

Country	Mauritius
Request ID#	2016000004 (amended)
Title	<i>Identification and characterisation of potential sand resources for beach rehabilitation</i>
NDE	<i>The Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division)</i>
Proponent	<i>Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division)</i>

Summary of the CTCN technical assistance

The Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division) hereafter called MSSE of the Republic of Mauritius, has requested CTCN Technical Assistance for the "Identification, Characterization and exploitation of Potential Offshore Sand Banks/Deposits". Many of the sandy beaches along the Mauritius coastline are eroding and the erosion will be aggravated due to the impact of Climate Change.

A recent site visit supported by the CTCN and made by a coastal expert from DHI has concluded that the original idea of finding suitable sand for beach nourishment offshore is not feasible. It was also determined that plenty of good quality sand can be found on-shore from where it can be excavated and placed on the beaches using local contractors. Therefore, the original scope of work has been change from a marine geophysical survey to a technical assistance focusing on helping MSSE to draw up plans and permits for using land based sand as a source for beach nourishment, also including Environmental Impact Assessment considerations. This will ultimately enable MSSE and MOI to develop an adaptation strategy for identification and management of a new land based sand site as a source of sand for beach nourishment.

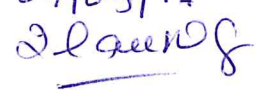
The goal of the proposed technical assistance is to support Mauritian authorities, especially MSSE in their expertise to solve future issues with beach erosion and stability, thus assisting their national capacity on this matter in the future.

Agreement:


(If possible, please use electronic signatures in Microsoft Word file format)

National Designated Entity to the UNFCCC

Technology Mechanism

Name: S. K NG YON WING
Title: Director of Environment
Date: 07/09/17
Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Jukka Uosukainen
Title: CTCN Director
Date:
Signature: 

1. Background and context

The Ministry of Environment, Sustainable Development, and Disaster and Beach Management (MSSE) of the Republic of Mauritius, has requested CTCN Technical Assistance for the “Identification, Characterization and exploitation of Potential Offshore Sand Banks/Deposits”. This is because many of the sandy beaches along the Mauritius coastline are eroding and the erosion will be aggravated due to the impact of Climate Change. The beaches are of great importance for Mauritius, partly as an integrated part of the marine, coral and lagoon environment and partly as an important landscape resource of great importance for the tourism industry. Consequently, it is of great importance to identify sustainable ways of protecting the beaches against historical and future erosion. Consequently, at first the CTCN assistance was used for identification and Characterization of potential Sand Resource areas.

For the first activities, the objective was to determine if marine sand resources were available in areas where sand mining is feasible and legal and to perform geophysical surveys in selected resource areas to ascertain the quantity and quality of the identified sand and to determine if the sand is suitable for beach nourishment activities.

However, the result of the site visit to the potential offshore sand mining areas (former activity 1) showed that it was not feasible to use sand from offshore sand mining areas for beach nourishment (see deliverable 1). This conclusion makes the planned shallow seismic survey redundant. DHI, as CTCN expert contracted, has recommended an alternative activity 2 to strengthen the MSSE’s and MOI’s capacity to manage the existing beaches and to make plans and environmental impact assessments for utilizing land based sand resources.

The activities planned consist of the following main elements which shall be accomplished during a 2 week visit by an expert from DHI:

- Making beach erosion management plans for 1 -2 beaches
- Identifying possible sites for land based sand mining and making plans for opening a land based sand quarry prior and/or during the training together with MSSE and MOI. The plan must include plans for the closure including land use after sand extraction
- Assisting in making an EIA for a land based sand quarry

By having staff from MSSE involved in all three activities and the MOI also involved in the beach erosion management plan, these two organizations will be able to make similar actions for all the relevant beaches on Mauritius. For that reason, the activity 2 as described in the original response plan is hereby amended with the activities described in section 3.

2. Problem statement

See CTCN Response Plan: “Identification and Characterization of potential Sand Resources for beach rehabilitation” Request Identification Number: 2016600004.

3. Logical Framework for the CTCN Technical Assistance:

<p>Objective: Strengthen MSSE and MOI capacity to manage the existing beaches and to make plans and environmental impact assessments for utilizing land based sand resources.</p> <p>Outcome: Increased expertise of MSSE and MOI staff to manage the existing beaches and to make plans and environmental impact assessments for utilizing land based sand resources</p>												
Month												
	1	2	3	4	5	6	7	8	9	10	11	12
<p>Output 1: Strengthen expertise of Mauritius practitioners in managing the existing beaches and in conducting EIA for land based sand resources</p> <p>Activity 1: Mauritius Beach Erosion Management Plans The implementer will conduct a two weeks training in Coastal Erosion Management. After the training, the participants will have strengthened their capacity to prepare an adaptation strategy for long-term requirement for sand for beach nourishment in Mauritius and the economic implications.</p> <p>The training will consist of the following main topics:</p> <ol style="list-style-type: none"> Detailed beach erosion management plans for 1 -2 beaches on Mauritius, including impact analysis of the hard structure in the two sites and exercises on sediment budgets. Part of the capacity building will to take into account a balanced view of some of the hard structures, considering those that have specific cultural and religious value (e.g. the shrines in the selected sites). Plan for opening a land based sand quarry. The plan will include plans for the closure including land use after sand extraction. Strengthening the EIA protocol with elements related to land based sand harvesting. The training will also include the assessment of existing sand land quarries at St Felix and Macconde in terms of the sand quality. The sieving and coring equipment and the logistics of the site visits of the two sand quarries will be borne by MSSE and MOI. Review of draft plans and recommendations <p>All three activities will be carried out by two experts during two weeks visit to Mauritius. After the visit by the experts, the developed draft plans will be further developed by the local stakeholders and reviewed by the experts.</p>	X											
<p>Deliverable 1:</p> <ol style="list-style-type: none"> Detailed beach erosion management plans for 1 -2 beaches on Mauritius Plan for opening a land based sand quarry. EIA for one land based sand quarry Review of draft plans and recommendations Closure and Data Collection report (CTCN template to be provided) 	X											

4. Resources required and itemized budget:

Activities and Outputs	Input: Human Resources (Title, role, estimated number of days)	Input: Travel (Purpose, national vs. international, number of days)	Inputs: Meetings/events (Meeting title, number of participants, number of days)	Input: Equipment/Material (Item, purpose, buy/rent, quantity)	Estimated cost	
					Minimum	Maximum
Output 1: Strengthen expertise of Mauritius practitioners in managing the existing beaches and in conducting EIA for land based sand resources						
Activity 1 Working on site including travel	2 Experts from DHI 12 days	One trip TR Mauritius 20 x hotel etc.	Training and meetings with stakeholders on Mauritius	Equipment for coring or sieving is borne by MSSE and MOI	37,000 \$	39,200\$
Reporting	5 days	NA	NA	NA	5,700\$	5,700\$
Estimated range of costing for the entire Response Plan					42,700\$	44,900\$

5. Profile and experience of experts

Experts required	Brief description of required profile
Two coastal experts	Expertise in: Coastal morphology, Environmental Impact Assessment, Geomorphology, Geology and Culture Geography.

6. Intended contribution to impact over time

Sustainable management and maintenance of Mauritius beaches based on local knowledge and workforce. Authorities cooperating with local contractors have experience and knowledge on how to maintain the beaches and how to make beach nourishment in case where it becomes necessary.

The do nothing scenario will be to let consultant and contractors from abroad do all the work which will prevent local involvement.

7. Relevance to NDCs and other national priorities

See CTCN Response Plan: "Identification and Characterization of potential Sand Resources for beach rehabilitation" Request Identification Number: 2016600004

8. Linkages to relevant parallel on-going activities:

See CTCN Response Plan: "Identification and Characterization of potential Sand Resources for beach rehabilitation" Request Identification Number: 2016600004

9. Anticipated follow up activities after this technical assistance is completed:

See CTCN Response Plan: "Identification and Characterization of potential Sand Resources for beach rehabilitation" Request Identification Number: 2016600004

10. Main in-country stakeholders in implementation of the technical assistance activities:

In country stakeholder	Role in implementation of the technical assistance
<i>National Designated Entity/Ministry of Environment (NDE/MSSE)</i>	<i>Participate to the training and develop with the implementer the draft plans Logistic support (office space, transport facilities, amongst others)</i>
<i>Mauritius Oceanography Institute (MOI)</i>	<i>Participate to the training and develop with the implementer the draft plans</i>

11. SDG Contributions:

Please refer to the original response plan

12. Classification of technical assistance:

Please refer to the original response plan

13. Monitoring and Evaluation process

Please refer to the original response plan