



## **Terms of reference**

### **Mapping Conservation Initiatives around the Cayman Trench**

#### **Background**

The Cayman Trench, also known as the Cayman Trough, is a deep-sea trench in the Caribbean Sea. It plays a crucial role in marine biodiversity due to its:

- **Unique geological features:** It is the deepest part of the Caribbean Sea, with depths reaching over 7,500 meters. This extreme depth creates a range of habitats from shallow coral reefs to deep-sea ecosystems. The trench is home to hydrothermal vent systems, particularly at the Mid-Cayman Rise. These vents release mineral-rich water that supports unique biological communities adapted to extreme conditions.
- **Diverse marine habitats:** The shallower regions of the Cayman Trench support extensive coral reefs, which are home to a wide variety of fish, invertebrates, and other marine life. The trench's depth and varying conditions foster diverse deep-sea habitats, including abyssal plains and seamounts, which are often less explored and understood but vital for global biodiversity.
- **Species richness:** The unique environmental conditions of the Cayman Trench support species that are not found anywhere else. Hydrothermal vents, for instance, host endemic species of bacteria, tube worms, and other organisms that rely on chemosynthesis rather than photosynthesis.
- **Migratory species:** The trench and surrounding waters serve as important migratory routes for large marine species such as whales, sharks, and sea turtles.
- **Ecological functions:** The trench plays a role in global nutrient cycling. Hydrothermal vents contribute to the distribution of minerals and chemicals in the ocean, which can influence marine productivity. Deep-sea environments like the Cayman Trench are important for carbon sequestration, helping to mitigate the effects of climate change by storing carbon in the deep ocean.
- **Scientific research and discovery:** The unique ecosystems of the Cayman Trench provide opportunities for scientific research, particularly in understanding life under extreme conditions and the adaptations of deep-sea organisms. Organisms found in the trench, especially those around hydrothermal vents, are of interest for biotechnological applications, such as enzymes that can function under high temperatures and pressures.



- Conservation importance: The unique and often fragile ecosystems of the Cayman Trench are vulnerable to human activities such as deep-sea mining, overfishing, and climate change. Conservation efforts are essential to protect these habitats and their biodiversity. The trench's biodiversity significance encourages international collaboration for conservation and sustainable use of marine resources, contributing to global efforts in marine conservation.

Protecting this area is crucial for maintaining marine biodiversity and the health of the global ocean ecosystem. Understanding and mapping current and past conservation initiatives in this region is essential for coordinating efforts, identifying gaps, and enhancing the effectiveness of conservation strategies.

## **Objective**

The primary objective of this consultancy is to map and analyze past and on-going conservation initiatives around the Cayman Trench. The consultant will identify research carried out in the region, key stakeholders, ongoing projects, funding sources, and conservation outcomes, as well as identified research and conservation gaps. This will provide a comprehensive overview of conservation efforts in the region and support the development of coordinated and strategic conservation planning.

## **Scope of work**

The consultant will be responsible for the following tasks:

- a) Conduct a comprehensive literature review of past and ongoing conservation initiatives, research, and reports related to the Cayman Trench.
- b) Identify main threats and root causes to the Cayman Trench's ecosystems and species.
- c) Identify and map key stakeholders involved in conservation efforts, including governmental organizations, UN, Cartagena Convention Secretariat, and/or regional collaboration bodies, non-governmental organizations (NGOs), academic institutions, and community groups.
- d) Identify diplomatic limitations/opportunities derived from the multinational character of the possible intervention of the Caribbean Biodiversity Fund (CBF) and the Mesoamerican Reef Fund (MAR Fund) in the Cayman Trench. (e.g. Countries involved, Belize-Guatemala pending marine border definition, Cayman Islands as a self-governing British Overseas Territory, US-Cuba investment limitations, regional treaties, etc.)
- e) Develop a database of ongoing conservation projects, detailing their objectives, funding sources, political supporters, geographic scope, timelines, and outcomes.
- f) Analyze the effectiveness and impact of past and existing conservation initiatives, identifying best practices and areas for improvement.
- g) Identify gaps in research needs and current conservation efforts and recommend strategies to address these gaps.
- h) Develop detailed maps and visualizations of conservation initiatives around the Cayman Trench.
- i) Prepare a comprehensive report summarizing findings, including recommendations for future research, opportunities for conservation efforts and potential niches for MAR Fund and CBF collaboration in the region.



## **Deliverables**

The consultant is expected to deliver the following:

- a) An inception report outlining the methodology, work plan, and timeline for the consultancy.
- b) A database of existing conservation initiatives and stakeholders.
- c) Detailed maps and visualizations of conservation initiatives around the Cayman Trench.
- d) A comprehensive final report summarizing findings, including analysis, recommendations, and potential areas for collaboration and by which partners.
- e) A Power Point presentation of the final report.

## **Duration**

The consultancy is expected to be completed within three months from the start date.

## **Reporting**

The consultancy will be implemented as desk-based work. Regular progress updates will be provided monthly. Follow up will be provided by CBF and MAR Fund, who will approve deliverables.

## **Confidentiality and copyright**

- **Confidentiality**
  - The consultant commits to carrying out the assigned tasks with the highest standards and ethical considerations. The contractor(s) reserve the right to instruct the consultant on the information that must be treated with confidentiality.
- **Copyright**
  - The contractor(s) hold the copyright to the products generated through this consultancy.

## **Payments**

Payments will be made upon approval of the following milestones:

- 30% after signature of agreement and presentation of work calendar.
- 40% on the completion of the mapping.
- 30% on the completion the final report.

## **Qualifications**

The required qualifications for this service include:

- a) Advanced degree in environmental science, marine biology, geography, or a related field.
- b) Knowledge of and experience in the Caribbean and the Cayman Trench are desirable assets.



- c) Proven experience in mapping and analyzing conservation initiatives, particularly in marine environments.
- d) Strong research and analytical skills.
- e) Proficiency in geographic information systems (GIS) and other mapping tools.
- f) Excellent written and verbal communication skills.
- g) Ability to work independently and manage multiple tasks effectively.

### **Application process**

Interested consultants are invited to submit the following:

- a) A detailed proposal outlining their approach to the consultancy, including methodology, work plan, and timeline.
- b) A financial proposal including the consultant's fee and any other anticipated expenses.
- c) Curriculum vitae of the consultant and any team members, highlighting relevant experience.
- d) Examples of previous work related to mapping and conservation initiatives.

### **Evaluation Criteria**

Proposals will be evaluated based on the following criteria:

- a) Understanding of the assignment and proposed methodology.
- b) Relevant experience and qualifications.
- c) Feasibility of the work plan and timeline.
- d) Cost-effectiveness of the financial proposal.

### **Deadline**

All applications must be submitted by April 18<sup>th</sup>, 2026, to [lsoto@marfund.org](mailto:lsoto@marfund.org) and [procurement@caribbeanbiodiversityfund.org](mailto:procurement@caribbeanbiodiversityfund.org). For any inquiries or further information, please contact: [lsoto@marfund.org](mailto:lsoto@marfund.org)