



Request for Proposals Environmental Consultant

Minerals (Stone, Gravel and Sand) Sector Study in St. Kitts and Nevis

A. GEF IWEco Project Background

The Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (GEF IWEco Project) is a five-year regional project that seeks to address water, land and biodiversity resource management as well as climate change. It is funded by the Global Environment Facility (GEF) and UN Environment Programme (UNEP) is the lead Implementing Agency for national and regional sub-projects. The Secretariat to the Cartagena Convention, UNEP CAR/RCU and the Caribbean Public Health Agency (CARPHA) are the co-Executing Agencies. Partnership is a central tenet of the project which is being implemented through a network of international, regional and national partners. St. Kitts and Nevis is one of ten participating Caribbean small island developing states (SIDS).

IWEco's objective is to contribute to the preservation of Caribbean ecosystems and the sustainability of livelihoods through the application of existing proven technologies and approaches that are appropriate for small island developing states through improved fresh and coastal water resources management, sustainable land management and sustainable forest management that also seek to enhance resilience of socio-ecological systems to the impacts of climate change.

The GEF-IWEco St. Kitts and Nevis National Sub-Project was launched on Tuesday, February 26th, 2019 in Basseterre, St. Kitts. The project entitled, "Addressing Impacts of Acute Land Degradation in the College Street Ghaut in St. Kitts and Quarries and Sand Mining Hotspots on Nevis" will aid to strengthen the institutional capacity, improve policy framework and facilitate pilot projects within the College Street Ghaut watershed in St. Kitts and key quarry sites and nearby wetlands and coral reefs in Nevis. The co-executing agencies in St. Kitts and Nevis are the Department of Environment, Ministry of Agriculture, Marine Resources, Cooperatives, Environment and Human Settlement in St. Kitts and the Department of Physical Planning and Environment of the Nevis Island Administration.

Project activities in St. Kitts will aim to reduce soil erosion and nutrient loading and overall land degradation in the College Street ghaut via cleanup of debris, rehabilitation of bridges and retaining walls, as well as planting of trees and grasses. Restoration activities in Nevis will focus on reforestation at an abandoned quarry at Hicks Estate, improvement of quarry operations to stem sedimentation, coral reef survey and restoration at Indian Castle, New River, Dogwood and Long Haul. Together with on-the-ground restoration work, the project will seek to update and improve policies, legislation and institutions related to sustainable land and water management in St. Kitts and Nevis.

B. Situational Analysis

Quarry operations

On **Nevis** the issue of land degradation associated with poor quarry management practices to reduce excessive sediment discharge warrants urgent redress. Quarries are one of the primary sources of sedimentation in nearby ghauts (dry riverbed / ravine). As a result, there are negative impacts on coral reefs and mangrove swamps. Currently, there are four active quarries on the island, all of which are on land leased from Government and operated by either private companies or statutory body (Nevis Land and Housing Corporation). These quarry sites cover over 50 acres of land and are located in the area of New River and Indian Castle along the eastern and southern sides of Nevis. A similar situation exists in **St. Kitts**. However, there is only one quarry located at Canada Estate which is owned and operated by the Government of St. Kitts and Nevis (GSKN) through the Public Works Department.

The different operations produce boulders, coarse base, fine base, aggregate (range from 1" stones to 3/8" stones and stone dust), various grades of sand, and filling material for road and runway construction, on demand in the construction industry.

St. Kitts and Nevis has seen significant growth in the hospitality sector over the past years, with the construction of high-end properties placing extra demand on the supply of gravel, stone and sand. The quarry sites are covered by semi-deciduous dry scrub forest, sparsely dense vegetation with a few patches of open canopy. The issue being faced is that most of these operations do not implement measures to stabilize displaced overburden and mitigate the flushing of sediment into ghauts and/or into the marine environment during heavy rains. Various stakeholders have been raising concern over degraded beaches and the high sedimentation rates.

Sand extraction operations

Nevis has clearly cracked down on illegal beach and ghaut sand mining in recent years and sand is currently imported from various location into Nevis. This process is managed by the Ministry of Finance in the Nevis Island Administration. On the other hand, beach sand mining is allowed at only one location in St. Kitts at Belle Tete. This is closely supervised by the Public Works Department. Ghaut sand mining is also allowed at Lodge. However, illegal activities have taken place at other beaches and ghauts over the years. That being said, the extraction of sand at these locations is not sustainable and not tightly regulated.

C. Scope of the Assignment

We are inviting qualified consulting firms (or consortium of consultants) to submit technical and financial proposals based on the following tasks:

1. Status of the minerals industry (focus on four functioning quarries at New River and Indian Castle in Nevis and one at Canada Estate in St. Kitts as well as sand extraction in St. Kitts only)
 - Analysis of quarry and sand mining operations and how these can be improved in order to reduce the impacts of land degradation and sedimentation
 - Determination of sustainable aggregate extraction rates in St. Kitts and Nevis
 - Feasibility / cost benefit analysis of various scenarios / locations for sustainable sand extraction in St. Kitts
 - Analysis of options related to sand importation based on the experience and lessons learnt in Nevis and within the Caribbean region. This should include an analysis of the economic impact of sand importation on the local economy especially the construction sector.
 - Analysis of ways to reduce the demand for sand through the use of alternative materials for construction
2. Design of at least two on-the-ground interventions that can be implemented by the IWEco Project in 2020-2021 to improve quarry operations in order to mitigate flushing of sediments into nearby ghauts and coastal environments in Nevis.
3. Development of best practices guidelines for minerals extraction, exploitation and processing including mine layout, extraction and rehabilitation practices in St. Kitts and Nevis.
4. Development of rehabilitation plans for 4 operational quarries in Nevis and 1 in St. Kitts as well as rehabilitation plans for sand mined areas in St. Kitts (Lodge and Belle Tete).
5. Training of all current operators as well as relevant government officials in best practices
6. Analysis of institutional, policy and legislative frameworks related to the minerals sector
 - Recommend any changes to legislation (namely Development Control and Planning Act / Ordinance and National Conservation and Environment Protection Act NCEPA) including draft regulations as needed
 - Develop a standard lease to be used for quarry operations done on public lands
 - Develop a permitting system for quarry operators which includes templates for mine design and rehabilitation plan (based on the best practices guidelines developed under Task 3)
 - Presentation of results to all relevant government officials

D. Expected Outputs:

1. Inception report with methodology and approach, including the findings of the desk review, field visits and stakeholder engagement highlighting gaps, recurring themes, challenges, opportunities and initial recommendations for improvement of the minerals sector in St. Kitts and Nevis.
2. An analysis report incorporating all elements described in tasks 1 and 2.

3. Development of best practice guidelines and rehabilitation plans as outlined in task 3 and 4 and training of all current quarry operators and relevant government officials in St. Kitts and Nevis.
4. A report / toolkit for institutional, policy and legislative improvements to the management of the minerals sector in St. Kitts and Nevis.
5. Final Report on the consultancy with assessment of tasks performed and recommendations.

E. Duration

Expected Duration	10 months
Target Start Date	February 15, 2020
Completion Date	December 15, 2020

F. Required Experience

The consulting firm should provide staff with at least five (5) years experience in minerals (stone, gravel and sand) exploration, exploitation and processing / geotechnical engineering / geology, environmental management and policy / legal analysis of the minerals sector.

G. Payment Schedule

Payment will be on the basis of outputs as follows:

- 10% at the start of the assignment once a contract has been signed.
- 15% upon approval of Draft Output No. 1 (Inception report)
- 20% upon approval of Draft Output No. 2 (Minerals Sector Analysis Report)
- 20% upon approval of Draft Output No. 3 (Best Practices Guidelines, Rehabilitation Plans and Training Report)
- 20% upon approval of Draft Output No. 4 (Toolkit for Institutional, Policy and Legislative Reforms)
- 15% upon approval of Final Reports

H. Evaluation Criteria

Proposals will be evaluated based on price/cost effectiveness, methodology, qualifications and experience.



I. Submission Requirements

Proposal submissions are to include:

- A technical proposal (including a workplan and timelines for deliverables)
- A financial proposal

Proposals must not exceed 20 pages in length. The currency of the proposal should be in USD. Please include evidence of similar project(s) successfully undertaken. Professional background (CVs) of person(s) to conduct the exercise along with other material deemed to be relevant to the proposal should be attached as annexes.

Proposals should be sent to the Halla Sahely, GEF IWEco SKN Project Coordinator via email (halla@sahely.com) no later than **January 15, 2020**.