CTCN Technical Assistance

Request Submission Form

Guidelines:

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: http://unfccc.int/ttclear/support/national-designated-entity.html
- 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 requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN
- NDEs have the opportunity to submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

Requesting country or countries:	South Sudan
Request title:	Please reflect the objective of the technical assistance in the title (maximum 200 characters). TECHNICAL GUIDANCE AND SUPPORT FOR CONDUCTING THE TECHNOLOGY NEEDS ASSESSMENT, INCLUDING ENGAGEMENT OF INTERNATIONAL CONSULTANT AND SOURCING OF FUNDS/ GRANTS FOR SOUTH SUDAN
NDE	Please add name of organisation, name of individual, position, email and address. MINISTRY OF ENVIRONMENT AND FORESTRY DAVID BATALI OLIVER DIIRECTOR GENERAL, DIRECTORATE OF PLANNING AND SUSTAINABLE DEVELOPMENT. EMAIL ADDRESS: db_oliver@ymail.com
Request Applicant:	Please add name of organisation, contact person, position, email and address of the organisation requesting assistance from the CTCN. ORGANISATION: MINISTRY OF ENVIRONMENT AND FORESTRY CONTACT PERSON: PAYAI MANYOK JOHN EMAIL ADDRESS: johna_manyok@yahoo.com ADDRESS: NFP, UNFCCC

Climate objective:

- ☐ Adaptation to climate change
- ☐ Mitigation of climate change
- ☒ Combination of adaptation and mitigation of climate change

Geographical scope:

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

☐ Multi-country

If the request 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 summarise the problem related to climate change and/or the negative impacts of climate change in the country that the request aims to address.

In 2014, the Inter-governmental Panel on Climate Change reported that anthropogenic greenhouse gas emissions were the highest in history and that the impacts on human and natural systems are widespread the world over (IPCC, 2014b). The Famine Early Warning Systems Network also found an increase in seasonal mean temperatures in many areas of Ethiopia, Kenya, South Sudan and Uganda over the last 50 years. The IPCC scenarios predict that the mean annual temperature rise over Africa is likely to exceed 2° C by the end of this century (IPCC, 2014a). The IPCC warnned that continued greenhouse gas emissions would increase the likelihood of severe, pervasive and irreversible impacts on people and ecosystems. However, according to IPCC, reducing emissions substantially in a sustained way (mitigation) and adapting to climatic changes are the only ways to limit the risks.

Although South Sudan is highly vulnerable to the impacts of rising temperatures and increased rainfall variability as a result of climate change, the livelihoods of farmers and pastoralists depend heavily on seasonal rains. According to the 2017 Climate Change Variability Index, South Sudan ranks among the five countries in the world most vulnerable to the impacts of climate change. Climate change is therefore a significant driver of environmental change in South Soudan.

Collection of data on greenhouse gas emissions is a very big challenge and this is attributed mainly to the state of insecurity in the country as well as lack of financial resources and limited technical and institutional capacity in South Sudan. Currently, there is low level of industrialization in the country. However, most of the emissions are likely to be emitted from land use changes, forestry, agricultural and waste management sectors. The widespread use of diesel generators, especially in the capital city for energy and the transportation sector also contribute to the overall greenhouse gas emissions in the country.

The effects of climate change are already being felt in South Sudan and are manifested in several forms. For instance, the duration and timing of rain have become erratic where rainy seasons delay and shorten, thereby leading to extreme weather events as seen in changes in precipitation and recurrent droughts and flooding, often with disastrous consequences for the population and the environment. Furthermore, some areas have more intense rain events, driven by climate change, thus contributing to more surface run-offs and floods, which actually threaten food security and human settlements, especially in lowland areas. These climate-driven impacts, which include among others, rising temperatures, droughts, changing rainfall patterns and increased climate variability, will increase in magnitude if action is not taken to reduce the global greenhouse gas emissions.

Agriculture dominates the economy in South Sudan, with over 75% of the population reliant upon subsistence agriculture and livestock production for their livelihoods. Despite the huge agricultural potential, the country suffers from low agricultural productivity, food insecurity and poverty, as over one-third of the population is classified as severely food insecure. These livelihood systems are dependent upon timely and ample rainfall, as well as access to water in the dry season. Farmers are threatened by food insecurity because of erratic rainfall and crop failure. Decreased rainfall due to climate change also results in limited pasture, which when combined with over-grazing results in the degradation of rangelands. Agriculture is currently

low input, low output and low productivity. The predicted effects of climate change will have negative effects on productivity, reducing it further. Currently, development of the agricultural sector is restricted by limited research on climate-resilient technology and varieties.

The livestock industry is predominantly comprised of pastoral and agro-pastoral livestock production systems. Pastoralists have a nomadic lifestyle. The movement of pastoralists is largely constrained by the availability of water and diseases. Weak extension service support to agricultural and livestock farmers are also a concern for farmers throughout South Sudan. Extension and veterinary / animal care services are extremely limited. This reduces communities' capacity to cope with outbreaks of disease and pests, which are expected to increase with climate change.

Deforestation is widespread in South Sudan and the main drivers are population growth, the increased demand for charcoal for domestic use, export and illegal trade and the seasonal burning of forests by pastoralists to regenerate pastures for their herds. Hence South Sudan's forests are in danger of disappearring, since the annual deforeststion rate is likely between 1.5 and 2 per cent. Deforestation and habitat degradation have decreased the ability of woodland and forest ecosystems to provide important goods (such as non-timber forest products) and services (such as water provision) to rural communities. This increases the vulnerability of rural communities to climate variability, as the goods and service provided by these ecosystems buffer communities against the crop failures associated with erratic rainfall, floods and droughts. Deforestation is also having a negative impact on biodiversity and wildlife conservation in South Sudan. There is also loss of forests due to uncontrolled bush fires in South Sudan. These bush fires are used in the practice of shifting cultivation, for hunting and to rejuvenate grazing areas.

Fuelwood and charcoal constitute about 80% of the country's energy supply due to lack of alternative sources of energy, like electricity, wind, and solar power and gas. As charcoal production is a lucrative business, more people are involved in it, thus accelerating deforestation and soil erosion as well as contributing to climate change from land use change. Charcoal production is also a source of greenhouse gas emissions.

Technology is an important aspect to be taken into consideration in climate change both in adaptation and mitigation. In South Sudan, the absence of comprehensive Technology Needs Assessment (TNA) will increase the difficulties of determining the level and extent of support needed for implementation of the Nationally Determined Contributions (NDCs), national development priorities and Sustainable Development Goals.

In the oil and gas sector, there is gas flaring whose emissions are significant. These emissions from gas flaring are the products of incomplete combustion of carbon fuels which are emitted in form of particulates and other harmful gases in to the atmosphere. These gases are mainly comprised of hazardous hydrocarbons. The transport sector is another significant contributor of the greenhouse gas emissions. However, there are no available data on the emissions and their trends.

This TNA project proposal is the first for South Sudan which will require funds, skills, capacities and the expertise of internationally recognised experts. With this proposal, CTCN is being requested for technical assistance including technical assessments, training and implementation plans to guide South Sudan in conducting Technology Needs Assessment for Climate change in key sectors of the economy.

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.

South Sudan is a Party to the United Nations Framework Convention on Climate Change (UNFCCC) since April 2014 and consequently joined the Global Environment Facility. For South Sudan to qualify for substantial funding from GEF, it has to undertake the enabling activities for the Convention. These enabling activities included the National Adaptation Programmes of Action (NAPA) and National Appropriate Mitigation Action (NAMA). South Sudan has prepared its NAPA but work on NAMA has not yet started. The NAPA communicates the priority activities that will address South Sudan's urgent and immediate needs for adapting to the adverse impacts of climate change. South Sudan has conducted its national capacity self-assessment which focuses on the country's capacity requirements to implement the Rio Conventions, of which UNFCCC is inclusive. To fulfil its reporting obligation to the UNFCCC, South Sudan has prepared its Initial National Communication which is almost completed. In its Initial National Communication, South Sudan provided information on national circumstances, greenhouse gas inventory and measures to mitigate climate change, vulnerability and adaptation to climate change and other aspects relevant for achieving the objectives of the Convention.

South Sudan, through the Ministry of Environment and Forestry, is the National Focal Point to the United Nations Framework Convention on Climate Change. The government has submitted an LDCF funded project proposal to strengthen the capacity of government institutions and vulnerable communities to mitigate and adapt to climate change shocks in South Sudan. South Sudan, in collaboration with UN Environment, is currently working on the process of implementing a project on GCF - readiness in order to be able to access the GCF substantial funds. This project will assist the country in building its national capacity to identify national priorities in its project to mitigate greenhouse gases emissions and to adapt to the impacts of climate change.

In response to its obligations to reduce GHG emissions and promote adaptation to climate change impacts under UNFCCC, South Sudan submitted its Intended Nationally Determined Contributions (INDC) in 2015 towards addressing climate change. The INDCs commit South Sudan to undertake a national greenhouse gas inventory besides introducing policies and actions to limit future emissions from planned land use and land use change. Furthermore, the INDCs aim to ensure more efficient use of biomass energy (charcoal and fuelwood) in the traditional energy sector. The INDCs will address emissions in the transport sector and the country also aims to develop more clean forms of renewable energy such as solar, wind and hydropower. In addition, South Sudan' National Adaptation Programmes of Action (NAPA) will complement the INDCs.

In all that has been mentioned above, the appropriate technologies will constitute an important and essential solution to the efforts and initiatives that aim to combat the impacts of climate change in South Sudan.

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

This section should answer the questions "what are the technology barriers that hinder national

[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)*

efforts described above" and "how will the CTCN technical assistance 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 requesting 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 requested CTCN technical assistance (described in the section below).

Specific Technology Barriers encountered in South Sudan can be categorized into political and security barriers, institutional and technological, socio-cultural, economic and policy. The trend of the political situation and insecurity in the country is considered a significant barrier to the government efforts at the national level to address climate change issues. Another important concern is the low level of environmental awareness among the political leadership and the local communities in general.

The institutional frameworks for creating an enabling environment for climate change technology transfer are at the nascent stage due to low priority accord to them due the current political situation in the country. Hence institutional and technical capacities of the government to formulate policy on climate change are still weak and inadequate. The existing policies are weak and there is generally a lack of environmental standards. There is also shortage of the requisite human resources and skills in the area of climate technologies. The socio-cultural barriers comprise the behaviours, attitudes, beliefs and norms within the communities, thereby may be reflected in their reluctance to adapt to climate-resilient or smart techniques. This is besides the inequalities in gender roles that may also be bias. Regarding the economic and financial barriers, there are no available funds to finance transfer of or access to environmentally sound technologies, innovations and know-how. Furthermore, even if there may be plans for addressing climate change still the national budgetary allocation for their implementation may be limited or even not available.

Other barriers include inadequate infrastructural services to ease acquisition of appropriate technologies, lack of market awareness, lack of research and development of green technologies, inadequate incentives and enabling environment for technology transfer. Generally, these barriers affect the development and transfer of climate technologies in South Sudan.

Sectors:

Please indicate the main sectors related to the request:

☒ Forestry	☒ Agriculture	☒ Water	☒ Health
☒ Restoration of degraded landscapes and ecosystems	☒ Infrastructure and urban planning	☒ Early warning systems	☒ Carbon fixation
☒ Energy Efficiency	☒ Livestock and Fisheries	☒ Industry	☒ Renewable energy
☒ Transport	☒ Waste management	☒ Disaster risk reduction	☒ Land use and Land use change

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 approaches
☒ Disaster risk reduction	☒ Ecosystems and biodiversity	☒ Gender	

Technical assistance requested (up to one page):

Founded on the problem statement, past/on-going efforts and technology barriers, please describe the requested technical assistance. The technical assistance should clearly contribute to mitigation or 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 technical assistance should be structured into the following:

- Overall objective
- Anticipated groups of activities to be performed by the technical assistance
- Anticipated products to be delivered by the technical assistance.

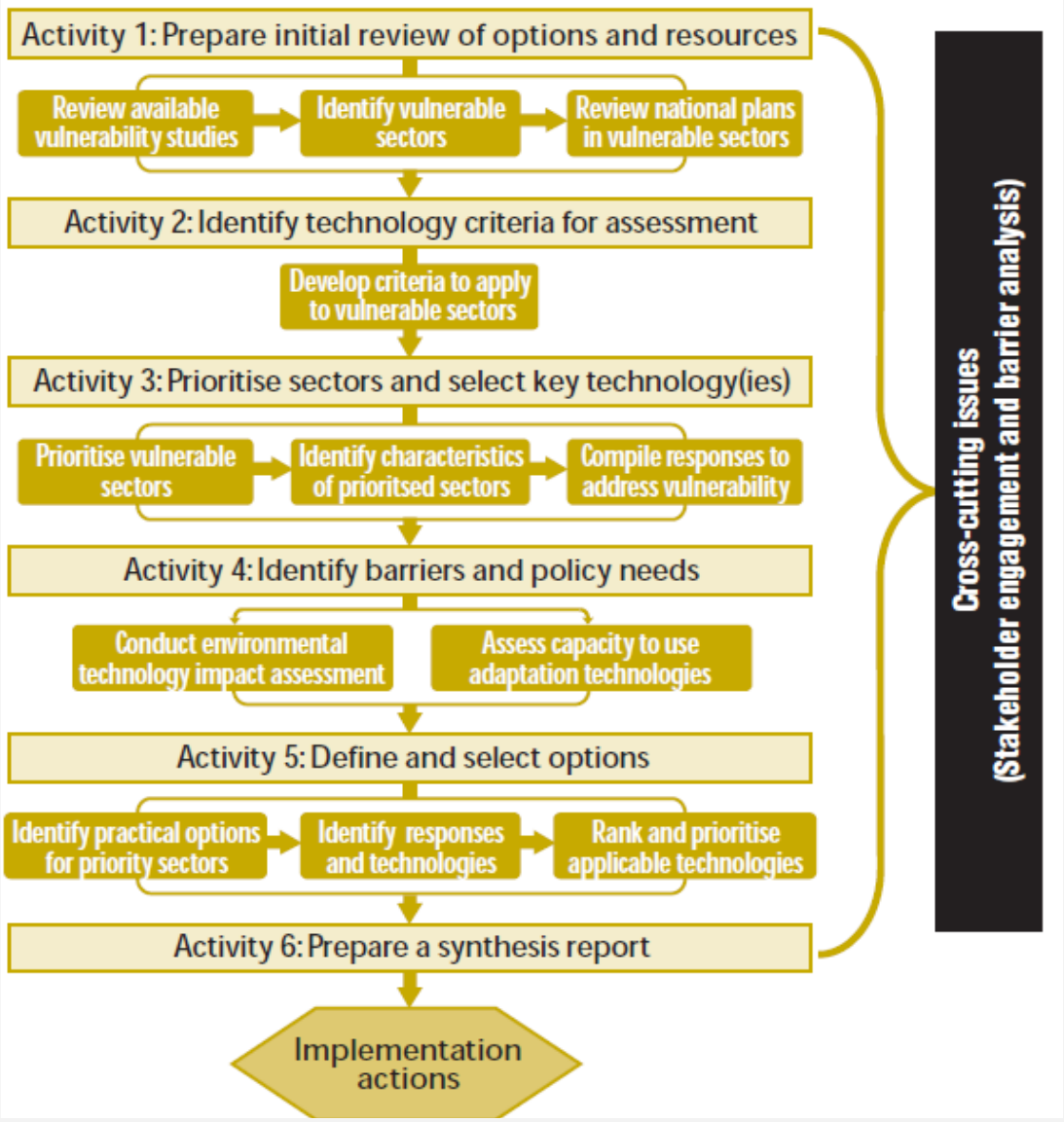
Please note that the CTCN facilitates technical assistance and is not a project financing mechanism.

The overall objective is to conduct Technology Needs Assessment for Climate Change Mitigation and Adaptation in South Sudan in most vulnerable economic sectors as identified in both the country's INC and INDC documents namely Agriculture, Energy, Water, Industry etc. It also seeks technical guidance for the different activities required to conduct the TNA process, including training on the TNA process, methodologies and quality control, together with the engagement of Consultant.

Scope of work includes:

- Organizes all process of technological needs assessment process;
- Conducts desk study on previously conducted similar assessments if any;
- Liaises with relevant state, non-state and private stakeholders and organizes individual interviews or group discussions, site visits, etc. in order to conduct the study of current technological needs;
- Assesses the constraints that hinder institutions responsible for activities related to climate change in terms of technology issues through collection, synthesis and analysis of existing information;
- Conducts desk study on existing state programs and plans on technology transfer and capacity building for activities related to climate change;
- Organizes the process of data collection on financial resources, technology transfer, and technical support received from bilateral and multilateral donors for activities to address climate change, as well as information on national resources allocated for climate change upon ratification of the UNFCCC;
- Provides periodic progress report to the Project Manager on implementation of the activities in regards to needs assessment process;
- Ensure timely and effective management of the activities according to schedule;

- Drafts the national Technology Needs Assessment report for various sectors



Anticipated Products to be delivered by the Technical Assistance:

The output of the support will be the TNA synthesis report, which contain the following elements:

i. Objectives for the TNA in the context of national development priorities
ii. A description of the stakeholder process adopted
iii. An evaluation of sectoral needs and opportunities
iv. A statement of data gaps
v. The criteria and process for technology assessment
vi. Identification and assessment of technology options (including adaptation, if appropriate)
vii. A list of priority sectors and key technologies for preliminary action and TAPs for various sectors.
viii. A review of key barriers related to existing plans and programmes and steps to overcome them
ix. Capacity building measures, if applicable
x. Potential sources of funding

xi. A discussion of implementation plans, if relevant

Expected timeframe:

Please indicate the expected duration period for the requested technical assistance. Please note CTCN technical assistance is limited to a maximum duration of 12 months.
12 Months

Anticipated gender and other co-benefits from the technical assistance:

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 technical assistance.

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

The anticipated activities with gender linkages as well as gender and other co-benefits from the technical assistance will include:

1. Decision Making:
   Equal participation of men and women in decision-making related to climate technology implementation or use. This will include their involvement in planning and consultation meetings, project planning process, including in climate technology user groups and cooperatives.

2. Capacity Building
   Women and men benefit equitably from technical assistance and project-related training

3. Awareness Raising and Advocacy
   Involvement of climate technology user groups, cooperatives and committees in awareness rising and advocacy in gender responsive manner.

Other anticipated co-benefits that will improve general quality of life include:

- Technology improvement and adoption of technological change,
- Capacity and Skills enhancement
- Increased productivity
- Contributions to energy security
- Business creation
- Reduced vulnerability
- Increased productivity
- Increased resilience

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.).

Stakeholders	Role to support the implementation of the technical assistance
National Designated Entity	Ensure alignment with national priorities on climate change, synergy with applicant's organisation; ensuring adequacy of application and provides endorsement. Monitor and evaluate the technical assistance provided by the CTCN.
Request Applicant	Coordinates implementation of project and ensure synergy and reporting to the UNFCCC Focal Point.
Please add as many stakeholders and lines as required.	Ministry of Agriculture and Food Security, , Ministry of Water Resources and Irrigation, Ministry of Electricity and Dams, Ministry of Commerce and Industry, Ministry of Transport, Ministry of Petroleum, Ministry of Mining, Ministry of General Education, Ministry of Higher Education, Science and Technology, Ministry of Gender, Child and Social Welfare, South Sudan Meteorological Department. Each of these national entities will be responsible for informing the international experts about the current technologies being used and will provide sufficient information to enable the experts to determine the best modern techniques that can be used in each of the national sectors.

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

Please describe how the technical assistance is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, technology needs assessments, Low Emission Development Strategies, Nationally Appropriate Mitigation Actions, 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)	Direct alignment and contribution to NDC implementation is required for all CTCN technical assistances. Please include a direct reference to the INDC/NDC document (chapter, page number, etc.). This project will contribute to South Sudan's Nationally Determined Contribution (NDC) emission reduction target which is under reviewing now International finance and investment, technology and capacity-building will be needed to achieve the ambitious intended contribution (Page 7).
Technology Needs Assessment	It is yet to be conducted.
National Adaptation Plans	We have not yet got the support to start our National Adaptation Plan.
Nationally Appropriate Mitigation Actions	Although South Sudan is yet to prepare its NAMA, the TNA, if conducted, will help in achievement of the objectives of the NAMA-road Map.
Add others here as relevant	

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

Please describe how the request was developed at the national level and the process used by the NDE to approve the request 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 this request, etc.

The process was initiated by the Directorate of Climate Change and Meteorology, Ministry of Environment and Environment. The stakeholders were engaged through the National Project Steering Committee, which comprises of relevant Ministries, Departments and Agencies. Several stakeholders' consultations were held and the need for the project was emphasized with its consequent development. It was approved by the Director General of Climate Change and Meteorology, Ministry of Environment and Forestry and the Hon. Undersecretary of the Ministry of Environment and Forestry in South Sudan.

Background documents and other information relevant for the request:

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

Draft Initial National Communication (INC) to UNFCCC 2018 (not yet submitted)

Intended National Determined Contribution (INDC 2015)

South Sudan First State of Environment and Outlook Report 2018

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms[2].

The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

[2] Please see:
https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

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Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

☒ Initial engagement: The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for accessing GCF readiness support.

☒ Advanced engagement (preferred): The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name: Joseph Africano Bartel

Date: 20/12/2018

Signature:

REPUBLIC OF SOUTH SUDAN MINISTRY OF ENVIRONMENT & FORESTRY OFFICE OF THE UNDERSECRETARY OF ENVIRONMENT 21 DEC 2018

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.
I understand that, after the completion of the requested assistance, I shall support 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: David Batali Oliver

Date: 20/12/2018

Signature:

REPUBLIC OF SOUTH SUDAN MINISTRY OF ENVIRONMENT & FORESTRY OFFICE OF THE UNDERSECRETARY OF ENVIRONMENT 21 DEC 2018

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

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