the country under the Adaptation Fund Climate Innovation Accelerator (AFCIA) programme, using a template for the application (technology concept) of AFCIA. As the implementation of technical assistance under AFCIA was limited, the request was not selected; however, in discussion with the country, it was agreed in principal that the request can be implemented using CTCN resources. Hence, a reference number for the CTCN TA request is generated with the AFCIA application attached here. As soon as the signed request in CTCN TA request template is received from the country, this document (AFCIA application) will be replaced by the same. Please see the AFCIA Technology Concept from the next page onwards.

ADAPTATION FUND

UN environment programme | CTCN CLIMATE TECHNOLOGY CENTRE & NETWORK

Adaptation Fund Climate Innovation Accelerator

Technology concept submission form

Guidelines:

- Technology concept submission form should be completed by an applicant organisation in collaboration with the national focal points to the CTCN (National Designated Entity, NDE) and the Adaptation Fund (Designated Authority) of the country. Please see updated contact list of the NDEs and the Designated Authorities through web-links as below:
  - NDE: http://unfccc.int/ttclear/support/national-designated-entity.html
  - Designated Authority: https://www.adaptation-fund.org/apply-funding/designated-authorities/
- The form must be signed by the NDE before official submission to UNEP-CTCN.
- The form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file.
- For the technology concept submitted by multiple countries, all the NDEs of the respective countries shall sign identical forms before official submission to UNEP-CTCN.

Country or countries:	Malaysia
Title of the technology concept:	Development of a Multi-Hazard Platform for forecasting Local Level Climate Extremes and Physical Hazards for Iskandar Malaysia *Please reflect the objective of the technology concept in the title (maximum 200 characters).*
NDE:	Ministry of Environment and Water Dr. Sugumari Shanmugam Under Secretary, Climate Change Division sugumari@kasa.gov.my Level 5, Block C7, Complex C, Federal Government Administrative Centre, 62662 Putrajaya, MALAYSIA *Please add name of the organisation, name of the focal point, position, email and address.*
Applicant:	Shahrinaz Maamor (shahrinaz@irda.com.my) Assistant Vice President Iskandar Regional Development Authority (IRDA) #G-01, Block 8, Danga Bay, Jalan Skudai, 80200 Johor Bahru MALAYSIA *Please add name of the organisation, name of the contact person, position, email and address of the organisation.*

Geographical scope:

☐ Community level
☒ Sub-national
☐ National
☐ Multi-country

If the technology concept is at a sub-national or multi-country level, please describe specific geographical areas (provinces, states, countries, regions, etc.).

Iskandar Malaysia (IM) (http://iskandarmalaysia.com.my/) is the fastest growing national special economic region located in southern State of Johor, Malaysia. The region encompasses an area of 2217 km^2; it involves five local government authorities with five distinctive "Flagship Zones" or developmental focal points.

Problem statement related to climate change (up to one page):

This section should answer the question "what is the problem?" Please summarise the problem related to climate change and/or the negative impacts of climate change in the country that the technology concept aims to address.

Recent disasters in Malaysia have revealed poor coordination and weak capacity with regard to the prediction of floods and landslides, and there is also concern over the occurrences of strong winds, air pollution (haze) and extreme temperatures. Development of forecasting capacity for these events is now important for major cities, particularly in view of climate change.

Flooding

Of these events, flooding accounts for the most frequent and significant damage and are responsible for a significant number of human lives lost, disease epidemics, property and crop damage, and other losses (CFE-DM, 2019). The average annual direct loss from seasonal monsoon floods amounts to RM915 million (at 2000 price level) (Department of Irrigation & Drainage Malaysia, 2003). Malaysia also had the highest percentage of the population exposed to floods among ASEAN member states between July 2012 and January 2019 (CFE-DM, 2019). It is estimated that the costs of damage for an annual flood, a 10-year flood and a 40-year flood are USD 0.98 million, USD 5.87 million and USD 14.34 million, respectively (Aldrich, Oum, & Sawada, 2014). In the State of Johor, floods occurred in December 2006/January 2007, killing 18 people and causing damage estimated at USD 489 million. Floods occurred again in Johor in 2008, causing 28 deaths and USD 21.19 million in damage (Chan, 2012). The coastal communities of Iskandar Malaysia (IM) economic region in the State of Johor are also at risk of flooding due to sea-level rise.

Landslides and Temperature Increase

Aside from flooding, landslide disasters are also common due to Malaysia's wet equatorial climate regime with frequent heavy rainstorms of high rainfall intensities (Chan, 2012). Several areas in IM also reported higher surface temperature increase recording a peak temperature increase of 6.70

degrees Celsius within a shorter period between May 2005 and May 2018 (Think City, 2021). The areas with significant temperature rise were focused around industrial and developing areas.

Social Vulnerability to Floods and Associated Health Risks

Climate-related disasters are also posing huge challenges to the public disaster management systems and affecting several vulnerable groups, including children, the poor and displaced persons. Ensuring clean water supply and optimal sewerage services are particularly difficult during disasters such as flooding, giving rise to food and water-borne diseases.

Coastal Vulnerability and Haze

Climate change is also potentially accelerating the rate of natural coastal erosion due to rising sea levels. The haze episode has been an almost yearly occurrence in Malaysia but becomes severe during the prolonged dry period associated with the El Niño phenomenon. The longest and most severe case was the episode of September to November 1997 that occurred in conjunction with the extreme 1997/98 El Niño. The estimated value of haze damage to Malaysia for the period of three months from August to October 1997 was RM802 million (USD 321 million based on the exchange rate at the time) (Tangang, 2010).

Past and on-going efforts to address the problem (up to half a page):

This section should answer the question "what has been done or is currently being done to address the problem?" Please describe past and on-going processes, projects or initiatives implemented in the country or region to tackle the climate problem as described above.

Preference for Structural Approaches towards Disaster Management

During the Tenth Malaysia Plan, Malaysia spent RM51 billion to enhance resilience against climate change. However, the Nation's approach towards disaster management is largely reactive and favours structural measures in controlling disasters such as floods, despite the high cost (Chan, 2012). These structural mitigation measures include canalization of rivers, raising river embankments and the building of multi-purpose dams (Asian Disaster Reduction Center (ADRC), 2005). The financial allocations for such projects have consequently increased significantly in every one of Malaysia's subsequent five yearly development plans (Chan, 2012). From 2004 to 2014, Malaysia has invested over RM9.3 billion on flood mitigation (Malaysia INDC, 2015).

Role of Key Agencies in Disaster Management

A Central Forecasting Office has also been established in the Malaysian Meteorological Service (MMS) Headquarters to monitor closely the weather and sea conditions and ensure that adequate warning can be given to potential victims. MMS also monitors the occurrences of local and cross-boundary haze, as well as conduct cloud seeding to induce rain. Another key agency in addressing flood risk in Malaysia is the Department of Irrigation and Drainage (DID) which is responsible for hydrology and irrigation matters e.g., provide Flood Forecasting and Warning services (FFW) to river basins experiencing frequent floods. To date, 72 rainfall and 89 water level telemetric station have been installed in river basins for FFW purposes. Additionally, 137 manual flood level monitoring stations have been set up at strategic locations to monitor the river level on a real-time basis. 60 flood warning sirens and boards have also been installed in flood prone areas. To address coastal erosion, both hard and soft engineering approaches had been implemented; Integrated Shoreline Management Plans (ISMPs) developed and implemented for specific areas.

Detailed sea level rise studies had also been conducted at some of the vulnerable coastal areas to project future vulnerabilities in a 20-year sequence from 2020 to 2100.

Iskandar Malaysia Low Carbon Society Blueprint and Urban Observatory

As part of efforts to address climate change, IM have adopted the "Iskandar Malaysia Low Carbon Society Blueprint", which has driven many stakeholders in the region to adopt various programmes and initiatives that contribute towards reducing greenhouse gas emissions. IM is also developed to be a Smart City which encompasses the six (6) dimensions of Smart Economy, Smart Governance, Smart Environment, Smart Mobility, Smart People and Smart Living. The Iskandar Malaysia Urban Observatory (IMUO) is also currently being developed to establish baseline data to support development planning and ensure balanced development. IMUO is a robust, comprehensive, and up-to-date data and knowledge management system at the regional level to improve decision making and galvanize targeted actions or response, as well as contributes to longer-term planning and setting up of appropriate systems and processes. A Crisis Preparedness System for Community is currently being developed to benefit communities in flood-prone areas.

Specific technology[1] barriers (up to one page):

This section should answer the questions "what are the technology barriers that hinder national efforts described above" and "how will the technology concept complement these efforts?" Building upon the problem statement and taking into consideration the existing efforts described above, please describe the specific technology barriers encountered by the applicant to identify, assess or deploy climate technology(ies) in an effort to address the problem statement. The described barriers should be within the scope of the technology concept (described in the section below).

Proactive Approach towards Disaster Management

While Malaysia is relatively sheltered from the impacts of catastrophic disasters, the looming impacts of climate change is necessitating a shift towards having a proactive perspective in disaster governance. Although actions taken during and post-disaster are important, pre-disaster measures such as flood forecasting through high-resolution modelling are useful to predict the scale and intensity of a probable hazard and the impact it brings.

Iskandar Malaysia Disaster Risk Reduction and Climate Resilience Strategy

Iskandar Malaysia aims to integrate considerations for disaster and climate resilient development through the development of comprehensive adaptation and mitigation plans and strategies. Additionally, IM plans to increase efforts in mainstreaming evidence-based resilience aspirations into wider development via the development of a new Iskandar Malaysia Disaster Risk Reduction Strategy to set a strategic vision and priorities. This new strategy will be based on disaster and climate risk assessments, to enhance synergy within disaster risk reduction and climate change

[1] ***"any equipment, techniques, practical knowledge and skills** needed for reducing greenhouse gas emissions and adapting to climate change" (Special Report on Technology Transfer, IPCC, 2000)*

adaptation. The assessment of natural disaster risk is also vital for the identification of potential threat and disturbance that can risk area business continuity.

Fragmented Institutional Framework and Challenges in Data Acquisition

The lack of contextualized data from detailed local risk assessments is one of the main barriers in implementing programmes and initiatives related to disaster risk reduction in Iskandar Malaysia. Data collection is important to ensure the reliability of forecasting environmental hazards. However, data acquisition for various parameters (terrain, infrastructure, pollution sources, geology, weather history, past geophysical events etc.) is very challenging. For some data types, problems of incompleteness and data scarcity arise. The institutional framework to address climate change is also fragmented and requires the development of new competencies and skills, especially at the local level.

Forecasting Quality and Improvements

As most equations and models developed originated from higher and middle latitudes environment, various modifications, downscaling to regional model and more appropriate parameterizations are important to overcome the issues in using them in a tropical region Furthermore, the meteorology and atmospheric condition in the tropical region is much more complicated with heat transport, convection, and chemistry. While improvements in forecast quality have enabled the development of advanced and customised applications to suit the needs of various end-users, the improvements require further research that improved the observations of meteorology, atmosphere, and land surface condition. The incorporation of these observations into various scientific and numerical models may produce localised forecast information that can be translated into a product which fulfils the requirement of end-users (SEADPRI-UKM, 2018).

Big Data Analytics for Holistic Management of Iskandar Malaysia Coastal Zone

Coastal zone management in IM requires capacity building for scenario planning, forecasting climate risks as well as expertise in big data analytics, among others. Methodologies for identifying vulnerability of coastal communities and areas exposed to coastal hazards should also be established. Baseline data is critical as an initial step.

Sectors:

Please indicate the main sector(s) related to the technology concept:

☐ Agriculture	☒ Coastal zone management	☒ Disaster risk reduction	☐ Food security
☐ Forests	☐ Human health	☐ Marine and fishery	☒ Rural development (resilience)
☒ Urban development (resilience)	☐ Water management		

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches:

☒ Communication and awareness	☐ Economics and financial decision-making	☒ Governance and planning	☐ Community based
☒ Disaster risk reduction	☐ Ecosystems and biodiversity	☐ Gender	

Technology concept requested (up to one page):

Founded on the problem statement, past/on-going efforts and technology barriers, please describe the technology concept. The technology concept should clearly contribute to adaptation to climate change as described in the problem statement and contribute to overcome the specific technology barriers.

Within a clearly defined scope, the description of the technology concept should be structured into the following:

- *Overall objective*
- *Anticipated groups of activities to be performed by the micro-grants project*
- *Anticipated products to be delivered by the micro-grants project*

Please note that UNEP-CTCN facilitates technical assistance and is not a project financing mechanism.

The project adapts carefully selected meteorological and hazard models for tropical conditions in Iskandar Malaysia. These will be integrated onto a common platform i.e. the Iskandar Malaysia Multi-Hazard Platform (MHP), designed for managing and communicating risks and enhancing disaster resilience. The MHP will be used by the five local authorities in IM to strengthen the management of flash floods, landslides, sinkholes, strong winds, urban heat and air pollution in the region and the climate changes. The MHP will be developed using technology that is similar to the Kuala Lumpur Multi-hazard Platform (http://ancst.org/nuof/), which is a demonstration pilot led by Universiti Kebangsaan Malaysia's Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM).

The physical console contains high-resolution susceptibility maps and versatile real-time 3-day forecasts for rainfall, temperature, wind speed and air pollution and combines this data with information on areas susceptible to landslides, flash-floods, sinkholes, strong winds, air pollution and urban heat occurrence to create a hazard map that can be used by the authorities to prepare their emergency responses. Underlying the content there are: a new regional weather forecast system, a new urban air quality model; new pluvial and fluvial flood maps new geological and atmospheric datasets; and new coastal management system. This city level forecasting system will provide the impetus for social innovation by facilitating community-level disaster preparedness and empowering special groups to participate in disaster risk reduction.

In addition to this, data and trends are extrapolated to assist land use planning and disaster management costing by improving the current measurement and reporting of existing vulnerabilities. Most importantly, the MHP realizes increased emergency planning capacities

through heightened awareness of critical events and disasters, a crucial step towards protecting vulnerable communities and their livelihoods. The system has already seen its pioneer deployment with the City Hall of Kuala Lumpur, Malaysia, and has led to the city becoming more capable to resist, accommodate, transform and recover from the impacts of natural hazards in a timely and efficient manner.

The MHP could support decision-making towards adaptive and holistic coastal zone management in IM. Anticipated activities include specialist workshops and outreach events to enhance community awareness regarding their exposure to coastal hazards. The project is expected to deliver susceptibility maps for coastal hazards and floods that is the foundation of the MHP. In addition, an initial emission inventory for IM could also be developed.

Expected timeframe:

Please indicate the expected duration period for the micro-grants project. Please note that the micro-grants project is limited to a maximum duration of 18 months.

18 months

Anticipated gender and other co-benefits from the technology concept:

Please describe the activities with gender linkages as well as the anticipated gender and other co-benefits (e.g. biodiversity, economic, social, cultural, etc.) that are likely to be generated as a result of the micro-grants project. Discrimination against women does not only accentuate women's vulnerabilities during disasters – it also wastes women's potential as sources of resilience. Women are still marginalized in decision making on disaster issues, even as they often hold vital social knowledge and vast untapped capacity for reducing community risk.

Developing gender-sensitive response to disasters

Active participation of all sections of society is required for effective disaster management, particularly women. Previously, flooding response in Malaysia have not always been gender sensitive. Disasters affect women and men differently, and due to deep-seated gender inequalities, women are at greater risk of suffering from disasters (Enarson & Dhar Chakrabarti, 2009).

The Iskandar Malaysia Disaster Risk Reduction Strategy and Action Plan aims to ensure that gender-inclusive elements such as gender-inclusive risk assessment and vulnerability and/or capacity analysis and targets for women's involvement in developing risk and hazard maps, community-based risk management procedures and activities for preparedness and response, development of action plans for post-disaster recovery, and early monitoring and/or warning activities are taken into consideration.

Preventing further loss of mangroves in Iskandar Malaysia

Overall, mangrove areas in IM have decreased at an alarming rate (33%) from 1989 to 2014 (Kanniah, et al., 2015). THe major causes of mangrove destruction in this region are the

development of the coastal region (construction of a port, industrial area, waterfront project *etc.*), intensified erosion, local hydrodynamic conditions, and development of aquaculture activities.

The MHP could support decision-making towards adaptive and holistic coastal zone management in IM. This includes systematic monitoring and control measures to protect the existing mangrove cover from further loss.

For more information you can find guidelines on the CTCN's website here:
https://www.ctc-n.org/technologies/ctcn-gender-mainstreaming-tool-response-plan-development

Further reading on gender can be found on the CTCN website here:
https://www.ctc-n.org/technology-sectors/gender

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the micro-grants project and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organisations, civil society, etc.).

Stakeholders	**Role to support the implementation of the micro-grants project**
National Designated Entity	Government Ministry (Climate Change)
Designated Authority	Government Ministry
Applicant Iskandar Regional Development Authority http://www.irda.com.my/	Government Agency
National Disaster Management Agency (NADMA) http://www.nadma.gov.my/en/	Government Agency
University Kebangsaan Malaysia – Southeast Asia Disaster Prevention Research Initiative (SEADPRI) http://www.ukm.my/seadpri/	Research Institute, University
University Malaya – Department of Geology (UM) https://geology.um.edu.my/	University
Malaysia Meteorology Department (METMALAYSIA) https://www.met.gov.my/	Government Agency
Department of Mineral and Geoscience Malaysia (JMG) https://www.jmg.gov.my/en/	Government Agency

Department of Environment Malaysia (DoE) https://www.doe.gov.my/portalv1/en/	Government Agency
UKM Pakarunding Sdn Bhd (UKMP) https://www.ukmpakarunding.my/	Private Sector/University
Geological Society of Malaysia (GSM) https://gsm.org.my	Professional society
Geomapping Technology Sdn Bhd (GMT) https://geomapping.com.my/web2018/	Private Sector
CoRE Expert Systems Sdn. Bhd. (CoRE)	Private Sector
Param Agricultural Soil Surveys (M) Sdn. Bhd (PASS)	Private Sector
Department of Irrigation and Drainage (DID) https://www.water.gov.my/	Government Agency
National Water Research Institute of Malaysia (NAHRIM) http://www.nahrim.gov.my/	Government Agency

Alignment with national priorities (up to 2000 characters including spaces):

Please describe how the technology concept is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, Technology Needs Assessments, Technology Action Plans, National Adaptation Plans, sectorial strategies and plans, etc.

Reference document (please include date of document)	**Extract** (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC) (2017)	*Direct alignment and contribution to NDC implementation is required. Please include a direct reference to the INDC/NDC document (chapter, page number, etc.).* ***Malaysia has taken early action. (Page 3)*** Pursuing green growth for sustainability and resilience including strengthening resilience against climate change and natural disasters. ***Major barriers for implementation include high costs and capacity constraints. (Page 4)*** *Institutional Framework and Capacity* Contribution towards development of new competencies and skills ***Adaptation***

	Mainstream adaptation to climate change into development: – *Addressing Flood Risks (Page 4)* – *Protecting Coastlines (Page 5)* – *Ensuring clean water supply and optimal sewerage services during disasters (Page 6)*
National Security Council (NSC) Directive No. 20, the Policy and Mechanism on National Disaster Relief and Management (1997)	National policy for improved coordination of all sectors involved in disaster management. This policy is used by NADMA to draft the National Disaster Risk Reduction Action Plan (ongoing)
National Forestry Policy (1978, Revised 1992)	***Protection Forests*** Ensure the stability of the country's climatic and physical conditions, the control of water resources, soil fertility, environmental quality, biodiversity conservation and reduce flood damage and erosion to rivers and agricultural land.
National Policy on Biological Diversity (1998)	Losing diversity means losing the ecosystem resilience, leading to adverse effects on human lives. Loss of genetic resources, floods, deterioration in quantity and quality of water supply, decline in food supply, loss in productive soils, and loss in potentially useful biological resources are some of the detrimental effects of the reduction in or loss of biological diversity.
National Policy on the Environment (2002)	Aligns with the policy's objectives to achieve; (1) A clean environment, safe, healthy and productive environment for present and future generations, (2) Conservation of country's unique and diverse cultural and natural heritage with effective participation by all sectors of society, and (3) Sustainable lifestyles and patterns of consumption and production.
National Green Technology Policy (2009)	This project could result in prioritisation of investments for Disaster Risk Reduction programmes and activities, including enhancing the potential for private sector (insurance & risk management industries) to be involved in the development and promotion of green technologies for reducing vulnerabilities from disaster.
National Policy on Climate Change (2009)	Contribution towards the development of vulnerability assessment methods for disaster risk reduction due to climatic hazards such as sea-level rise, flooding and flash floods as well as hazards associated other extreme climatic conditions that impact societal well-being.
The Eleventh Malaysia Plan 2016 - 2020	Contribution towards disaster management resilience against climate change and natural disaster strategies.

Third National Physical Plan (2015, launched in 2017)	Contributes towards resiliency and liveability as the basis for physical planning and spatial development (Thrust 2: Spatial Sustainability and Climate Resilience)
Low Carbon Cities Framework (2011)	Aligns with national target to reduce carbon emission from all aspects of city living which include protecting the natural environment, maintaining green areas in the city and increasing carbon sink.
National Water Resources Policy (2012)	Aligns with its for all to have access to safe, adequate and affordable water supply, hygiene and sanitation.

Development of the technology concept (up to 2000 characters including spaces):

Please describe how the technology concept was developed at the national level and the process used by the NDE and the Designated Authority to approve the technology concept before submitting it (who initiated the process, who were the stakeholders involved and what were their roles?) and describe any consultations or other meetings that took place to develop and select the technology concept, etc.

The Iskandar Malaysia Multi-Hazard Platform (MHP) will be developed using technology that is similar to the Kuala Lumpur MHP (http://ancst.org/nuof/), which is a demonstration pilot led by Universiti Kebangsaan Malaysia's Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM). The Kuala Lumpur MHP is an output of the Newton Ungku Omar Fund (NUOF) project administered by Innovate UK and Malaysian Industry-Government Group for High Technology (MIGHT).

NUOF Project Partners:

Malaysia Partners

- SEADPRI, Universiti Kebangsaan Malaysia, UKM
- Department of Geology, University of Malaya, UM
- Malaysian Meteorology Department, MMD
- Department of Mineral and Geoscience of Malaysia, JMG
- Department of Environment Malaysia, DoE
- UKM Pakarunding Sdn. Bhd., UKMP
- Geomapping Technology Sdn. Bhd., GMT
- Param Agricultural Soil Surveys (M) Sdn. Bhd, PASS
- Geological Society of Malaysia, GSM
- CoRE Expert Systems Sdn. Bhd., CES

UK partners

- University of Cambridge, UoC
- British Geological Survey, BGS
- University College London, UCL
- Cambridge Environmental Research Consultants, CERC
- Cuesta Consulting

- JBA RML

Steering Committee:

- Kuala Lumpur City Hall (DBKL)
- Malaysian Industry-Government Group for High Technology (MIGHT)
- Ministry of Federal Territories (KWP)
- National Disaster Management Agency (NADMA)
- Department of Town and Country Planning (PLANMalaysia)
- Department of Irrigation and Drainage (JPS)
- National Hydraulic Research Institute of Malaysia (NAHRIM)
- Malaysia Civil Defence Force (APM)
- Public Works Department (JKR)

List of meetings held in 2017 and 2018 is available here

Background documents and other information relevant for the technology concept:

Please list all relevant documents that will help UNEP-CTCN analyse the context of the technology concept and national priorities. Please note that all documents listed/provided should be mentioned in the technology concept in the relevant section(s), and that their linkages with the technology concept should be clearly indicated. For each document, please provide web-links (if available) or attach to the form. Please add any other relevant information as required.

1. Intended Nationally Determined Contribution Of The Government Of Malaysia – Malaysia INDC
2. Disaster Resilient Cities: Forecasting Local Level Climate Extremes and Physical Hazards for Kuala Lumpur - http://ancst.org/nuof/

Consultation with the Designated Authority of the country:

Please indicate whether the technology concept has been developed in consultation with the Designated Authority of the country.

☒ The Designated Authority of the country has been engaged in the design of the technology concept and will be involved in the further process leading to the implementation of the micro-grants project.

Monitoring and evaluation:

By signing this form, I affirm that processes are in place in the country to monitor and evaluate the micro-grants project funded by the Adaptation Fund through UNEP-CTCN. I understand that these processes will be explicitly identified in the Project Concept Note (response plan of the micro-grants project) and that they will be used in the country to monitor the implementation of the micro-grants project.

I understand that, after the completion of the micro-grants project, I shall support UNEP-CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

Signature:

NDE name: Dr. Sugumari Shanmugam

Date: 30th April 2021

Signature:

DR. SUGUMARI A/P SHANMUGAM
Undersecretary
(Climate Change Division)
Ministry of Environment and Water

THE COMPLETED FORM SHALL BE SUBMITTED THROUGH A WEB-LINK AS BELOW:

https://www.ctc-n.org/adaptation-fund-climate-innovation-accelerator-afcia-unep-ctcn

UNEP-CTCN is available to answer all questions and provide guidance on the application process.