CTCN
MATE TECHNOLOGY CENTRE & NETWORK

CTCN Technical Assistance
Response Plan

Country:	KENYA
Request Identification Number:	2015000070

Title:	Catalysing low cost green technologies for sustainable water service delivery

Summary of the CTCN Technical Assistance

Water services available for the poor in Kenya are often inadequate, unsafe and unsustainable. Arid and Semi-Arid areas in the Northern part of Kenya and poor peri-urban areas are particularly vulnerable, characterized by low level of water service provision and acute water scarcity, where water demand considerably surpasses availability. In addition, climate change is expected to further impact water availability and infrastructure, which highlights the need for improved water access in underserved areas and a more sustainable and strategic management of water resources. In this project the CTCN will support the Water Services Trust Fund (WSTF) in Kenya, through the provision of technical assistance to determine the technical and financial feasibility of selected green technologies for improved water resources and climate-proofed infrastructure, with focus on two areas: ASAL in Northern Kenya and poor peri-urban areas.

The main outputs planned the present technical assistance include: (1) Prioritization of identified technologies and selection of three green water technologies adapted to targeted areas ; (2) A pre-feasibility study to determine the technical, economic and social feasibility of the three selected water technologies for the targeted areas; (3) identification of potential private sector actors and Public Private Partnerships (PPP) within the water sector for the deployment of green water technologies; (4) capacitation of public and private sector actors to engage in PPP; (5) The development of a Public Private Partnership business model in collaboration with relevant stakeholders; (5) The development of a concept note to trigger future funding (i.e. to enable piloting of technologies, supporting implementation of PPP etc.);(6) A final report summarizing all activities and outputs and presenting the main conclusions and recommendations for future action.

It is expected that this technical assistance will have a significant impact on the sustainable development goals in Kenya, through improved water access to underserved communities and resulting co-benefits. The implementation of this technical assistance contributes to national priorities and planned development programs in the water sector in the country. It will have a duration of one year and will be implemented in close collaboration with the Ministry of Water and Irrigation (MWI), the Water Resources Management Authority (WRMA), County Governments, private sector actors, CBOs among other institutions.

1. Overview of the CTCN technical assistance

1.1 Technology aspects

In line with the applicant's request the pre-selected water technologies for this technical assistance are:

(1) Solar water pumping system
(2) Wind powered pumping systems or wind mill,
(3) Sand dams (run off water harvesting technology),

(4) Djabias (Semi-underground tanks with water catchment systems),
(5) Water pans (run off water harvesting technology).

A rapid prioritization exercise will determine which three technologies, and/or a combination of these e.g. solar pumping systems and water pans, from the above list are the most appropriate, sustainable and pertinent for PPP in the targeted areas. These will be the object of subsequent in-depth analysis. If others are found more appropriate for the targeted areas, during the first phase of the technical assistance, they may substitute the ones already pre-selected. The above listed technologies are for domestic, farming and livestock use. Common for these is that they are low-cost simple technologies involving renewable energy, which are found appropriate for underserved communities vulnerable to water stress. The selected technologies have the potential to make water management more climate proof, reliable, sustainable and accessible in areas where for example access to diesel for water pumps is difficult. The Water Services Trust Fund (WSTF) has prior experience with deploying these technologies, which the analysis under this technical assistance will build on. For the final assessment and identification of the specific technologies, the technical assistance will consider possible technology providers, feasibility of technology deployment, replicability potential in the country, prices of implementing technologies in targeted areas, and the sustainability of the selected technologies in the target regions, to ensure that water extraction does for example not threaten resource sustainability and lead to environmental degradation.

1.2 Objectives (outcomes)

The main short-term objective of the assistance provided by CTCN is to analyse the feasibility and sustainability of the deployment of 3 specific low-cost green technologies for improved water services for household consumption, farming and/or irrigation, in underserviced ASAL areas in Northern Kenya and in peri-urban areas. The aim is also to analyse private sector engagement potential in their deployment and to develop cooperation and synergies between public and private actors, through the development of a public-private partnership model for green water technology deployment.

1.3 Results (outputs expected from CTCN assistance)

The main outputs planned under the present technical assistance are the following:

1 The green water technologies selected by the proponent (Solar water pumping system, wind powered pumping systems, Sand dams, Djabias, Water pans) are prioritized based on local context and three technologies are selected for further analysis under this response plan. In case relevant technologies have been omitted from the pre-selection they can be added to the rapid prioritization exercise.

2 A pre-feasibility study is undertaken in order to determine the technical, economic and social feasibility of the three selected water technologies for the targeted areas. The study will include an in-depth analysis of each of the technologies, the current experience with the technologies in target areas and/or in other contexts, the economic feasibility (cost-effectiveness, price of materials, operation and maintenance costs, potential providers, ability of the technology to create employment, current demand and supply etc.), the social feasibility (acceptability, attitude and perception of technology, social impact including the number of beneficiaries and accrued benefits, land-use patterns, gender and governance issues etc.), together with a risk analysis.

3 Multi-stakeholder consultations are conducted to identify potential private sector actors and approaches to Public Private Partnerships (PPP) for the selected water technologies.

4 Based on outcomes from the pre-feasibility studies and stakeholder consultations, a Public Private Partnership business model is developed in collaboration with relevant stakeholders.

5 A capacity building workshop is held to share findings from the feasibility studies and stakeholder consultations and to capacitate relevant public institutions and private sector actors to initiate and implement PPP within the water sector, promoting collaboration approaches and the business case for the deployment of selected green water technologies.

6 Based on outcomes from this technical assistance, a project concept note is developed in order to use the CTCN technical assistance to catalyze larger financing (i.e. to enable piloting of technologies, supporting implementation of PPP etc.).

7 Final report summarizing all activities and outputs and presenting the main conclusions and recommendations for future action.

1.4 Expected use of outputs.

The outputs produced under this technical assistance will be of immediate use for the implementation of the Danida funded Thematic Programme for Green Growth and Employment Creation in Kenya (2016-2020) (see section 2.2) and the European Union, climate proofed infrastructure programme. One key objective of these programmes is to enable the climate-proofing of water infrastructure, using green technologies when appropriate. The technologies identified and analysed under this assistance will provide a knowledge base and platform for the technology pilots planned under the Danida and EU climate proofed infrastructure programmes in various ecological zones in Kenya. The identified technologies and feasibility studies elaborated under the present CTCN assistance will therefore be instrumental to these future pilots. The outputs, outcomes and recommendations derived from the present CTCN assistance will thereby contribute to address a significant knowledge gap and provide an important platform for these long term programmes and will also help to catalyse larger financing.

2. Description of the Assistance

2.1 Activities

Activity 1 – Technology prioritization

The technologies selected (Solar water pumping system, wind powered pumping systems, Sand dams, Djabias, Water pans) are prioritized by the proponent, and three technologies are selected for further analysis under this response plan. In case other relevant technologies have been omitted from the pre-selection they may be added to the rapid prioritization/selection exercise.

Activity 1.1
The proponent undertakes rapid prioritization exercise and identifies three technologies with most PPP relevance for further analysis. A list of criteria and a simplified Multi-Criteria Analysis (MCA) template will be shared with proponent to facilitate the identification of technologies.

Activity 1 – Deliverables

Deliverables	Delivery date
List of criteria sent	*Week 1*
Final list of selected technologies	*Week 3*
M&E short summary about lessons learned in activity 1 (cf section 3.4)	*Week 3*

Activity 2 – Feasibility study of the selected technologies

Pre-feasibility studies are undertaken in order to determine the technical, economic and social feasibility of each of the three selected water technologies for the targeted areas. This entails in-depth analysis of the current experience with each of the technologies in target areas and/or similar contexts (similar technologies applied in other parts of the world), with focus on technical feasibility (types of techniques and materials, skills and knowledge, potential providers etc.), economic feasibility (cost effectiveness, price of materials, potential to create employment, operation and maintenance costs, current demand and supply etc.), social feasibility of the chosen technologies (acceptability, attitude and perception of the technology, land-use patterns, capacity to absorb, gender and governance issues etc.), risk analysis as well as sustainability and replicability potential.

Activity 2.1: Preparation phase

Expert(s) identify main stakeholders to be involved in consultations and interviews in close collaboration with proponent. Expert(s) consults with proponents and relevant stakeholder to finalize framing, content, research questions and methodology of feasibility study. The target area(s) (in ASAL and peri-urban areas) for the feasibility study is/are identified in collaboration with proponents, based on relevance for the identified technologies, prior knowledge and WSTF work undertaken in these areas, local vulnerability and other potential considerations. The concrete steps, planned activities, timing and logistics are also discussed.

Deliverables	Delivery date
Report on agreed feasibility study framework	*Week 5*

Activity 2.2: Data Collection.

Expert conducts desk study where available documents (scientific articles, reports, surveys etc.) covering relevant topics related to the chosen technologies (e.g. on current experience with these in Kenya and other countries, technology briefs etc.), the national water sector policy context in Kenya, the local context in selected areas (socio-economic context, water sector, land-use patterns, governance etc.) etc.

This first secondary data collection phase is followed by a primary data collection phase for qualitative study. This exercise covers: Choice of data collection methods; Selection of interviewees, development of interview guides/questionnaires and interviews/focus groups with relevant stakeholders (water service providers (WSPs), technology providers, water Service Board (WSB), Water Resources User Associations-WRUAs CBOs etc.) are held by expert. List of interviewees and interview guides is included in final report as annex.

Deliverables	Delivery date

List of interviewees and interview guides	*Week 14*

Activity 2.3: Data analysis and submission of final feasibility study report

Data analysis and draft of feasibility report. The report should be 30-50 pages conveying clear, concise and accurate information. The report may include but need not be restricted to:
- Executive summary
- Introduction
- Methodology section
- Technology description (e.g. types of techniques, skills and knowledge required, current experience with the technologies in target areas and with similar technologies applied in other parts of the world, potential providers, etc.).
- Economic feasibility (e.g. economic viability of technology, cost effectiveness, potential to create employment, operation and maintenance costs etc.).
- Social feasibility of the chosen technologies (e.g. acceptability attitude and perception of the technology, consideration of gender and youth issues (i.e. involvement of women in local water management etc.) land-use patterns, capacity to absorb, gender and governance issues etc.).
- Risk analysis
- Sustainability and replicability potential
- Findings: PPP potential and Recommendations
- Annexes: list of interviewees, interview guides etc.

Submission of feasibility report to proponents, CTCN and other potential stakeholders for comments followed by submission of final report.

Deliverables	**Delivery date**
First draft of feasibility report for comments	*Week 24*
Final Feasibility study report	*Week 28*
M&E short summary about lessons learned in activity 2 (cf section 3.4)	*Week 28*

Activity 3 – Training in and identification of potential PPP

Based on outcomes from feasibility study, multi-stakeholder consultations are conducted to identify potential private sector actors and approaches to Public Private Partnerships (PPP) and involved actors from public and private sectors are capacitated to engage in PPP for the deployment of the selected water technologies and make informed investments in the domain.

Activity 3.1 Identification and consultation of relevant stakeholders

In collaboration with proponents relevant public and private actors (investors, SMEs etc.) for PPP are identified and multi-stakeholder consultations are conducted to identify PPP opportunities within the water sector and selected technologies.

Deliverables	**Delivery date**
List of stakeholders identified	*week 28*
Consultation report	*Week 34*

Activity 3.2 Design of a PPP business model

Based on outcomes from feasibility study and consultations a PPP business model for selected water technology(ies) most apt for PPPis developed and shared with WSTF, private sector actor and other relevant stakeholders.

Deliverables	Delivery date
Public Private Partnership Business model for selected water technology	*week 36*

Activity 3.3 Workshop on feasibility study outcomes and training of actors in PPP for selected green water technologies

A 1 day workshop is held to communicate feasibility report outcomes to stakeholders identified in activity 3.1 and to train actors (WSTF and other identified private and public sector actors) to engage in - and implement - PPP in general for the deployment of selected green water technologies and present business model as an example.

Deliverables	Delivery date
Workshop report	*week 38*
M&E short summary about lessons learned in activity 3 (cf section 3.4)	*Week 38*

Activity 4 – Catalyzing finance

Support the instrumental use of the CTCN technical assistance by contributing to catalyze larger financing (i.e. to enable piloting of technologies, supporting implementation of PPP etc.).

Activity 4.1 Development of a project concept note
A concept note for future projects to build on outputs and outcomes from current technical assistance, is developed by expert in close collaboration with proponents and relevant stakeholders (i.e. to enable piloting of technologies, supporting implementation of PPP, etc.). The concept note should thus contribute to the overall long-term objective of this assistance: to strengthen access to - and sustainable financing of - green water technologies for underserved ASAL and peri-urban areas.

Deliverables	Delivery date
Project concept note	*week 44*

Activity 4.2 Future funding opportunities
Based on the outcomes and recommendations of the feasibility study and the concept note, the expert will support WSTF in approaching different kinds of funding. The expert will identify national (private and public), bilateral, regional and/or international financing resources and elaborate a list of potential future funding opportunities and/or provide referrals to potential funding opportunities. This activity will also include a short report (10-15 pages) containing recommendations for future funding for clean water technologies and specifically the technology prioritized in Activity 1.1. This report will also include examples of fundraising initiative in the clean water sector in other developing countries.

Deliverables	Delivery date
List of potential funding institutions	*week 44*
Recommendations for future funding report	*Week 48*
50 copies of the recommendation report	*Week 48*

Activity 4.3 Recommendations for future actions

Draft of final CTCN assistance report by expert, summarizing all activities, outputs and expected outcomes under the current assistance, presenting the main conclusions and recommendations for future action, including links with other initiatives, examples of good practice in other countries, future initiatives needed to capitalize on current assistance (e.g. based on concept note and other options). The report is printed and disseminated with relevant actors.

Deliverables	Delivery date
Final report of activities and outputs of assistance and recommendations for future action	*week 50*
Report layout	*week 51-52*
print and shipment of 300 copies of the report	*Week 51*
M&E short summary about lessons learned in activity 4 (cf section 3.4)	*Week 51*

2.2 Synergies and Baseline Setting

Currently, a major challenge in the target areas is that most technologies used applied in the water sector are unsustainable and expensive to maintain and operate. They cannot adequately withstand the adverse effects of climate change, such as water shortages during dry periods and damages to water infrastructure due to flooding. At the same time, there is very limited research on the deployment and feasibility of green technologies for the water sector in the country. The assistance provided by CTCN contributes to develop the knowledge base on the current experience with, and feasibility of the deployment of green water technologies and the possibilities for PPP within the area.

A number of synergies between the CTCN assistance and other similar and/or complementary initiatives exist. The technical assistance provided is consistent with the results from Technology Needs Assessment funded by UNEP in the country, where opportunities for adaptation technologies have been identified, including groundwater abstraction and rainwater harvesting. The assistance is also in synergy with - and instrumental to - the implementation of the Danida funded Thematic Programme for Green Growth and Employment Creation in Kenya (2016-2020) and EU the climate proof programme (expected to run for 4 years). The objective of the engagement is to support WSTF in reaching out to underserved ASAL counties with provision of water and sanitation services to communities and with associated investments in management of water catchment areas. Under this programme it is planned that water infrastructure will be climate-proofed and use green technologies when appropriate and that a number of technology pilots in various ecological zones in Kenya will be financed. The outputs, outcomes and recommendations derived from the present CTCN assistance will contribute to address a significant knowledge gap and provide an important platform for this long term programme, as well as serve to catalyse larger financing.

2.3 Timeline

Activity	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1.Technology Prioritization												
1.1 Prioritization & selection of technologies												
2.Feasibility Study of the selected technologies												
2.1 Preparation phase												
2.2 Data Collection												
2.3 Data analysis and submission of final feasibility study report												
3. Training in and identification potential of PPP												
3.1 Identification and consultation of relevant stakeholders												
3.2 Design of a PPP business model												
3.3 Workshop on feasibility study outcomes and training of actors in PPP for selected green water technologies												
4.Catalyze finance												
4.1 Development of a project concept note												
4.2 Future funding opportunities												
4.3 Recommendation for future action												
Monitoring and evaluation												
M&E teleconference with country and international partners												
M&E short summary about lessons learned in the activities (cf section 3.4)												

2.4 Expertise required

This section describes the expertise required to deliver a successful technical assistance, in order to achieve the described objectives and outcomes. The expertise expected for experts to successfully deliver this technical assistance includes:

- Proven technical expertise with green water technology deployment in Africa.
- Demonstrated experience and in depth expertise in designing and implementing water projects, with focus on the particularities of green water technology deployment.
- Experience with climate proofing of water services and infrastructure from developing countries.
- Expertise and knowledge regarding the design and execution of feasibility studies in developing countries, with attention to the technical, economic and social feasibility of adaptation technologies.
- Experience and knowledge of qualitative interview design and methods
- Proven experience with private sector engagement in water service provision and facilitation of Public Private Partnerships in public infrastructure.
- Familiarity with multiple stakeholder consultations and workshop facilitation

- Previous experience with providing technical assistance to government institutions at multiple levels in the country/region.
- Proficient analytical and writing skills.

Activity 1	
Expert 1	*Water technology Expert with MCA expertise*
Activity 2	
Expert 1	*Water technology expert, Framing, analysis and data collection*
Expert 2	*Data collection expert with experience in qualitative analysis in developing countries*
Event 1	*Consultation meetings*
Event 2	*Workshop (55 participants approximately, see annex 3 for details)*
Materials	*Reports*
Others	
Activity 3	
Expert 1	*Private sector engagement/private sector finance facilitation, PPP with experience in climate technology, preferably in the water sector*
Event 1	*Consultation meetings*
Event 2	*Workshop (55 participants approximately- see annex 3 for details)*
Activity 4	
Expert 1	*Expert in facilitating climate finance opportunities with domestic and international financiers in the public and private sector with experience in catalyzing finance in developing countries for the deployment of climate technologies*
Expert 2	*Water technology expert(s), Framing, analysis*
Materials	*Reports*
Materials	*Concept note*

2.5 Main partners

Stakeholder	***Role to support the implementation of the CTCN assistance***
NDE	*Coordination of the project*
Ministry of Water and Irrigation (MWI)	*Policy guidance and direction*
WSTF	*Lead agency in development of green technologies and strategic business model(s)*
Water Resources Management Authority (WRMA)	*Technical Assistance given to WRUAs during implementations of pilots in the Green Growth programme*
County Governments	*Support and participate in research*

CBOs & Local community	*Participate in research*
Local and International institutions of higher learning (to be identified)	*Partnership in Research and capacity building on green technologies and PPP mechanisms*
CTCN/ International Experts in water technologies	*Provision of technical support and guidance*
Danish Embassy in Kenya	*Thematic Programme for Green Growth and Employment Creation in Kenya 2016- 2020*
Water and Sanitation Actions Groups	*Participate in research*
Water resource associations	*Participate in research*
Water service providers	*Participate in research*

2.6 Indicative budget

The amount of resources estimated to complete the current assistance is around USD 206.000. A more detailed budget will be provided upon signature of the response plan.

Activities	**Estimated Budget (USD)**
Activity 1	-
Activity 2	USD 81.000
Activity 3	USD 65.000
Activity 4	USD 50.000
Evaluation and learning	USD 10.000
Total	**USD 206.000**

Implementation of this Response Plan will be led by the Climate Technology Centre (including selection, contracting, supervision and monitoring of implementation partners) in close coordination with the corresponding National Designated Entity and relevant national actors. Implementation will be led by an International Consortium or Network Partner of CTCN.

2.8 Gender considerations

In Kenya, as in many other countries in SSA, water investments have direct positive impacts on women's lives. Data from ASAL counties shows that inhabitants spend 1-2 hours daily for fetching water, a task which is for the most part undertaken by women. Increased and improved access to water services is therefore fundamental to promoting gender equality in these areas, permitting women to liberate time for e.g. income generating activities. WSTF has experience with promoting women and youth's participation in community water projects, which this technical assistance will build on. Gender and youth issues will be taken into consideration in the social feasibility study (i.e. involvement of women in local water management etc.) and will also be included in the evaluation phase.

2.8 Risk identification and risk mitigation

Risk	**Consequence**	**Probability**	**Mitigation measure**

Lack of stakeholder buy-in	Unsustainability of technical assistance	Low	Early involvement of stakeholders; transparent communication of results and next steps.
Private sector actors are not identified/interested/convinced to engage	No PPP are created	Medium	Economic viability of the project/technology should be very clear. Focused and informed identification of actors, early collaboration and clear communication of business case.
Limited awareness of technologies		Medium	All technologies identified as suitable need to be communicated to all stakeholders
High initial costs of installing the technologies	Unsuitability of technologies for target areas No technology is installed	Low	Make sure that identified technologies are low costs A more inclusive, participatory process in the stakeholders' consultations and interviews
Security issues	Put a hold to the implementation. Unsustainability of the technology	Medium	Identify risk at the early stage of technology and sector prioritisation. Enforcing the inclusion of local communities, CBOs, NGOs of the area.
Cultural beliefs and practices e.g where women can't be offered leadership/ management positions	Lack of involvement of women	Medium	Capacity development & Sensitizing actors

3. Long-term impacts of the assistance

3.1 Expected climate change-related benefits

In the long-term, the assistance provided will pave the way for the deployment and sustainable financing of climate-proofed water technologies in underserved areas. The long-term objective that

this technical assistance contributes to is thus an improved access to water services for vulnerable households and communities in ASAL areas in Northern Kenya and in peri-urban areas. Outputs will thus serve to build the resilience of these population groups to water stress, by contributing to climate-proofed infrastructure. The technical assistance will also contribute to positive long-term impacts such as income generation, increased productivity in drylands production systems, poverty reduction, improved health and increased gender equality.

	CTCN climate technology impact	**Anticipated contribution from CTCN assistance**
1	Climate technologies adapted to national context are identified and prioritized to enable their deployment and/or transfer in the requesting countries	An in-depth analysis of the technical, social and social feasibility of three selected green water technologies is provided
2	New national Technology Needs Assessment (TNA) and Technology Action Plan (TAP) as a result of the response	Assistance in line with TNA
3	Progress made against mitigation objectives (i.e. energy and carbon intensity reduction) as a result of the response	Knowledge development on green water technologies
4	Progress made against adaptation or resilience objectives (e.g. climate vulnerability index improvement) as a result of the response	Outputs under this assistance contribute to long term objective of building the resilience of communities vulnerable to water stress, through the promotion of more knowledge and sustainable financing mechanisms for climate-proofed infrastructure in the water sector.
5	New mitigation or adaptation technology projects/initiatives implemented as a result of the response	Assistance is instrumental to future Danida funding among others.
6	New or strengthened policies/ laws developed, approved and enacted as a result of the response	Providing new background knowledge for the development of new/strengthening of existing policies/ laws
7	New policies/laws where climate change was mainstreamed as a result of the response	-
8	Country integrating climate change mitigation and/or adaptation issues into its planning and policies as a result of the response	Providingnew background knowledge for the development of new/strengthening of existing policies/ laws
9	New or strengthened Public-Private Partnerships (PPP) created directly as a result of the response	Providing background for informed investments and PPP for green water technology deployment is key to assistance
10	New or strengthened twinning arrangement	-

	created as a result of the response	
11	Capacities to access and attract public and private finance increase to enable financing of technology deployment	Providing background for informed investments and PPP for green water technology deployment is key to assistance
12	Post-response intervention funding attributable to the response.	A concept note for future projects based on assistance and identification of financing institutions is essential to the assistance
13	Framework and analysis of local production developed to enable deployment of national production of climate technologies	Feasibility study is based on local context

3.2 Co-benefits

	Sustainable Development Goal	Contribution from CTCN assistance
1	End poverty in all its forms everywhere	Provides opportunities for income generating activities
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Improved accessibility and quality of water services leads to improved hygiene
3	Ensure healthy lives and promote well-being for all at all ages	Improved accessibility and quality of water services leads to improved health
4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	Accessibility to water encourages girl education opportunities in the ASAL areas. It also improves all aspects of livelihood including education.
5	Achieve gender equality and empower all women and girls	Gender equality is an essential co-benefit of improved access and quality of water services. The accessibility to water will also liberate women to more productive economic activities
6	Ensure availability and sustainable management of water and sanitation for all	Sustainable management of water resources through green climate-proofed technologies and sustainable finance mechanisms
7	Ensure access to affordable, reliable, sustainable, and modern energy for all	Assistance will contribute to less costly, reliable and sustainable energy for water management
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	The assistance will form basis for the Danida Green growth programme whose objective among others is to create employment. This research will also result in green technologies which are economically feasible for domestic and agricultural purposes.
9	Build resilient infrastructure, promote inclusive	Support to a sustainable model for

	and sustainable industrialization and foster innovation	providing climate-proofed infrastructure
10	Reduce inequality within and among countries	Accessibility and sustainable management of water is a sustainable development goal for all nations. CTCN's assistance to Kenya in achieving this goal will bridge the inequality gap with other nations
11	Make cities and human settlements inclusive, safe, resilient and sustainable	Assistance aims at improving water access and quality in poor urban settlements
12	Ensure sustainable consumption and production patterns	Promotes sustainable water resource management
13	Take urgent action to combat climate change and its impacts	Use of wind and solar power and climate-proofing of infrastructure
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	-
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Promotes sustainable water resource management
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Accessibility of water will reduce water related conflicts, reduce inequalities and build effective, accountable and inclusive institutions from the community level (management at CBO level) to National level (WSTF).
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	The PPP business model, concept note for future projects and identified green technologies will open areas of global partnership in sustainable development in the water sector.-

3.3. Post-assistance plans and actions

Immediate post-assistance plans include actions that may support the replication of the PPP business model and the scaling-up of selected water technologies to be deployed in other regions of the country. Immediate post-assistance plans and actions based on the recommendations and results produced under the CTCN assistance also include the direct instrumental use of the knowledge produced on the technologies and PPP for the technology pilots planned and water sector and green technology related activities planned under the Danida (2016-2017) and EU climate proofed infrastructure. Through the DANIDA green growth and EU climate proofing programmes, WSTF envisages to utilize the post assistance results and the PPP business model by formalizing the green technologies and the PPP business models in its financing frame work for communities being supported among them WRUAs, CBOs and WSPs. The private sector will be engaged in replicating the green technologies and business model beyond the pilot counties.

WSTF will utilize the post- technical assistance to catalyse for further resource mobilization to compliment the traditional development partners to include private sector financiers.

3.4 Monitoring and Reporting of technical assistance results and impacts

Expected activities and milestones under this assistance are explicitly described in sections 1.3,3 and the performance indicators table below (see also log frame in annex). Activities progress and deliverables will be monitored closely by the Lead Implementer of this Response Plan with the collaboration of the NDE in Kenya and CTCN. The Lead Implementer is responsible for verifying project progress against timeline and associated milestones and communicates these results to the NDE and CTCN. At the end of each activity, the Lead Implementer will provide a short summary of lessons learned of the activity reflecting on the progress, successes and challenges encountered during the activity. Every month a teleconference with country and international partners is held to communicate the state of advancement of the project, challenges, possible needs for adjustments etc. The Lead Implementer is responsible for planning these. All suggested changes to the activities, processes and/or approaches as outlined in current response plan must be accepted by the CTCN and NDE before they can be applied.

Performance indicators of CTCN Assistance				
Response output *(linking to sec 1.3)*	**How output will be used to ensure creation of result**	**Expected result**	**Expected outcome of result** *(linking to sec 1.1)*	**Anticipated impact that outcome will produce** *(linking to section 3)*
Selection of technologies.	*Selected of adapted technologies in water supply in ASAL and peri-urban areas*	*List of technologies provided for feasibility study*	*Technologies chosen for feasibility study*	-
Feasibility study report	*Recommendation on feasibility of selected technologies*	*Increased knowledge on the feasibility of selected technologies*	*Implementation of the most feasible technologies Low cost water supply in ASAL and peri-urban areas*	*Increased use of low cost green technologies in water supply*
Multi-stakeholder consultations to identify PPP	*Holding of consultative forums with different relevant stakeholders in the Water sector*	*Identification of opportunities for PPPs*	*Increased avenues/ opportunities for PPPs*	*Increased PPPs*
Public Private Partnership business model is developed	*Clear communication of business case to*	*A PPP model developed*	*Increased PPP in water supply*	*Improved quality and water access Improved livelihoods*

	suitable partners			
Capacity building workshop	*Conducting of capacity building workshops for both private and private actors interested in PPP*	*Enhanced knowledge and capacity of PPP actors*	*Increased knowledge of the PPP model and possibilities*	*Enhanced capacity in PPP model implementation*
Development of concept note	*Concept note will be used as a basis for the implementation of future projects*	*Informed investment in water supply*	*Increased access to sustainable water*	*Improved livelihoods for the people*
Final report	*Draft final report will be analyzed for the dissemination of output and recommendations*	*Lessons learnt and recommendations. Action plan on the recommendations of the final report*	*Increased investment in low cost green water technologies in ASAL areas*	*Availability and sustainable management of water resources*

4. Signatures

Signatures of the requesting country

NDE

Name: Dr ARTHUR S. ONYUKA
Title: Senior Research Scientist
Date: (NDE - KEMRI) 14/3/2016
Signature:

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Request Proponent

Name: ISAAC TIMMY M SHAYO
Title: CEO – WATER SERVICES TRUST FUND
Date: 15/3/2016
Signature:

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Signatures of the CTCN

CTCN Director

Name: JUKKA UOSUKAINEN
Title: DIRECTOR, CTCN
Date: 10-03-2016
Signature:

Climate Technology Manager

Name: JASON SPENCER
Title: CTM
Date: 10.3.2016
Signature:

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Annex 1: Response Logframe

Activity *(link to sec 2)*	**Description of sub-activities conducted by the CTCN**	**Output/ Deliverable** *(link to sec 2.9)*	**Expected Outcome** *(link to sec 3)*	**Main national partners involved**	**Objectively Verifiable Indicator** *(see Annex 5 guidance)*	**Means of Verification** (data source, method of collection, responsibility and periodicity)
Activity 1: ***Technology prioritization***	*Activity 1.1. Selection of technologies*	*List of selected green technologies*	List of technologies provided for feasibility study Technologies chosen for feasibility study	WSTF, MWI, WARMA, NDE	No. of technologies selected	Final list of selected technologies Timely submission
Activity 2: ***Feasibility study of the selected technologies***	*2.1 Preparation phase: identification of main stakeholders, consultations, finalization of framing, RQ, methodology. Identification of target area*	Study Methodology, Data collection tools, Study work plan Report on agreed feasibility study framework	An in-depth analysis of the technical, social and economic feasibility of three selected green water technologies is provided	WSTF, MWI, WARMA, NDE	Study methodology developed, no. of data collection tools, developed work plan Report on agreed feasibility study framework	Timely submission of report

	2.2 Data Collection	Field data; Data from desk study List of interviewees and interview guides	Quality feasibility study report	WSTF, MWI, WARMA, NDE	Amount of data collected No. of data sources used No of interviewees and quality of interview guides	Data sources (records/ reports from MWI, WSTF, WARMA and CBO offices), Desk review report.
	2.3 Data Analysis and Submission of final feasibility report	Final Feasibility study report	Stakeholder awareness on the feasibility of selected technologies	NDE, WSTF, MWI, WARMA	Amount of data analysed; Quality of draft feasibility report Diversity of sources used; Response Implementer efforts days; Recommendations; Level of detail used	Technologies Feasibility report Analytical tools used Timely submission
Activity 3:	*3.1 Identification and consultation of relevant stakeholders*	List of stakeholders identified Consultation report	Increased opportunities for PPPs	NDE, WSTF, WARMA, MWI, Danish embassy in Kenya	No. of PPPs identified, No. of Stakeholder consultations held Diversity of stakeholders involved	PPP identification report Stakeholder consultations report Stakeholders selection criteria/report

	3.2 Design of a PPP business model	PPP model developed for selected water technology	Increased partnerships and increased water supply in ASALs.	NDE, WSTF, WARMA, MWI, Danish embassy in Kenya	No. of PPP models developed	PPP model report for selected water technology
	3.3 Capacity building workshop for PPP actors.	Workshop report	Enhanced capacity of PPP actors	NDE, WSTF, WARMA, MWI, Danish embassy in Kenya	Post training evaluation and feedback (and minutes) No. of people trained	List of trainees, Capacity building report, training programme, training evaluation and feedback
Activity 4:	*4.1 Development of a project concept note*	Project concept note	Informed investment and improved water supply.	NDE, WSTF	Quality of project concept note developed	Project concept note
	4.2 Future funding opportunities	List of potential funding institutions Recommendations for future funding report Recommendation report	Increased funding in the water supply	NDE, WSTF	No. of funding institutions identified	List of potential institutions, Funding programmes, application criteria

4.3 Recommendations for future actions	Final report of activities and outputs and recommendations for future action Report layout Print and shipment of report copies	Informed and improved investment in water supply.	NDE	No. of reports submitted Recommendations; Scope of dissemination; Uptake of recommendations;	Final report

Annex 2: Indicative list of performance indicators

Overall Activity	Specific Activity	Indicator
Capacity Building	▪ development and delivery of workshops ▪ development and delivery of trainings (e.g. webinars, e-learning, ad-hoc) ▪ development and delivery of toolkits	Number of participants trained or training days received; Post training evaluation and feedback (and minutes); CTCN Knowledge Management System (KMS) users; Webinar content/minutes/feedback; e-learning content/feedback
Advisory	▪ development of needs assessment/ studies/ reports/ etc. ▪ establishment/development of recommendations	Diversity of sources used; Response Implementer efforts days; Recommendations; Scope of dissemination; Level of detail used; Feedback; Uptake of recommendations
Policy development	▪ development of strategy ▪ drafting of implementation plan ▪ formulation inputs to policy/ law	Strategy available and adapted to local context and national priorities; Number of interview/events conducted to developed the strategy/ plan; Strategy/Plan dissemination; Number of technologies recommended in the strategy/plan; Scope of changes recommended by the strategy/plan.
Project implementation	Mitigation ▪ Energy supply ▪ Energy use ▪ Industry ▪ Transport ▪ Agriculture ▪ Waste management ▪ Forestry Adaptation ▪ Water ▪ Infrastructure, transport and urban design ▪ Early warning and environmental assessment ▪ Coastal zones ▪ Agriculture and forestry	Outputs available and adapted to local context and national priorities; Level of private sector participation; Planning/Outputs distributed to decision makers with feedbacks; Integration of outputs/outcomes into planning of host country; implementation of outputs/outcomes by host country or other multi/bi-lateral organisation; Level of cooperation between Response Implementer, NDE and Response Proponent(s).

Overall Activity	Specific Activity	Indicator
	▪ Human health ▪ Marine and fisheries	
Development of a new partnership or strengthening of an existing one	▪ Development/ Establishment of basis for Twinning ▪ Development/ Establishment of basis for PPP ▪ Development/ Establishment of basis for knowledge partnership	

Annex 3: Proposed participants for the consultation meetings and private sector engagement/ experience sharing workshops.

No.	Organization	Proposed representatives
1.	Ministry of Water & Irrigation- MWI	2
2.	International experts/ CTCN/ UNEP-DTU	4
3.	National Designated Entity- NDE	4
4.	*Water Services Trust Fund- WSTF (Proponent)- Management representatives, Investment managers, technical officers, Resource mobilization, monitoring and evaluation & communications*	14
5.	*Ministry of Environment & Natural Resources*	2
6.	*Water Resources Management Authority (WRMA)*	2
7.	*Water Services Regulatory Board- WASREB*	2
8.	*National Environment Management Authority- NEMA*	2
9.	*Ministry of Energy*	2
10.	*Renewable Energy companies*	2
11.	*Local and International institutions of higher learning*	5
12.	*County Government*	8

13.	*Local community (CBOs, WRUAs and WSPs)*	6