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:	Maldives
Title of the technology concept:	*Establishment of a skimming well gallery system for agricultural use in HDh.Nolhivaranfaru of Maldives.* *The objective of the proposed concept is to demonstrate a sustainable, efficient, environmentally friendly way of withdrawing groundwater for agricultural uses in outer islands.* *Please reflect the objective of the technology concept in the title (maximum 200 characters).*
NDE:	*Please add name of the organisation, name of the focal point, position, email and address.* *National Designated Entity* *Climate Change Department, Ministry of Environment and Energy* *Address* *Handuvaree Hingun, Maafannu, Male, 20392, Maldives* *Focal point* *Mr. Amjad Abdulla, Director General* *E-mail* *amjad.abdulla@environment.gov.mv, climate@environment.gov.mv*
Applicant:	*Please add name of the organisation, name of the contact person, position, email*

and address of the organisation.

Ministry of Environment
Handuvaree Hingun, Maafannu, Male, 20392, Maldives

Contact Person
Ahmed Waheed, Director
ahmed.waheed@ *environment*.gov.mv

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.).

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

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

Maldives is a country that is extremely vulnerable to the impacts of climate change and one that is facing unique environmental and economic challenges. The geographical setting of the islands also makes them highly susceptible to sea level rise and natural disasters. This coupled with economic factors such as limited natural resources, low diversified economies and high import dependency/narrow range of exports further exacerbates the existing vulnerabilities.

Water scarcity is one of the biggest challenges arising from climate change and other localized changes such as rapid urbanization in the Maldives. The freshwater lens has historically been the most important water source for the islands of Maldives. The thickness of the freshwater lens, which typically floats atop the denser sea water, is controlled by a number of factors including island width, rainfall rates and associated infiltration and recharge rates. This fresh water lens is highly vulnerable to the impacts of climate change and other factors such as rapid urbanization. These fresh water lenses in the islands are highly affected due to over extraction for different purposes such as cleaning, bathing and agriculture. Additionally, environmental factors such as salt-water intrusion is further deteriorating these freshwater sources. Existing poor agricultural practices further adds to this problem. One such practice is the use of dug wells as fertilizer mixing containers to pump fertilizers for crops. This causes leaching of fertilizers into the fresh water lens, resulting in further

depletion of freshwater aquifer due to uncontrolled extraction in the absence of appropriate means to regulate. This is one of the major threats to groundwater aquifers on the islands.

Recent modelling results indicate that many of the islands are expected to have a measurable freshwater lens although significant decreases (at least 50%) in thickness can occur during the dry season months. Excessive groundwater extraction in relation to recharge has led to salt water intrusion and up-coning of saline water together with the preferential flow paths and reduction of the efficiency of natural recharge processes. Thus, the concern is that during droughts, over-pumping can alter the size of the aquifer and limit recovery to its former size. Observation and anecdotal evidence point to ponding due to soil compaction and reduced infiltration capacity in areas of roads and other built up areas, leading to evaporation losses.

Hence it is vital to develop and demonstrate an efficient, environmentally friendly method of groundwater extraction in order to ensure sustainable use of the limited resource with minimum impact on the island aquifers.

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.

In order to attain the current condition of the groundwater resources currently an island specific baseline study of the resource has been carried out in 13 islands of the Maldives. Under this activity, the following has been achieved:

- Mapping of the fresh water resource of the island
- Assessing the physiochemical and biological qualities of the aquifer
- Establishing sustainable groundwater yield
- Details of major groundwater uses in the islands including agriculture

Based on the findings of the baseline study and in consultation with the Ministry of Fisheries, Marine Resources and Agriculture, HDh.Nolhivaranfaru has been identified as an island where agriculture is moderately practiced and hence, has the potential to explore new technologies.

Follows some of the findings of the report for HDh. Nolhivaranfaru are as follows:

According to the study, the island of Nolhivaranfaru has a freshwater lens (FWL) volume of 335,176 m^3 with a maximum FWL thickness of 4.52 m. Furthermore, it was found that the aquifer has a sustainable yield of 1196 m^3 per day. Generally, the hydrological condition of the freshwater lens can be regarded as contaminated with an average faecal coliform record of 746 MPN/100mL. More a snapshot of the physiochemical parameters are stated below.

Physiochemical perimeters	EC (µS/cm)	TDS (mg/L)	pH	Turbidity (NTU)	DO (mg/L)	Temp (°C)
Average	2240.20	1332.00	7.61	0.68	4.43	29.19

Physiochemical perimeters	Salinity (PSU)	Nitrates (mg/L-NO3)	Ammonia (mg/L)	Phosphates (mg/L)	Total Coliform (MPN/100ml)
Average	1.27	39.23	6.72	0.24	1141.00

Specific technology[1] barriers (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.

General overview of the proposed project location

The island of Nolhivaranfaru is located at 6°41'50"N and 73°07'20"E in the Haa Dhaalu Administrative Atoll. It has a population of 1081 people, via the 2014 Census. The island is 3.55km long and 1.1km wide, giving it an area of 171 Hectares. The construction of the sewerage network in the island has been completed and will be operational soon. For now, septic tanks are still widely used. The island has a jetty on its western side. There is a harbor on the northern side of the island as of August 2018. The island has 2 mangroves. One measuring 280 x 20m and a smaller mangrove area with 65 x 22m. The island does not have a water supply network.

[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)*

Table 1: Basic statistical information on Nolhivaranfaru island in Hdh Atoll.

Name of the island	HDh.Nolhivaranfaru
Longitude and Latitude	6°41'50"N, 73°07'20"E
Area	171 ha
Population (Census, 2014)	1081
Distance from Atoll Capital (HDh.Kulhudhuffushi)**)**	10.2km
Distance from Male'	282.3 km
Harbour	Not Present
Island sewerage network	No
Water supply network	No
Other infrastructure	-

Geology and vegetation

The island is about 3.55km long and 1.1km wide. The vegetation covers about 70% of the islands surface. The vegetation takes up most of the southern half of the islands and runs along the outside of the island as well. Around 4% of the land is being used for farming. The farms are located around the middle of the island, to the south of the habituated area of the island and to the north of most of the vegetation. The island has 2 mangroves where the bigger mangrove measures 280 x 20m and smaller mangrove measures 65 x 22m. Both the mangroves are located at the southern end of the island within the vegetation

Agricultural practices

In the island of HDh. Nolhivaranfaru, in terms of agriculture, there are approximately 103 plots registered at the island council to be used for farming purposes, each with an area of 5000 square feet. A total of 515,000 square feet is therefore designated on this island for farming purposes. Currently, 93 plots of land are being used for farming purposes. 19 plots of farming land were surveyed, which encompasses 20.4% of the total number of plots leased for farming. 4 out of 19 farming plots (21%) use water hose connected to the well through a pump for watering the plot, while the remaining 15 farming plots (79%) manually water their plots using watering cans. All of the farming plots use groundwater for irrigation.

On average, 630 litres of groundwater are used daily by each farming plot for irrigation. While the size of the plots given to all farmers are the same, farming is carried out at varying scales throughout Nolhivaranfaru. Small-scale farms which use the least amount of water use 16 litres daily and the farms which use the most amount of water use up to 2160 litres of groundwater daily. Therefore, for a total of 93 farming plots, it was estimated that 58,619 liters of groundwater are used daily by the farms of Nolhivaranfaru.

Since the current approach used in sourcing water for irrigation is unsustainable, there has been a number of interventions to promote sustainable ground water use in small scale farming. In most cases groundwater is extracted via jet (petrol) pumps for irrigation purposes. And such a practice is threatening the thin groundwater aquifer of the islands which replenishes after rainfall. However, climate variability and change is causing variations in the rainfall pattern.

Although there has been some works underway to establish such system, the system is not operationalized and neither practiced by farming communities

This makes it very important to explore sustainable and cost effective technologies which can facilitate sustainable groundwater management practices among small scale farmers of the island. It is also envisage that, the technologies could be replicated to other islands which are facing the similar issues. The proposed groundwater extraction via galleries remains of the options which could be adopted in the island as it avoids using jet or heavy duty pumps to extract groundwater. The proposed system then could be connected to networks which may have low water flows.

Sectors:

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

- [x] Agriculture
- [ ] Coastal zone management
- [ ] Disaster risk reduction
- [x] Food security
- [ ] Forests
- [x] Human health
- [ ] Marine and fishery
- [x] Rural development (resilience)
- [ ] Urban development (resilience)
- [x] Water management

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches:

- [x] Communication and awareness
- [ ] Economics and financial decision-making
- [x] Governance and planning
- [x] Community based
- [ ] Disaster risk reduction
- [x] Ecosystems and biodiversity
- [ ] Gender

Technology concept requested (up to one page):

The proposed demonstration project will help to promote sustainable ground water extraction and management for agricultural practices in HDh.Nolhivaranfaru Island by developing a sustainable groundwater extraction system and advocating the farming community on sustainable practices. Further it would help to replace the existing point extraction methods with the skimmed extraction through infiltration galleries. The objectives of the proposed infiltration gallery system for the protection of groundwater aquifer on HDh.Nolhivaranfaru Island include:

- Protection of the unpolluted groundwater aquifer zone
- Improve the current method of water extraction and poor agricultural practices such as fertilizer management among farming community of the island.
- Develop a groundwater monitoring system
- replicate the demonstration project on other potential islands across the country considering the good practices and other lessons learned from the project

To achieve these objectives an infiltration gallery system for horizontal skimming of groundwater will be built and water will be supplied into agricultural farm plots on a more conservative optimized mode. It has been proven, that infiltration galleries or skimming wells for freshwater pumping as shown in the annex 1 is the most appropriate method for freshwater pumping from shallow aquifers. If properly designed, constructed and operated, infiltration galleries can reduce the problems of saline intrusion that can occur due to pumping from wells or vertical boreholes.

Project Outputs and Activities

Avtivity1: Sustainable groundwater extraction system established

- Project planning and preparation of documents
  - Identify relevant stakeholders, stakeholder consultations, site selection, literature review, preparation of technical documents including concepts and other relevant documents.

- Preliminary study
  - Conduct community consultation particularly with farming community (e.g. farm land owners) including Island Development Committee (IDC), Women's Development Committee (WDC) and other key stakeholders of HDh.Nolhivaranfaru

Island.
    - Review existing water resource assesments and baseline studies on water resources (e.g. availability of groundwater resource, method of extraction, water quality etc)
    - Assess existing wastewater disposal practices (e.g. condition of sewer lines, number of outfalls, treatment facilities such as septic tanks etc)
    - Identify the project site and to ensure that potential sources of pollution are away from project site
    - Review landuse practices and land use plan of the island to faciliate the design and construction works

- Detailed Survey
    - Conduct a site specific survey (e.g. the area of the proposed land for building infiltration systems, potential sources of pollutions etc.)
    - conduct hydro-geological survey that are required for the site
    - Carry out detailed assessments on the exsting water consumption practices of the community.
    - Topographic surveying of the selected site.
    - conduct enviromental screening and Enviromental Impacts Assesment(EIA) for the proposed works.
- Detailed engineering design
    - prepare detailed engineering design including drawings, bill of quantities and bidding documents for construction of proposed infiltration gallery systems
- Construction of gallery systems
    - Site preparation
    - Select a suitable experienced national contractor to build the system (procurement of materials, logistical arrangements etc)
    - Commissioning of the system
- Develop operation, maintenance and management plan
    - Develop operation and maintenance manual
    - Develop a community management plan inconsulation with island Council and community.

Activity-2: Agricultural practices improved preventing contamination of groundwater

- Raise awareness among farming communities
    - Conduct workshops targeting farming community to raise awareness on good and sustainable agricultural practices (e.g. water management, handling of fertilizers and pesticides, best practices of fertilizer/pesticide applications on crop lands etc)
    - Prepare materials (e.g. leaf lets, handouts, flyers, posters, brochures, video spots etc)

Activity-3: Sesitisation and awareness of the established sustainable groundwater extraction system other potential islands across Maldives

- Conduct performance evaluation
    - Continued groundwater quality monitoring
    - Generate reports

- Stakeholder meetings, community mobilization and information dissemination to other atolls
  - Conduct stakeholder meetings to share the performance of the systems (e.g. presentations on the process and outcome)
  - Conduct meetings and information dissemination sessions targeting relavent stakeholders Conduct workshops to promote the infiltration gallery systems on potential islands across Maldives
  - dissiminate materials and good practices of the project via various means such as TV spots, brochures, leaflets and flyers etc

Activty 3:Groundwater monitoring mechanism established

- Provide training
  - Conduct training on water quality monitoring to potential staffs selected from different institutions and community
  - Involve community based organizations in the training and monitoring process

- Establish groundwater monitoring plan and monitoring boreholes
  - Develop monitoring boreholes on selected location
  - Develop monitoring plans

- Procurement of equipments
  - Purchase equipment for water quality monitoring and provide training to community and othe realvent people on water quality monitoring

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.

The project is anticipated to be completed within 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.

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

Adaptation co-benefits generated in the agriculture sector are key to driving adaptation at the national level and are a crucial step to breaking down sectoral silos and pursuing climate-resilient development. Agriculture accounts as the primary source of livelihood for over 7,000 farmers and their families. Agriculture is prominent in providing food and nutrition security especially for those who are residing in the islands (MoFA, 2012). Therefore, from a livelihood and employment perspective agriculture is vital to the economy in terms of its economic and social welfare value.

Women contribute largely to both the production and processing spheres of agriculture More than half (54 percent) of the labour force in agriculture (Maldives Country Programming Framework, 2012). Recent statistic indicates over 39 percent of the women are unemployed and when employed they earn a third less than their male counterparts. Yet, women headed households are on the rise and their responsibilities are increasing (HEIS, 2010). Therefore, there is a greater need to facilitate income generating activities for women especially in areas where their presence is already

The Maldives updated NDC has also emphasized on the importance of taking initiatives to promote food security and agriculture as part of the climate actions. As such, promotion, research and development focusing on climate smart technologies and practices to address challenges facing the agricultural sector due to climate variabilities, seasonal changes and extreme events was one of the key areas highlighted in the NDC. Similarly, strengthen policies, programs and campaigns to increase the efficiency of water use to reduce human pressure on the existing water resources was also considered as one of the key strategies of the NDC.

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	**Roles/responsibilities**
1. Ministry of Environment	○ Facilitate project steering works ○ Provision of policy guidance ○ Facilitate project implementation in consultation with stakeholders
2. Utility Regulatory Authority	○ Ensure project meets existing regulations related to water supply and management ○ Facilitate necessary approvals required to implement the project

2. Environmental Protection Agency	○ ensure project meets existing ground water protection and water resource management policies ○ provide guidance to obtain necessary environmental permits to implement the project ○ facilitate development of environmental monitoring plans
3. Min. of Fisheries, Marine Resources and Agriculture	○ Facilitate project execution in consultation with farmers and farming community of the island ○ facilitate capacity building works targeted to farmers and farming community ○ facilitate knowledge sharing from project outcomes with farming communities of other islands
4. Island Council	○ provide administrative support to implement the project in the island ○ facilitate operation and maintenance of the gallery and monitoring wells ○ ensure the project implementation and sites allocated for the project are in line with land use plans of the island ○ facilitate participation of stakeholders from the island community in the project works.
5. Atoll Council	○ provide administrative support to Island Council on obtaining necessary permits ○ Guide island council on all relevant administrative matters related to sustainable management of the project and related works.
6. Farming community	○ facilitate in the development of conservative water management system ○ adopt good practices and lessons learned from the project
7. Community Based Organizations (CBOs)	○ Promote and participate in the project activities and support dissemination and replication of the system in other communities

Stakeholders	**Role to support the implementation of the micro-grants project**
National Designated Entity	Ministry of Environment
Designated Authority	Ministry of Environment
Applicant	Ministry of Environment
Please add as many stakeholders and lines as required.	
Ministry of Environment	Project steering, policies and

	Regulations, implementation in close co-operation with other stakeholders and monitoring, and management
Utility Regulatory Authority	Enforcer of water related regulation
Environmental Protection Agency	Enforcer of environment related regulation
Min. Of Fisheries, Marine Resources and Agriculture	Support for the development and management of the demo
Island Council	Administrative support and operation and maintenance of the gallery and monitoring wells
Atoll Council	Administrative support
Farmers	Support in the development of conservative water management system
NGOs	Promote the system on other islands in the atoll in the context of environmental resource protection

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.

In accordance with the National Water and Sewerage Act (8/2020), groundwater is regarded as an important resource with its contamination prohibited. Furthermore, groundwater use has been restricted to personal and agricultural use within scale limitations in order to ensure sustainable management of the resource. There are existing polices and regulations which guides and ensures sustainable management of groundwater resources and promotion of efficient and cost-effective water withdrawal technologies. However, enforcement of such policies and regulations and constrained due to limited technical capacity and resources.

In accordance with the National Water and Sewerage Strategic Plan 2020-2025 (developed under the requirement of the Water and Sewerage Act), policy five: Protect and conserve natural water resources, there is a target to implement water resource conservation and management plans in all islands by 2023. Under this target, the national groundwater management plan “Island climate resilient groundwater management plan” has already been developed. The strategy 10.4 of the national plan is designated for establishing infiltration gallery. This proposal is part of the efforts made to implement island level groundwater management plans.

Similarly, there are policy tools from the agriculture sector which emphasised on the importance sustainable groundwater management and good agricultural practices. This includes Agricultural Pesticide Control Act (21/2019). The Pesticides Act encompasses a wide range of elements including setting standards for the import, use, production, export and proper disposal of pesticides. The act also includes best practices for the usage of pesticides correlating with

health, wellness, environmental and ecological conservation.

In addition to its linkages to groundwater management the project aligns with the government's effort to promote climate smart agricultural policies. The strategic Action Plan (2019-2023) of the government of Maldives outlines the policies in mainstreaming climate smart and sustainable agricultural practices. Moreover, supporting smallholder farmers to realize opportunities for linking agriculture to tourism through scaling-up of climate-smart agriculture practices and technologies in one key area in the National Strategic Framework to Mobilize International Climate Finance to Address Climate Change in the Maldives 2020- 2024.

The Maldives updated NDC has also highlighted the importance for building resilience on food systems including food security and also emphasises sustainable management and use of water resources to address the climate change impacts facing the country.

In the National Adaptation Plan for Action (NAPA 2006) pointed out key priority recommendations relevance to water resource management in the country, and this includes protection and preservation of natural water resource catchments (e.g. groundwater aquifers, lakes and ponds etc). It also emphasises on exploring appropriate technologies for wastewater disposals on islands to avoid groundwater contamination and groundwater management.

Reference document (please include date of document)	**Extract** (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	Pages 13-15, 19-20
Technology Needs Assessment	Initial works are ongoing to develop TNC.
National Adaptation Plans	Fund mobilization ongoing
National Water and Sewerage Act (8/2020)	Chapter 4 and 5
National Water and Sewerage Strategic Plan 2020-2025	Policy 5: Protect and conserve natural water resources
Agricultural Pesticide Control Act (21/2019)	Chapter 4
strategic Action Plan (2019-2023) of the government of Maldives	Chapter: Blue Economy 1.2 Agriculture, Policy 3: Mainstream climate smart and 4.7 Resilient Communities (Policy 2) 4.5 Water and Sanitation
National Strategic Framework to Mobilize International Climate Finance to Address Climate Change in the Maldives 2020- 2024	Pages 14-15, Page 56
National Adaptation Plan for Action (NAPA 2006)	

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 concept was developed based on the island specific assessments conducted on the condition of the groundwater resources as well as the information available on the agricultural practices in the islands of the Maldives. MoFA has been consulted to select the project location and to obtain technical reviews on the concept.

Stakeholder	*Roles and Responsibilities*
Water and Sanitation Department	○ *Provide information on previous assessments* ○ *Assisting formulating*
Min. Of Fisheries, Marine Resources and Agriculture	○ *Select project location* ○ *Provide Technical Review on the concept*

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.

Document Name	*Web link/Details*
Concept design of infiltration gallery	Annex 1
groundwater baseline assessment report of 13 islands (including project island)	https://www.environment.gov.mv/v2/en/download/10708
National Water and Sewerage Act (8/2020)	Attachment (DHIVEHI)
National Water and Sewerage Strategic Plan 2020-2025	https://www.environment.gov.mv/v2/en/download/10597
Maldives Pesticides Act (21/2019)	Attachment (DHIVEHI)
Strategic Action Plan of the government of Maldives (2019-2023)	https://presidency.gov.mv/SAP/
Maldives Climate Change Policy Framework (2015)	https://www.environment.gov.mv/v2/en/download/4594
Maldives Updated Nationally Determined Contribution (2020)	Attachment
National Strategic Framework to Mobilize International Climate Finance to Address Climate Change in the Maldives 2020 – 2024	https://www.environment.gov.mv/v2/en/download/9991

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:	Amjad Abdullah
Date:	28/01/2021
Signature:	

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.