

**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.

<b>Requesting country or countries:</b>	Sudan
<b>Request title:</b>	Please reflect the objective of the technical assistance in the title (maximum 200 characters).  <b>Improving the efficiency and sustainability of water harvesting technologies in Sudan by providing technical assistance in terms of enhancing; technology transfer, capacity building, and research collaboration.</b>
<b>NDE</b>	Please add name of organisation, name of individual, position, email and address.  <b>Organization;</b> Higher Council for Environment and Natural Resources <b>Name:</b> Huyam Ahmed Abdalla Ahmed <b>Position:</b> Environmental Officer <b>Email:</b> hoyamahmed66@gmail.com
<b>Request Applicant:</b>	Please add name of organisation, contact person, position, email and address of the organisation requesting assistance from the CTCN.  <b>Organisation:</b> Water Research Center- Unviersity of Khartoum <b>Name:</b> Ahmed Elshaikh <b>Position:</b> Assistant Professor <b>Email:</b> <a href="mailto:ahmedhayaty@live.com">ahmedhayaty@live.com</a>  <b>Organisation:</b> Agriculture Research Corporation- Dry Land and Water Harvest Research Centre <b>Name:</b> Sahar Babiker Ahmed Abdalla <b>Position:</b> Researcher <b>Email:</b> <a href="mailto:sahar_babiker@yahoo.com">sahar_babiker@yahoo.com</a>

--	--

**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): -**

In light of observed and projected climate change over Sudan and according to the Worldbank (2021) climate knowledge portal rainfall is highly variable when compared to temperature. Forecast results of precipitation show varying trends of both weather and drier conditions. It is possible that average monthly rainfall decreases during the rainy season. Model projections for northern Sudan are inconsistent in changes in rainfall, while there is higher confidence in southern Sudan of an increase in intense precipitation. However, forecasts more consistently indicate increased variability and unpredictability in seasonal rainfall and increased incidences and intensity of drought.

Average annual temperatures in Sudan are expected to rise significantly, relative to baseline expectations. By 2050, average temperatures are forecast to increase by between 0.5°C to 3°C nationally, with more extreme increases in northern regions. Greater warming is forecast to occur during summer (1.5°C to 3.1°C in August by 2060) than winter (1.1°C to 2.1°C in January by 2060). Temperature increases are forecast to intensify the impacts of drought through increased evapotranspiration and reduced available soil moisture.

Extreme climatic variability with cyclical episodes of prolonged droughts and extreme floods, coupled with increasingly erratic distribution and intensity of rainfall, has a negative impact on the amount of surface and groundwater available for human and livestock consumption and productive purposes. These climatic phenomena complicate the design and operation of water supply facilities that contribute to competition and conflict between farmers and pastoralists for scarce water resources.

Half of Sudan's population lives on about 15% of the land, mostly near the River Nile. Sudan's National Adaptation Plan (NAP) of 2016 identified actions to protect water resources and reduce vulnerability to climate change in all 18 states of Sudan. The major proposed adaptation measures included water harvesting, efficiency irrigation technology, and improving water management practices.

The problem is related to climate change in Sudan and have a negative impacts on water availability, agriculture production and the over all goal of food security. Implementation of a sustainable and efficient modern water harvesting technologies will benefit to overcome the impacts of climate change. Most rain fed areas in Sudan are not in close proximity to rivers, and depend solely on rainfall for crops and domestic uses. With frequent drought and high evaporation rates - conditions that are expected to worsen with climate - change - water harvesting technologies are increasingly viewed as essential to sustain rural livelihoods in Sudan. High Rain variability during the rainy season and between years. This affects the distribution of soil moisture storage especially in rain fed agriculture, and the availability of drinking water for both human and animal. The consequent dry spells during the crop season could resulted in stunted growth diseases infestation and insect breakout which has direct effects on final yield. On the other hand, the rainfall variability affects the rainwater harvested for drinking purposes, as people are dependent on runoff water harvesting brought about by the ephemeral water courses -known as Wadis- especially in the Western (Darfur States) and Southeastern (Kordofan) of the country. The recurrent intense rainfall events in a short period of time serves the loss of water as well as the failure of the water harvesting structures being water pond (Hafir) or earth dam. The obstacles facing these structures is attributed to technical and management factors.

Raise in average annual temperature as a result of the global warming phenomenon will increase soil temperature which will accelerate the water loss via evaporation in particularly from the open surface water catchments. High soil temperature is rabidly accelerate soil micro-organism activity which decrease soil organic matter and soil fertility.

Rain fall variability and increased temperature due to climate change in Sudan has a direct impacts on crop productivity and water availability, It is evident that the water shortage and unsustainable water harvesting affect the dependent communities and was the reason behind the migration of youth and families to urban settings due to the instability and conflicts brought by the competition on this limited resource. This situation is exacerbated by the devastating civil war erupted in Sudan in April 2023. It serves as an extra threat for the agriculture activity, mainly the rainfed agriculture.

For instance, rainfall rate in the last year 2023 was below the average annual rate and some areas received even less than the minimum. The devastating civil war exploded in Sudan in April 2023 in 17 states has been an extra threat for agriculture activity. The vulnerable economic situation in Sudan along with the increased price

of agricultural inputs and limited accessibility for both inputs and water sources were hinder many to starvation.

The First (2003), Second (2012) and Third (2022) National Communication Reports (SNC1) (SNC) recognized water as one of the top priority sectors for the country to confront the escalating impacts of climate change.

Based on wide consultations at the federal and state level the NAPA process recognized 32 urgent adaptation interventions mainly in the water and agriculture sectors to reduce the increasing vulnerability of rural communities to current and future climatic risks (HCENR, 2007).

According to HCENR, (2016), the NAP extended existing efforts to identify and prioritize potential adaptation interventions at the state level, as primarily assessed during the NAPA process. The emphasis on the water sector was confirmed by GCF Country Program 2020.

The relation of Sudan's water policy to climate resilience is clearly expressed in the major policy objectives e.g. advocacy for integrated watershed management and protection of the environment.

The country conducted its Technology Needs Assessment (TNA) for adaption and mitigation in 2013. Two priority sectors have been covered about technology for adaptation, namely agriculture and water sectors. The TNAs resulted in a Technology Action Plan (TAP). The proposed project contributes to achieving Sudan's INDCs (2015) and Sudan's first NDC (2022) in the adoption of IWRM, water harvesting and introduction of revolving funds to support the implementation of small water harvesting projects.

Sudan has faced decades of conflicts and recently the War which trigger in April 2023 that have created massive displacements internally, while conflicts in neighbouring countries have resulted in an influx of refugees. This request aims to address the needs of host communities and Internally Displaced People (IDPs) in the construction and design of water supply to mitigate potential conflict.

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.

**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.

As mentioned earlier rainwater harvesting in most of the rural areas in Sudan is considered the main source for domestic water supply and cultivation. It is the key method for securing water for food security and settlement of rural population.

Therefore, the government has given the priority to water harvesting projects, e.g. Zero Thirst initiative to combat thirst between the years 2010 – 2016, where a number of 427 Hafirs and 29 dams were constructed, mainly for water provision for the rural population by the Dam Implementation Unit (DIU) all over the States of the country. However, an evaluation and assessment study in the year 2016 has revealed that 64% and 69% of the Hafirs and dams, respectively, failed due to problems pertinent to the management of these structures. Since then, various studies took place in order to investigate the sustainability of the rainwater harvesting for agricultural and drinking purposes from technical and management perspectives:

- Assessment of Hafirs' Systems in Sudan, Technical, Socio- Economic and Environmental Aspects
- Evaluation of Enhanced Hafir Project in South Darfur State
- Localization and design of potential Water Harvesting projects in Wadi Nyala using advanced methodologies (RS and GIS)
- Investigation of Earth-Fill Dams Failures in Seasonal/Intermittent Streams
- Technical Study, Analysis, Implementation and Coordination to Reduce the Impact of Flash Floods on Human Lives and Economic Assets in Um Zaifa Village - Ed Al Fursan Locality – South Darfur State
- Assessment and Evaluation of the Water Quality of the Water Harvesting Facilities in Rural Areas of Sudan
- Surface Water Resources Assessment – Coastal Area of the Red Sea State.
- Water Harvesting for Integrated Large Scale Agricultural Activities in Gadarif State.
- Development of a Community-based Management System for Sustainable Water Harvesting Facilities in the Rural Areas of Sudan.
- Training manual for surface water harvesting as part of the project 'Strengthening local communities' resilience to climate change in North Darfur State, Sudan.

in additions to:

- Sudan Water Sector Strategy 2021 - 2031 The Promise of the Ministry of Irrigation and Water Resources to Transform the Livelihoods of the People of Sudan.
- Various studies about rainwater harvesting and runoff water harvesting (flash flood):
  - (2022 - 2023): Technical Study, Analysis, Implementation and Coordination to Reduce the Impact of Flash Floods on Human Lives and Economic Assets in Um Zaifa Village - Ed Al Fursan Locality – South Darfur State

- (2020 - 2022): Assessment and Evaluation of the Water Quality of the Water Harvesting Facilities in Rural Areas of Sudan
- (2020 - 2022): Surface Water Resources Assessment – Coastal Area of the Red Sea State.
- (2020 - 2022): Water Harvesting for Integrated Large Scale Agricultural Activities in Gadarif State.
- (2019 - 2020): Development of a Community-based Management System for Sustainable Water Harvesting Facilities in the Rural Areas of Sudan
- (2019): Training manual for surface water harvesting as part of the project ‘Strengthening local communities’ resilience to climate change in North Darfur State, Sudan
- (2018 - 2019): Assessment of Hafirs’ Systems in Sudan, Technical, Socio-Economic and Environmental Aspects
- (2016 - 2020): Localization and design of potential Water Harvesting projects in Wadi Nyala using advanced methodologies (RS and GIS) (Financed by the Ministry of Higher Education and Scientific Research)
- (2014): Evaluation of Enhanced Hafir Project in South Darfur State – Water Harvesting Center – University of Nyala
- Zero- Thirst initiative (2016-2020): governmental initiative to construct rainwater harvesting techniques (Hafir and earth dams) to combat thirst all over Sudan

**Specific technology 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 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).

Lack of knowledge, experience, and human resources remain major capacity barriers to Sudan’s water resource adaptation technologies. Although a few governmental agencies and research institutes in Sudan have experience in design, implementation and operation, of haffirs technologies, the majority of institutes lack these capacities. As a result most of the sectors may not have enough skills and experience to implement this technology confidently and effectively. Therefore, regular consultation and exchanges of knowledge and experience are required. In addition, the amount of trained experts capable of regular maintenance is very limited and may lead to structural collapse and decreased water storages also limited and missed opportunities in the use and application of appropriate technology, research, and development and engagement of the private sector: The country’s isolation and limited engagement with international good practices have limited the introduction and adoption of new technologies and approaches to improve water

supply service delivery. Adoption of technologies like renewable energy, such as solar and wind, have been limited.

So especial attention should be given to ground water-related research where, in surface water scarcity area, groundwater reserve can represent an alternative option to reduce vulnerability to drought and give the country a better position to cope with the harsh climatic conditions. Groundwater development offers major opportunities for communities to withstand the major cause of their vulnerability and less resilient and adaptive capacity through crop, vegetable and animal production for food and income generation and improved livelihoods of increased water supply for domestic and health hygiene

In the context of the war in Sudan, there are several technology barriers that hinder national efforts for the water harvesting project. These barriers include:

1- Lack of security in certain of Sudan cities.

2- Weak infrastructures

3. Limited access to advanced water harvesting technologies: The ongoing war has disrupted infrastructure development and limited access to modern technologies for water harvesting. This hampers the implementation of efficient and effective water storage systems such as earth embankments, dams, and haffirs.

4. . Human Resource Development and Capacity Building Lack of technical expertise: There is an acute shortage of staff with adequate skills, including technical and administration qualifications, to design, implement, and manage water supply services in the country. The water supply sector has experienced significant brain drain. Conflict has resulted in a brain drain, with many skilled professionals leaving the country. This lack of technical expertise in water harvesting techniques and systems further hinders national efforts to implement and maintain these projects.

5. Inadequate research and development: The war has diverted resources away from research and development activities related to water harvesting technologies. As a result, there is a lack of locally adapted solutions that can address specific challenges faced in Sudan's context.

**The CTCN's technical assistance can complement these efforts by providing the following support:**

1. Technology transfer: The CTCN can facilitate the transfer of advanced water harvesting technologies to Sudan, bridging the gap caused by limited access. This can include providing guidance on suitable earth embankment designs, dam construction techniques, and haffir management practices.

2. Capacity building: The CTCN can offer providing capacity building programs to train local technicians and professionals on water harvesting techniques. This will help address the lack of technical expertise by equipping individuals with the necessary skills to implement and maintain these projects effectively.

3. Research collaboration: The CTCN can collaborate with local research institutions to conduct studies on innovative approaches to water harvesting in Sudan's specific context. This research will contribute to developing locally adapted solutions that are resilient to the challenges posed by the war.

Overall, the CTCN's technical assistance will complement national efforts by overcoming technology barriers through technology transfer, capacity building, and research collaboration. By addressing these barriers, Sudan will be better equipped to implement sustainable water harvesting projects that cater to drinking purposes for both humans and livestock as well as irrigation needs despite the challenges posed by the ongoing conflict.

<b>Sectors:</b>			
Please indicate the main sectors related to the request:			
Coastal zones	Early Warning and Environmental Assessment	Human Health	Infrastructure and Urban planning
Marine and Fisheries	• Water	• Agriculture	Carbon fixation
Energy Efficiency	Forestry	Industry	Renewable energy
Transport	Waste management		
Please add other relevant sectors:			

<b>Cross-sectoral enablers and approaches:</b>			
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	
-------------------------	-----------------------------	----------	--

**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.

**Overall objective:** The overall objective of the requested technical assistance for water harvesting in Sudan is to improve the country's capacity to effectively implement and sustain water harvesting technologies, through technology transfer, capacity building, and research collaboration.

Anticipated groups of activities to be performed by the technical assistance:

**1. Technology Transfer:**

- a. Conducting assessments of existing water harvesting technologies and practices in Sudan.
- b. Identifying appropriate and innovative water harvesting technologies suitable for the Sudanese context.( as?
- c. Facilitating the transfer of these technologies to local stakeholders through training programs, workshops, and demonstrations.
- d. Providing technical support for the installation, operation, and maintenance of water harvesting systems.

**2. Capacity Building:**

- a. Developing training programs on water harvesting techniques, including design, construction, operation, and maintenance.
- b. Conducting capacity needs assessments to identify gaps in knowledge and skills related to water harvesting.
- c. Organizing workshops and seminars to enhance the capacity and raising the awareness of operation, maintance (O&M) and sustainability of water supply to the relevant stakeholders such as government officials, , researchers, engineers, technicians, farmers, and community members.

d. Establishing knowledge-sharing platforms or networks to facilitate continuous learning and exchange of experiences.

### **3. Research Collaboration:**

a. Collaborating with local research institutions to conduct studies on the effectiveness and suitability of different water harvesting techniques in Sudan's diverse climatic conditions.

b. Supporting research projects focused on improving the efficiency and cost-effectiveness of water harvesting systems.

c. Promoting knowledge exchange between international experts and local researchers through joint research initiatives or partnerships.

d. Facilitating access to funding opportunities for research projects related to water harvesting.

e. Conducting feasibility studies of the potential areas that suitable to the water harvesting.

#### **Anticipated products to be delivered by the technical assistance:**

1. Comprehensive assessment reports on existing water harvesting technologies in Sudan.

2. Catalogue or database of appropriate water harvesting technologies suitable for different regions within Sudan.

3. Training materials (manuals, guidelines) on various aspects of water harvesting techniques.

4. Trained personnel capable of designing, implementing, operating, and maintaining different types of water harvesting systems.

5. Research papers or publications highlighting successful case studies or innovations in water harvesting technology specific to Sudan's context.

6. Increased awareness among stakeholders about the benefits and potential applications of water harvesting techniques through awareness campaigns or communication materials.

**Note:** The specific activities and products may vary depending on the needs identified during project planning and implementation phases in collaboration with relevant stakeholders in Sudan.

#### **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.

The expected time plan for activities is around 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>

In Sudan, focusing on gender-inclusive water harvesting initiatives can lead to a range of co-benefits including improved livelihoods, environmental sustainability, social equity, and cultural preservation.

**Technology Transfer:** The transfer of water harvesting technologies can be tailored to benefit women in Sudan who are often responsible for water collection and management. This can include the introduction of simple and efficient water harvesting techniques such as rainwater harvesting systems, small-scale irrigation technologies, and water conservation methods that can be easily managed by women.

**Capacity Building:** Capacity building programs can be designed to empower women in Sudan through training on water harvesting techniques, project management, and leadership skills. By involving women in decision-making processes and providing them with the necessary skills and knowledge, they can play a more active role in water management, leading to improved water access and sustainability.

**Research Collaboration:** Research collaborations focusing on gender-responsive water harvesting solutions can lead to a better understanding of the specific challenges and opportunities faced by women in Sudan. This can result in the development of tailored approaches that address gender disparities in water access and management, ultimately benefiting both women and their communities.

**Gender Linkages and Co-Benefits:** By prioritizing gender-responsive approaches in water harvesting initiatives, women in Sudan can experience increased economic opportunities, improved health outcomes, and enhanced social empowerment. Additionally, integrating biodiversity conservation practices within water harvesting projects can lead to environmental co-benefits such as habitat restoration and improved ecosystem resilience. Furthermore, by involving local communities, including women, in the decision-making process, there is potential for the preservation and promotion of cultural practices related to water management.

<b>Key stakeholders:</b>	
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.).	
<b>Stakeholders</b>	<b>Role to support the implementation of the technical assistance</b>
National Designated Entity	Support and facilitated to the implementation technical assistance in Sudan and coordinate. Coordination between the Ntional entities and CTCN.
Request Applicant	Project coordination with different stakeholdersforoverseeing andmanaing all aspects of communication and implementation.
Please add as many stakeholders and lines as required.  <ul style="list-style-type: none"> <li>• Ministry of Irrigation and Water Resources</li> <li>• Agriculture Research Corporation- Dry Land and Water Harvest Research Centre.</li> <li>• Water Research Center- Unviersity of Khartoum</li> </ul>	Institutional arrangements, policies and strategic planning, and technology adoption.  Conducting research studies aims to improve water harvesting techniques in Sudan. Providing technical assisting and supervising the implementation of the recommended water harvesting technics released from the previous research studies. Transfer knowledge to the beneficiaries such as: local community members, government officials, farmers and .....etc. Supporting capacity building activites, conducting research, and implementing training program.

<b>Alignment with national priorities</b> (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.	
<b>Reference document</b> (please include date of document)	<b>Extract</b> (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.).

	<b>Adaptation component of the updated NDC- Table 4-1: Sudan's adaptation priorities page No. 16- 18 and 4.5. Implementation of adaptation actions and plans page No. 22</b>
Technology Needs Assessment	<p><b>TNA- Adaptation 2013</b></p> <p>Chapter 5 Technology Prioritization for Water Sector Page No. 44- 47 and 5.4.1 Rain water harvesting (haffir) Page No. 48-49.</p> <p>Annex I Technology Fact Sheets</p> <p>B.1. Technology: Rain Water Harvesting (Haffir) page 74- 76.</p> <p>B.3. Technology: Water Harvesting (Earth Dam) page 80-83.</p> <p><b>Part 2:</b> Barrier Analysis And Enabling Framework</p> <p>Chapter2: 2.1 Preliminary Targets for Haffirs Technology and 2.2 Barrier Analysis and Possible Enabling Measures for Haffir page No. 137- 146.</p> <p><b>Part 3:</b> Technology Action Plan- 2.2 Action Plan for Rain Water Harvesting (Haffirs) page No. 206- 217.</p> <p><b>Part4:</b> give a summery idea for the some projects related the water harvesting technology like Haffir Page No. 243-244.</p> <p>2.3 Project Overview 2.3.1 Construction of 15 rain water harvesting (haffir) in 15 states page No.245-247.</p>
National Adaptation Plans	<p>NAP 2015</p> <ul style="list-style-type: none"> <li>• In page 54 – 57 Mentioned enhanced National Research for climate change adaptation- including Objective and key activities and Approach and results in number of sectors including water sector</li> <li>• As well as clarify the Adaptation investment and financial flows in page 64 -65. Specific activities for the Sudan adaptation investment</li> <li>• Page 72 – 80 define Priority adaptation measures in all states in Sudan including those cities effected by the war</li> </ul>
Nationally Appropriate Mitigation Actions	<p>NDC 2021</p> <p>Page 20-21 Table 4-1: Sudan's adaptation priorities.</p>
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.

- Sudan was invited by CTCN through NDE to requested to the opportunity to support the affected countries by new EC Programme on Climate Change and

Security Which Objective Activity is to Implement Innovative Community-Based Climate Technology for Communities at Risks of Conflicts.

- After the consent of Sudan his representative in the Higher Council for Environment and Natural Resources, have been connected with stakeholders for requesting,
- establishing a small working group including: Ministry of Irrigation and Water Resources, Water Research institute -Universty of Khartoum, Agriculture Research Corporation- Dry Land and Water Harvest Research Centre, Water Harvest Research Centre in Unvirsty of Nyala.
- established Watsaap group for ease communication
- contact the committee members by phone to explain the project objectives and then share the CTCN with them.
- Regular communication via WhatsApp and calls to develop the request.

**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. :

- **Water Sector Capacity Building Strategic Plan 2021- 2023 - Ministry of Irrigationand Water Resources. (attached)**
- Please indicate if this request has been developed with the support of the CTCN Request Incubator.

**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.

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.

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:

Date:

Signature:

**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: Huyam Ahmed Abdalla Ahmed

Date: 21/2/2024

Signature: 

**THE COMPLETED FORM SHALL BE SENT TO THE [CTCN@UNEP.ORG](mailto:CTCN@UNEP.ORG)**

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