

## Caribbean Aqua-Terrestrial Solutions

### Component 2- Roll-on Phase: Management of Coastal Resources and Conservation of Marine Biodiversity in the Caribbean

#### Terms of Reference

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Assessment and feasibility study of the SSMR to determine the health of benthic habitats, the nature and diversity of life forms and a biophysical survey of the seafloor that can inform management action and support zoning for conflict resolution and marine ecosystem conservation.

CARICOM – CARPHA Caribbean Public Health Agency  
P.O. Box 1111, The Morne, Castries, Saint Lucia

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A programme implemented by GIZ and CARPHA



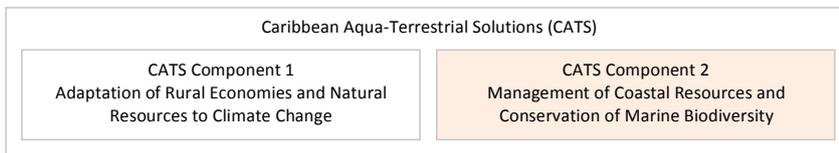
## Scope

This Terms of Reference (ToR) defines the parameters for an the assessment of the marine and coastal resources of the SSMR to assess the status and health of the benthic habitats, the nature and characteristic of the sea floor, inform management actions, identify best possible locations for selected infrastructural development, identification of opportunities to generate sustainable income streams and reduce conflict in resource use for the local communities and the Local Area Management Authority (LAMA).

### 1. The CATS 2 Programme

This assistance is part of a regional programme between Germany and the Caribbean Community (CARICOM), titled Caribbean Aqua-Terrestrial Solutions (CATS), and specifically it's Programme Component 2 'Management of Coastal Resources and Conservation of Marine Biodiversity in the Caribbean'. In the five CARICOM countries of Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines, CATS Component 2 focuses on improving the sustainable management, and in particular the sustainable financial management of Marine Managed Areas (MMA)

The CATS Programme is the result of a merger of two initially, separately conceptualized projects (now 'Programme Components 1 and 2), namely on "Adaptation of Rural Economies and Natural Resources to Climate Change" and on the "Management of Coastal Resources and Conservation of Marine Biodiversity in the Caribbean". CATS applies an integrated Ridge-to-Reef Approach (RtR), and as a whole addresses the increasing vulnerability of Caribbean SIDS and Low-lying Coastal States to climate change and the attendant negative impacts on coastal communities and economies, ecosystems (terrestrial and coastal/marine), and coastal natural resources management.



CATS is implemented jointly between the Caribbean Public Health Agency (CARPHA), the German Development Cooperation (GIZ, Deutsche Gesellschaft für Internationale Zusammenarbeit) and the programme's national (focal) partner institutions in the Countries. It is implemented from January 2012 until March 2017.

### The Situation of Coastal and Marine Environment and Environmental Management in the Caribbean

The region of the Western Indies and the Gulf of Mexico is a recognized marine and coastal biodiversity hotspot. At the same time, the Caribbean is one of the world's eco-regions extremely affected by excessive resources over-use and negative environmental impacts from climate change. The coastal marine ecosystems of the Caribbean, and in particular its coral reefs are already today among the most threatened on a global scale. In this respect, most affected are in particular the 15 coastal and Small Island Developing States (SIDS) forming the Caribbean Community (CARICOM). Their essential economic sectors like tourism and fisheries and thus their economies as a whole are highly dependent on the intactness and productivity of the coastal and marine environment, both in terms of direct resource use as well as regarding the use of services deriving from these environments. Given the critical exposure of the economies of the countries and larger parts of their population to these negative effects, their connection with sustainable income generation and poverty reduction at large scale is obvious.

It is today generally accepted that reaching sustainable solutions in an efficient manner is within the principles and approaches of Integrated Coastal Zone Management (ICZM). At the same time, the central importance of Marine Managed Areas (MMAs) is undisputed and this approach has been taken at almost 80 locations in the Caribbean to date. While ICZM at national levels is in its infancy in most CARICOM Countries, it is in fact the management of the numerous MMAs in the region that does not only have direct positive effects on the ecosystems and their resources, but at the same time does serve as small-scale pilot templates to learn from towards the bigger national scale. MMAs, when large enough and chosen to strengthen resilience against the effects of climate change, and if managed properly and sustainably, are just a smaller image of the larger picture. The CATS Programme does intervene at this logical point, intending to support the bridging between MMAs and national-scale ICZM.

CATS Programme Component 2 is built around two principal approaches, which are 1. The provision of advisory technical support over the entire range of issues and problems associated with sustainable MPA management and its linkage and integration into ICZM, and 2. The provision of financial support to demonstration and pilot projects and activities of identified importance for the sustainable improvement of financial management of at least 5 MPAs in the CATS region. Whenever possible, the inclusion of public-private partnership mechanisms (PPP) is specifically supported in the programme as PPP is seen as one of the keys to sustainable MMA management and ICZM in general. All CATS support is gender sensitive with a specific emphasis on management, empowerment and economic participation of women.

## 2. CATS component 2 indicators

The Overall Objective of CATS Component 2 is 'The management of existing Marine Protected Areas in selected CARICOM member states is improved'.

The Specific Indicators of CATS C2 are

- At least 5 coastal and marine protected areas are being managed sustainably according to business plans that include climate change and gender-sensitivity and which have been adopted by the countries involved.
- In at least 5 marine protected areas in the participating CARICOM member states, sustainable financing mechanisms are implemented.
- CARICOM has adopted Guidelines and Directives for the development, updating and implementation of MPA Management Plans.

### This service

## 3. Background

The SSMR is a defined geographical space located in Soufriere, Scotts Head and up to Anse Bateau, near the village of Point Michel, encompassing the immediate offshore waters and sub strata, as well as the adjacent coasts, which is managed in such a way so as to achieve the long term conservation, economic and cultural values of the area. The bay is a submerged extinct volcano crater plummeting to great depths and is characterized by an array of geologic features making it one of the best dive spot on earth. The SSMR was legally established under the Fisheries Act, Chapter 61: 60 Act 11 of 1987 and the Statutory Rules and Order No. 17 of 1998 for the avoidance of user conflict between fishermen and other emerging uses of the sanctuary. The Local Area Management Authority, which oversees the management of the SSMR, was created the said ACT of 1998.

The community of Soufriere and Scotts Head do not readily lend themselves to agricultural activity like communities in other parts of Dominica, due to the soil type and topography of the area. There are no factories or guest houses to generate economic activity in those communities and the main source of income and local livelihood are marine based activities including fishing. Given the heavy reliance on the extractive use fisheries sector, the communities around the SSMR are very much dependent upon the ecological intactness and the health of the coral reefs in particular and the greater marine environment. These communities are therefore in general quite vulnerable to the effects of climate change like intense hydrometeorological phenomena such as hurricanes, storm surges, tsunamis and landslides.

#### **4. Intervention logic and objective of this service**

Soufriere and Scotts Head, like most other communities in Dominica, are faced with growing unemployment and limited opportunities in agricultural development and economic diversification given the unique geology of the area. As a result, historically, there has been an over-reliance on fishing and yachting as major economic contributors to the local economy. However, since the passage of legislation that led to establishment of the SSMR, restriction in fishing and discontinuation of yacht anchoring in the SSMR, has adversely impacted the local economy for many years. While tourism is now growing and holding great promise for economic development, there is concern that developments within the SSMR can impair the health of marine ecosystems with irreversible damage to benthic floral and faunal communities.

Following discussions with Head of Program, CARPHA Management Team and stakeholders, very specific projects were identified and agreed upon to support community livelihood initiatives. The implementation of these projects within the SSMR would require detailed and careful assessment to ensure that they do not impair the health of marine habitats. This technical services assignment is therefore an essential prerequisite to the sustainable development of the marine reserve as a whole. The goal is to hire a short term expert (STE) or team of experts with the proven skills in conducting detailed surveys to conduct an assessment of the near-shore benthic habitats, geology, ecological systems within the SSMR and conduct requisite consultations to incorporate local knowledge in all deliverables. This will inform zonation to reduce conflicts in resource use, determine the feasibility of installing yacht moorings, construction of jetty system, refurbishment/enhancement of dive moorings and other interventions at the most cost effective means while optimising compatibility with the environmental, biophysical and social constraints of the area. With increase in number of users of the SSMR and the recent impact of Tropical Storm Erika, there is an urgent need for assessing the status and health of the marine reserve to inform whether managed zones are meeting their objectives of sustaining biological diversity and preservation of habitat health for ecosystem sustainability. This study is critical to guide the interventions and collaboration between community resource governance structure and the CATS Programme for the sustainable management of the resources within the SSMR. Additionally, the study will advance the implementation of measures determined necessary by a suite of management tools and mechanisms already developed from prior CATS programme support including the Sustainable Financing Mechanism, Legal and Organisational Framework and Communication Strategy and Plan

#### **5. The specific nature and objective of this Consultancy**

Sustainable management of MPAs are largely dependent on detailed knowledge of the status and health of the marine and coastal environmental conditions and the natural resources. Without exception, the condition of the underwater environment and resources of the SSMR, constitute the principal assets that support revenue generation. Moreover in MPAs such as the SSMR having 'conservation' as one of their principal management objectives, constantly and frequently updated information on the status of

the underwater environment is at the heart of environmental monitoring. Unfortunately, in many cases such crucial underwater monitoring is hampered by inadequate capacities of MPA management units.

The objective of this study is to assess the biophysical characteristics and health of SSMR benthic environments to determine the feasibility and optimum location for undertaking specific development projects such as a community yacht mooring, dive boat moorings and jetty project within the SSMR. The highly standardized reef check monitoring methodologies combined with biophysical assessment processes will be adopted to guide study exercise.

## 6. Detailed description of scope of work

The undertaking of any project within a protected area space will typically require objective and professional expertise at all phases of project planning and implementation phases. As a result, the scope of assessment and feasibility for development will demand rigorous assessment and in some cases, consultations to determine optimal locations and types of projects that can be accommodated. In this regard, the scope of this study is defined by comprehensive responses to the following questions:

- a. How could any proposed development adversely impact benthic and pelagic marine life in the SSMR?
- b. Where and how can they occur to minimize damage and interference while enhancing ecosystem services?
- c. What are the criteria for optimal site selection for any proposed development?
- d. Given the current and projected demand for SSMR resources, the characteristics of the marine and coastal ecosystem; and the culture and tradition of the communities involved, how feasible and sustainable is any proposed development in this protected area space?;
- e. What are the logistics and special site challenges of undertaking and developmental work?
- f. How appropriate are the proposed zonation and demarcations to reduce user conflict using a cross-fertilisation of scientific evidence and community consultations approach?
- g. What are the necessary mechanisms and approaches to reduce user conflict, sustain livelihoods and protect the integrity of the ecosystems?

In providing a comprehensive and definitive response to the above questions the consultant will be expected to undertake the following **key tasks**:

- i. A comprehensive assessment of the SSMR benthic environment, including biophysical characteristics, status and health of major habitats and species, and nature or type of any observed changes in the biotic and abiotic factors within the SSMR to determine:
  - Suitable indicators and baseline data for the continued monitoring
  - Type and management intervention that is needed to address underlying conditions
  - Technical feasibility of proposed developments (include design/types, placement, numbers and exact locations) especially relating to yacht moorings, dive moorings and jetty infrastructure
  - Financial feasibility and management requirements including the education and capacity building that would be needed of users and local managers to ensure ecosystem sustainability

Determination of how these proposed interventions contribute to the sustainable financing mechanism, resource conservation and livelihood potential of the SSMR

- ii. Produce a map of the SSMR demarcating the spatial dimension of different ecosystems including, coral reef, sea grass beds and other near shore aquatic habitats based on available existing maps, ground-truthing and in-water surveys;

- iii. Project financial returns from different revenue generating streams such as diving, snorkelling (day boat charters), moorings, and other forms of resource use over the next 5 years and propose optimum numbers for financial sustainability and environmental carrying capacity;
- v. Produce checklists of potential direct, indirect, induced, and cumulative impacts (through invasive species, habitat loss, contamination, overharvests, climate change) on habitats, ecosystem services, and valued ecosystem components in particular kinds of habitats and biodiversity circumstances in the SSMR
- vi. Complete a stakeholder analysis and a minimum of three (3) community consultations to gather input on the most appropriate co-management framework.

**7. Deliverables**

The Consultant shall submit the following products. Each product shall be submitted in the form of an electronic file (ex. MS-Word, MS-Excel and PDF, MS- Power Point):

- D1. Conduct an inception meeting with key project partners and submit report, detailed work plan and schedule 5 working days) after signing of contract;
- D2. Within 20 days) of signing of contract the consultant must submit a **geo-referenced** resource map with coordinates identifying major ecosystems and optimal location amenable to the proposed interventions, and bathymetric map with sub-terrain characteristics;
- D3. Within 30 days of signing the contract, the consultant will submit and evaluation report of the carrying capacity of SSMR ecosystems
- D4. Within 35 days of signing this contract, the consultant will be required to submit a checklist of impacts on habitats and ecosystem services
- D5. Within 45 days of signing the contract the consultant will submit a Draft Assessment Report (DAR) along with a baseline study.
- D6. Within 50 days of signing this contract, the consultant is required to submit a stakeholder consultation report to develop a co-management framework
- D7. Within 60 days of signing of this contract the consultant will submit a Final Assessment report
- D8. Within 60 days of signing of this contract the consultant is required to submit a final comprehensive consultancy report of all activities, deliverables challenges, lessons learnt and way forward for resource management within the SSMR

**8. Table of Deliverables**

D	Deliverables	Working Days - Timetable (2016)											
		5	10	15	20	25	30	35	40	45	50	55	60
1	Inception meeting report and work plan												
2	Georeferenced and bathymetric maps												
3	Evaluation report of the carrying capacity of SSMR ecosystems												
4	Checklist of impacts on habitat and ecosystem services												
5	Draft assessment report and baseline study												
6	Stakeholder consultation report												
7	Final assessment Report												
8	Comprehensive consultancy report of all activities, deliverables, lessons learnt and way forward												

## 9. This STE Consultancy

The consultancy by a short term expert (STE) or firm will contribute to CATS component 2 and objective 1 and 2

The consultancy will be supervised by Component 2 Roll-on Phase Program Officer. Additional backup, guidance and advice regarding the conduct of this assignment will also be provided by Head of Program (CATS) and /or by the (CARHA) Program Management Team.

## 10. Skills and knowledge requirements

The consultant/firm should show evidence of professional diving qualifications and relevant experience in marine biology or a closely related field, including outstanding knowledge of benthic ecosystems ecology. Preference is for a candidate who has undertaken similar survey work. Experience in surveying and underwater photography would be a distinct asset.

In order to be considered for this contractual work, he/she must demonstrate a combination of the following skills:

- a) A university degree and/or advance professional working experience related to coastal and marine resources management (i.e. fisheries, marine biology, marine geology etc), MMAs and marine spatial planning
- b) At least 3 years of experience in assessment of coastal and marine resources baseline studies
- c) Ability to conduct underwater biophysical surveys with good knowledge of reef check methodologies
- d) Good knowledge of Caribbean coastal and marine ecosystems with ability to identify common floral and faunal species in Dominica coastal waters, resource use conflict resolution and co-management of marine resources
- e) Ability to interpret and present survey results in a clear and concise manner
- f) Ability to work, consult and interact with a wide range of national, local coastal and marine resources users/management entities, and MPA managers
- g) Ability to use IT and reporting software to locate, compile and analyse data related to expected output of the consultancy
- h) Possess strong communication skills (verbal and written)
- i) Fluency in spoken and written English
- j) Highly motivated with readiness to work in both formal and informal settings of diverse stakeholder interests.

## 11. Characteristics of contract

Type of Engagement: Freelance Contract;  
Duration of Engagement: **60 Working Days**;  
Contract start: At the earliest.  
Contract end: No later than 15 September 2016.

## 12. Administration of Contract

The GIZ will issue the contract for the execution of this Terms of Reference to the selected Consultant or firm. Work done must be approved and signed off by the PIT, CFO and CATS before payment is made to the consultant.

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### 13. Payment

The Assignment will be performed for a lump sum amount, meaning that all costs are included in the service fee. No reimbursements whatsoever shall be made to the consultants for other costs incurred. Payments being made by the GIZ to the Consultant or firm are as follows:

- 40% on commencement of the assignment;
- 60% upon completion by the consultant of all deliverables and submission of final report approved by Program Officer and of Head of Program.

GIZ reserves the right to pay within 3-5 business days once the deliverables have been reviewed and approved.

### 14. Discretion

The consultant agrees not to disclose any confidential information, neither before, during nor after the provision of services. The scope of possible disclosures will be discussed with the client and will be limited solely and exclusively to what is strictly necessary for the performance of work. However, the customer will have the permission, if required, to use the work as a professional reference.

### 15. External Communication

The consultant is committed to always use the logos of CATS, GIZ, CARPHA and BMZ in the correct format. All official and external communication, before, during and after the consultancy, must be agreed with the project first.

### 16. Your Application

Application deadline for Expressions of Interest/ Proposals is: Friday 20<sup>th</sup> June, 2016.

To apply for this position, please submit:

- Letter of interest, detailing how you meet the qualifications and experience outlined above
- Up to date CV (clearly responding to the above stated requirements to the position)/Company Profile (incl. Registration Number and copy of registration document)
- A Technical proposal elucidating on your understanding of the proposal and addressing approach and methodology and any risks anticipated
- A separate Financial Proposal specifying the expected daily fee rate and the lump sum (cost for the contract in USD) see above (Payment) signed (and stamped, if a company/NGO). The quotation must include banking details for international transfers. Note: (1) The financial offer/Quotation needs to specify the time frame for delivery and completion of services and (11) the financial offer/quotation and invoices need to be signed by the consultant, in case of consultancy firm, bear the company stamp and contact details.
- A scanned copy of a valid ID e.g. Passport or Driver's License (both sides) of expert/ staff (individual expert and dedicated company staff)
- If a company/NGO, a copy of the certificate of incorporation and a valid ID of the responsible person, e.g. Managing/Executive Director

We strongly encourage applicants to submit their applications and complete set of annexes electronically in either MS Word Format or as a PDF.

Please apply to:

- Dr. Camille David, Program Officer, Commonwealth of Dominica ([camille.david@giz.de](mailto:camille.david@giz.de))
- Dr. Horst Vogel, Head of Program-CATS ([horst.vogel@giz.de](mailto:horst.vogel@giz.de))
- Mr. Forbes Robertson, CARPHA, ([robertly@carpha.org](mailto:robertly@carpha.org))

Cc to:

- Ms. Louenda George, Senior Admin & Finance Officer ([louenda.george@giz.de](mailto:louenda.george@giz.de))

Please note that only shortlisted candidates will be contacted for interviews.  
Please refrain from inquiries via phone