REQUEST FOR EXPRESSIONS OF INTEREST
(CONSULTING SERVICES – CONSULTANTS' QUALIFICATION SELECTION "CQS")

Assignment Title: Consulting Services for a Firm to develop an Exposure Layer Model for CCRIF SPC.

Reference No: ELM/2026 – CCRIF SPC - Exposure Layer Model for CCRIF SPC.

The primary objective of the Consulting Services ("the Services") is for the development of a geo-referenced database of exposed assets, including relevant attributes including but not limited to the ones in the current exposure model. It should incorporate various data sources, especially satellite imagery, census records and specific data provided from member countries.

The updated exposure layer model should implement a clear and robust methodology for classifying, categorizing, and aggregating exposure data, ensuring scalability and maintainability for future updates. The methodology should remain consistent across countries when using global and regional data, even with the inclusion of local, country-specific information.

Scope of the Assignment

CCRIF is searching for a modelling company or firm, referred to hereinafter as the "Firm", with experience modelling exposure for use in catastrophe modelling.

The expected services from a successful Firm are the following:

1. Develop a geo-referenced exposure database.
2. Interaction with CCRIF. The Firm is expected to interact with both the Senior Risk Management Specialist and the Risk Management Specialist via electronic mail and other means for requests of further information, updates or feedback on the development
3. Deliverables. The Firm is expected to deliver the following:
    a. Inception Report and Detailed Project Plan
    b. Exposure Layer Database
    c. Exposure Layer Model
    d. Validation Report and Technical Documentation

The firm must demonstrate, in a well-detailed Expression of Interest, the following:

- At least 3 years of demonstrable experience in developing and implementing geospatial models, particularly exposure or risk assessment models.

- The proposed lead modelers and technical experts must possess extensive experience (minimum 5-7 years) in geospatial analysis, risk assessment, and exposure modelling, with demonstrated success in similar projects.
- Clarity, feasibility, innovation, and alignment with best practices in their proposed methodology and approach.
- Ability to manage complex projects, adhere to timelines, and deliver within budget.
- Excellent communication skills for effective interaction with our team and stakeholders.

The services are expected to commence upon execution of the contract and the expected level of effort (LOE) is 5 months. The specific dates for deliverables will be agreed by contract. The specific dates for deliverables will be agreed during the negotiation of the contract.

The detailed Terms of Reference (TOR) for the assignment can be found at the following web address: *www.ccrif.org.*

CCRIF SPC now invites eligible firms to indicate their interest in providing the Services. Interested firms should provide information (brochures, description of similar assignments, experience in similar conditions, general qualifications and number of key staff etc.) demonstrating that they have the required qualifications and relevant experience to perform the Services. Interested firms are required to declare conflicts of interest.

The shortlisting criteria are based on the above listed Required Qualifications and Relevant Experience.

The Firm will be selected in accordance with CCRIF's Consultants' Qualification Selection (CQS). From the firms that submit an Expression of Interest, CCRIF SPC will select the firm with the best qualifications and relevant experience and invite it to submit its technical and financial proposals for negotiations.

Further information can be obtained at the address below.

Expressions of interest must be delivered in a written form to the address below by e-mail by February 13, 2026.

CCRIF SPC
***Subject Line* – CCRIF SPC - Exposure Layer Model for CCRIF SPC.**
Attn: Isaac Anthony, Chief Executive Officer
Registered Office: c/o Willis Towers Watson Management (Cayman) Limited, The White House (c/o Regus), 20 Genesis Close, George Town, P.O. Box 30600, Grand Cayman, KY1-1203, Cayman Islands
Email: procurement@ccrif.org

Terms of Reference

Development of an Exposure Layer Model for CCRIF SPC

1. BACKGROUND

Formed in 2007, the Caribbean Catastrophe Risk Insurance Facility (CCRIF) was the world's first multi country risk pool and the first to offer parametric insurance backed by traditional and capital markets. Designed to help Caribbean governments quickly access funds after hurricanes and earthquakes, CCRIF was born under the technical leadership of the World Bank and with a grant from the Government of Japan. It was capitalized through a multi-donor trust fund, with contributions from Canada, the European Union, the United Kingdom, France, Ireland, Bermuda, the Caribbean Development Bank, the World Bank, as well as through membership fees paid by participating governments.

In 2014, the facility was restructured into a segregated portfolio company (SPC) to facilitate expansion into new products and geographic areas and is now named CCRIF SPC. The new structure, in which products are offered through a number of segregated portfolios, allows for total segregation of risk.

CCRIF SPC is registered in the Cayman Islands with a board of directors which is responsible for governance and the strategic direction of the company and a chief executive officer with responsibility for managing the company on a day-to-day basis. It operates as a virtual organization, supported by a network of service providers covering the areas of risk management, risk modelling, captive management, reinsurance, reinsurance brokerage, asset management, technical assistance, and corporate communications and information technology. CCRIF offers earthquake, tropical cyclone and excess rainfall policies to Caribbean and Central American governments. CCRIF helps to mitigate the short-term cash flow problems small developing economies suffer after major natural disasters. CCRIF's parametric insurance mechanism allows it to provide rapid payouts to help members finance their initial disaster response and maintain basic government functions after a catastrophic event.

Nineteen Caribbean governments are currently members of the facility: Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, Montserrat, St. Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Sint Maarten, Trinidad & Tobago and Turks & Caicos Islands. Nicaragua is the first Central American government to become a CCRIF SPC member, Panama, Guatemala and Honduras have since joined the facility.

CCRIF's sustainability relies on certain key factors:

- Continuing operations with the capacity to fund payouts, within the agreed timeframe, while maintaining adequate capital and reserves.

- Ability to attract members by offering relevant products at attracting pricing while at all times reinforcing the objectives and limitations of parametric insurance coverage.
- Supporting the membership with technical assistance and ensuring a close working relationship with members that value the need for parametric insurance coverage in light of more frequent and severe natural disasters.

CCRIF's products require careful design of the policy terms and conditions as well as precise and robust models. An exposure layer model is a crucial component in these models, characterizing assets and infrastructure that could be affected by natural hazards like tropical cyclones, floods, or earthquakes. The current exposure model considers residential building and non-residential building stock, hotels, education centres, public buildings, airports, ports, power facilities and road networks, including a set of building types associated with number of stories, construction material, rise, and ductility; yet it is outdated and requires a robust and adaptable solution within the Caribbean region.

This procurement aims to identify a firm with the expertise to design and develop a high-quality exposure layer model that meets CCRIF's objectives and technical requirements, providing potential bidders with sufficient information to prepare competitive proposals.

2. Objectives

The primary objective is to develop a geo-referenced database of exposed assets, including relevant attributes including but not limited to the ones in the current exposure model. It should incorporate various data sources, especially satellite imagery, census records and specific data provided from member countries.

The updated exposure layer model should implement a clear and robust methodology for classifying, categorizing, and aggregating exposure data, ensuring scalability and maintainability for future updates. The methodology should remain consistent across countries when using global and regional data, even with the inclusion of local, country-specific information.

3. Scope of the Assignment

CCRIF is searching for a modelling company or firm, referred to hereinafter as the "Firm", with experience modelling exposure for use in catastrophe modelling.

The expected services from a successful Firm are the following:

1. **Develop a geo-referenced exposure database.** The exposure layer should establish a robust methodology, ensure spatial and attribute accuracy, and be able to be updated, expanded, and maintained over time as new data becomes available, or requirements evolve. CCRIF will provide the Firm information necessary for the development, including the documentation of the current exposure model, a list of technical requirements and objectives to meet and data provided by the member

countries to be considered in the model. Prospective bidders should ensure their proposal at a minimum includes the following asset types and attributes. The spatial resolution is expected to be not coarser than 100m.

Asset Type	Line of Business	Attributes
Building Stock	Residential building stock	Location, Height, occupancy type, number of stories, construction type, primary structural material, area classification (e.g. urban), building's behaviour under stress (e.g. ductile), building count and replacement cost.
	Commercial and industrial building stock	
	Hotels, education and healthcare building stock	
	Public building stock	
Infrastructures	Airports	Location, Airport category (e.g. large hub, reliever) and replacement cost.
	Ports	Location, category (e.g. big, small) and replacement cost.
	Power Facilities	Location, category (e.g. oil, solar) and replacement cost.
	Road Network	Location, road types (including classification in types and Road Surface) and replacement cost per km.
Agriculture	Crops	Spatial distribution, crop type and value (at least with for the following crops: bananas, sugar cane, coffee, rice and maize)

2. **Interaction with CCRIF.** The Firm is expected to interact with both the Senior Risk Management Specialist and the Risk Management Specialist via electronic mail and other means for requests of further information, updates or feedback on the development.
3. **Deliverables.** The Firm is expected to deliver the following:
    a. Inception Report and Detailed Project Plan: Outlining the finalized approach, timeline, and resource plan.
    b. Exposure Layer Database: The geo-referenced exposure data in agreed-upon formats for all the countries listed in the following table.

ISO3 Code	Country Name
ABW	Aruba
AIA	Anguilla

ATG	Antigua and Barbuda
BES	BES Islands - Bonaire, Sint Eustatius and Saba
BHS	The Bahamas
BLZ	Belize
BMU	Bermuda
BRB	Barbados
CRI	Costa Rica
CUW	Curacao
CYM	Cayman Islands
DMA	Dominica
DOM	Dominican Republic
GLP	Guadeloupe
GRD	Grenada
GTM	Guatemala
GUY	Guyana
HND	Honduras
HTI	Haiti
JAM	Jamaica
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
MSR	Montserrat
MTQ	Martinique
NIC	Nicaragua
PAN	Panama
PRI	Puerto Rico
SAP	San Andres Islands
SLV	El Salvador
SUR	Suriname
SXM	Sint Maarten
TCA	Turks and Caicos
TTO	Trinidad and Tobago
VCT	Saint Vincent and The Grenadines
VGB	British Virgin Islands

c. Exposure Layer Model: The complete and functional model, including the source code and executables.

d. Validation Report and Technical Documentation: Documenting the accuracy and reliability of the model, as well as the documentation for the model architecture and data sources.

Before receiving any material from CCRIF, the Firm will be required to sign a Non-Disclosure Agreement.

4. REQUIREMENTS

- At least 3 years of demonstrable experience in developing and implementing geospatial models, particularly exposure or risk assessment models.
- The proposed lead modelers and technical experts must possess extensive experience (minimum 5-7 years) in geospatial analysis, risk assessment, and exposure modelling, with demonstrated success in similar projects.
- Clarity, feasibility, innovation, and alignment with best practices in their proposed methodology and approach.
- Ability to manage complex projects, adhere to timelines, and deliver within budget.
- Excellent communication skills for effective interaction with our team and stakeholders.

The selected Firm will enter a formal contract with CCRIF, which will include standard terms and conditions, intellectual property rights, payment terms, and dispute resolution mechanisms.

5. TIME SCHEDULE

The anticipated duration for the completion of this project is 5 months from the contract signing date. Delays are justified if caused by tardiness in receiving the requested information from CCRIF.