



**REQUEST FOR PROPOSAL**  
**SERVICES FOR DEVELOPING COMMUNITY-BASED HAZARD MAPS &**  
**DOCUMENTATION OF THE IMPACT OF PAST HYDROMETEOROLOGICAL**  
**EVENTS FOR COMMUNITIES IN SAINT LUCIA AND GRENADA**

The Caribbean Institute for Meteorology and Hydrology (CIMH) has received financing from the United States Government through the United States International Development Agency (USAID) towards the “**Strengthening Disaster and Climate Resilience in the Eastern and Southern Caribbean (SDCR) Project**” and intends to apply a portion of the proceeds to eligible payments under a contract for which this invitation is issued. According to the Assistance Award agreement governing the SDCR Project, the authorized geographic code for procurement of goods and services under this award is US Government Code 937. As such, in addition to the United States of America and the award recipient countries, a list of countries from which eligible consultant teams, companies, firms or individuals can be engaged is attached at ANNEX 1.

The CIMH, the Implementing Agency, wishes to engage an individual, one each for Grenada and Saint Lucia, to develop community-based hazard maps for four (4) communities in each country. The primary objective of this exercise is to **support the strengthen of impact-based forecasting for hydrometeorological hazard for communities in Saint Lucia and Grenada.** The duration of the assignment is expected to be for a period of five (5) months.

**The CIMH now invites submission of proposals for Grenada and/or Saint Lucia, for the provision of the services as detailed in ANNEX 2 - Terms of Reference (TOR). Submissions can be for one or both countries.**

In the assessment of submissions, consideration will be given to technical competence, qualifications and experience, and the local and regional experience on similar assignments. All information must be submitted in English, on or before **September 15 2021, 4:00 pm (Barbados/Atlantic Time)** to **procurement@cimh.edu.bb**, and addressed to:

**Dr. David A. Farrell,**  
Principal,  
Caribbean Institute for Meteorology and Hydrology (CIMH)  
Husbands, St. James , BARBADOS

Further information may be obtained through email submission to [sdcr@cimh.edu.bb](mailto:sdcr@cimh.edu.bb),

Attn: Ms. Cisne Pascal, Project Manager.

The CIMH reserves the right to accept or reject late applications or to cancel the present request for proposals partially or in its entirety. The CIMH will not be bound to assign any reason for not selecting any applicant and will not defray any costs incurred by any applicant in the preparation and submission of proposals.

# ANNEXES

## ANNEX 1 - LIST OF CODE 937 AWARD ELIGIBLE COUNTRIES

1. United States of America
2. Recipient Countries
  - a. Antigua & Barbuda,
  - b. Barbados,
  - c. Dominica,
  - d. Grenada,
  - e. St. Kitts and Nevis,
  - f. Saint Lucia, and
  - g. St. Vincent and the Grenadines
3. Other Eligible Developing Countries (*listed below*)



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### List of Developing Countries

A Mandatory Reference for ADS Chapter 310

#### Low income/lower middle income

Afghanistan  
Bangladesh  
Benin  
Burkina Faso  
Burundi  
Cambodia  
Central African Republic  
Chad  
Comoros  
Congo, Dem. Rep  
Eritrea  
Ethiopia

Gambia, The  
Guinea  
Guinea-Bissau  
Haiti  
Kenya  
Korea, Dem Rep.  
Kyrgyz Republic  
Liberia  
Madagascar  
Malawi  
Mali  
Mozambique

Myanmar  
Nepal  
Niger  
Rwanda  
Sierra Leone  
Somalia  
Tajikistan  
Tanzania  
Togo  
Uganda  
Zimbabwe

Angola  
Armenia  
Belize  
Bhutan  
Bolivia  
Cameroon  
Cape Verde  
Congo, Rep.  
Côte d'Ivoire  
Djibouti  
Egypt, Arab Rep.  
El Salvador  
Fiji  
Georgia  
Ghana  
Guatemala  
Guyana  
Honduras  
Indonesia

India  
Iraq  
Kiribati  
Kosovo  
Lao PDR  
Lesotho  
Marshall Islands  
Mauritania  
Micronesia, Fed. Sts.  
Moldova  
Mongolia  
Morocco  
Nicaragua  
Nigeria  
Pakistan  
Papua New Guinea  
Paraguay  
Philippines  
Samoa

São Tomé and Príncipe  
Senegal  
Solomon Islands  
Sri Lanka  
Sudan  
Swaziland  
Syrian Arab Republic  
Timor-Leste  
Tonga  
Turkmenistan  
Tuvalu  
Ukraine  
Uzbekistan  
Vanuatu  
Vietnam  
West Bank and Gaza  
Yemen, Rep.  
Zambia

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**ANNEX 2**  
**TERMS OF REFERENCE**  
**SERVICES FOR DEVELOPING COMMUNITY-BASED HAZARD MAPS &**  
**DOCUMENTATION OF THE IMPACT OF PAST HYDROMETEOROLOGICAL**  
**EVENTS FOR COMMUNITIES IN SAINT LUCIA AND GRENADA**

1. **INTRODUCTION**

1.01 Hydro-meteorological forecasting is currently undergoing a shift in paradigm from the traditional focus of describing the hydro-meteorological situation to providing actionable information on what the hydro-meteorological event will do, i.e., a forecasting of the hydro-meteorological system's impacts. The CIMH has been providing impact-based forecasts to the regional stakeholders since 2008 - first starting with providing impact-based forecasts associated with severe weather systems to CDEMA and its stakeholders to now providing sector focused impact-based forecasts associated with hydro-meteorological and climate systems. These capabilities were developed and expanded in part through the Government of Italy sponsored Enhancing Resilience to Reduce Vulnerability in the Caribbean (ERC) programme (2009-2014), the USAID sponsored BRCCC programme (2014-2018), the ongoing African Caribbean Pacific (ACP)-EU-Caribbean Development Bank Natural Disaster Risk Management (CDB-NDRM) programme and the ongoing USAID-OFDA sponsored Weather and Climate Ready Nations (WCRN) initiative.

1.02 Through the WCRN, the CIMH and implementation partners are currently expanding impact-based forecasting in the region through (i) the introduction of risk and response matrices capable of guiding national to community level pre-impact decision-making, (ii) agreed standard operating procedures (SOPs) that improve clarification of the roles and responsibilities of meteorological and disaster management communities, (iii) stronger integration of warning and alerting frameworks such as the Common Alerting Protocol (CAP) into preparedness and early warning workflows through engagement with the CIMA Research Foundation, (iv) the transfer of low-cost technologies to facilitate the sustainability of the hydro-meteorological observation networks in the region and (v) the development of an ambassador programme. The WCRN is being implemented as a pilot project in Barbados with a goal to expand the activities to Grenada and Saint Lucia among other countries.

1.03 Hazard maps are used within the WCRN process to support the delineation of areas that can be impacted due to the particular hazard of interest. As part of this CIMH broader objective of strengthening impact-based forecasting capabilities in the Caribbean region, the CIMH wishes to engage services to develop community-based hazard maps and to document the impact of previous hydrometeorological events for eight (8) target communities, four (4) communities each in Saint Lucia and Grenada. The engagement is expected to last for a period of five (5) months.

## **2. ABOUT THE CARIBBEAN INSTITUTE FOR METEOROLOGY AND HYDROLOGY (CIMH)**

2.01 CIMH is an Institution of the Caribbean Community and the technical Organ of the Caribbean Meteorological Organisation (CMO). The mandate of the CIMH is to *“assist in improving and developing the meteorological and hydrological services as well as, providing the awareness of the benefits of meteorology and hydrology for the economic well-being of the CMO Member States”*. This is achieved through training, research, investigations, and the provision of related specialised services and advice.

2.02 To achieve its mandate, the CIMH established an affiliation with the UWI in 1973 where its primary responsibility is the delivery of the Bachelor of Science Programme in Meteorology in the Faculty of Science and Technology. The CIMH is also recognised by the World Meteorological Organisation (WMO) as: (i) the Regional Training Centre in the Caribbean for meteorology and hydrology and related disciplines; (ii) a Regional Instrument Centre for the Caribbean; (iii) Centre of Excellence in Satellite Meteorology Training; (iv) the Regional Climate Centre for the Caribbean; and (v) a Pan American Sand and Dust Storm Warning Alerting and Assessment System node.

2.03 In recent years, the CIMH has become the Caribbean Centre for Climate and Environmental Simulations. In addition, the CIMH is the Climate Archiving Data Centre for CMO Member States. The Institute is also an important Caribbean centre for research and development related to meteorology, hydrology, agro-meteorology and climate as well as their applications in the Caribbean. It is active in such areas of hydrological risk impacts forecasting,

agricultural risks forecasting, climate health related risk forecasting and has had strong collaborations with other regional institutions, national organisations in CMO Member States and the international community.

2.04 The CIMH is currently implementing the Strengthening Disaster and Climate Resilience in the Eastern and Southern (SDCR) Project, which is made possible by the generous support of the American people through the United States Agency for International Development (USAID).

2.05 The SDCR Project will support building the resilience of the region through a series of small but effective initiatives that extend some areas of work started by the CIMH. Equally as important, the work being proposed introduces innovative activities that are unrelated to previous activities executed by the CIMH and the region. The SDCR Project will (i) strengthen hydro-meteorological observation platforms; (ii) strengthen the human capacity and institutional resilience of National Meteorological and Hydrological Services (NMHSs) in the Caribbean to enable them to maintain some level of functionality under the most arduous conditions; (iii) strengthen multi-hazard early warning systems in the Caribbean by enhancing the timely collection and integration of pre- and post-impact data into regional multi-hazard impact-forecasting and decision-support platforms that improve risk forecasting, management and reduction and (iv) further strengthen and expand the development and delivery of climate services in the Caribbean.

### **3. OBJECTIVES**

3.01 The primary objective of this exercise is to develop community-based hazard maps and to document the impact of previous hydrometeorological events for eight (8) target communities, four (4) communities each in Saint Lucia and Grenada.

### **4. SCOPE OF WORK**

4.01 Key duties and responsibilities of the engaged person(s) include:

- (a) Working with community members, national disaster professionals such as the red crescent society, the national disaster office and the national meteorological and hydrological services (NMHSs) to develop

community-based hazard maps for flood and landslide for four (4) communities.

- (b) Documentation of information on impacts experienced by each community from the past flood and landslide events. Appendix 1 provides guidance for the type of information to be recorded for each event. Anecdotal information gleaned from local community knowledge about past impacts should be substantiated by credible national information as far as possible.

## **5. QUALIFICATIONS AND EXPERIENCE**

5.01 The engage persons are required to have experience working in disaster management at the community level. In addition, the individual must have:

- (a) Expertise in disaster management with particular focus at the community level and in compiling community-based hazard maps.
- (b) An associate degree or similar in relevant natural science discipline and/or a recommended five years' experience working in disaster management.

## **6. DELIVERABLES**

6.01 The engaged person(s) will deliver:

- (a) An inception report inclusive of a methodology for development and delivery of the community-based hazard maps, selected historic flood and landslide events, collation of information on selected events and proposed implementation schedule for four (4) communities.
- (b) Documentation of the justification for the selection of four(4) communities in Saint Lucia and Grenada.
- (c) Four (4) draft community-based hazard maps for flood and landslide, one per selected community.
- (d) Four (4) draft documents with information on impacts experienced from the past flood and landslide events for each of the selected communities.
- (e) A final report which consists at a minimum of :

- a. four (4) final community-based hazard maps for flood and landslide,
- b. final documentation of past hazard events for each community and
- c. a summary of the methodology, a list of participating national stakeholders, challenges faced and recommendations for similar future undertakings.

## **7. DURATION**

7.01 It is expected that the scope of work will last for no more than five(5) months.

## **8. REQUEST FOR PROPOSAL**

8.01 The CIMH invites submission of technical proposals that include the following elements:

### **(a) The Technical Proposal should include or recognize the following:**

- (i) The approach to implementing the exercise outlining the methodology and tools which will be used to develop the community-based hazard maps and compile information of past hazard events in consideration on the ongoing COVID-19 pandemic;
- (ii) Detailed Work Schedule inclusive of the level of effort required for each task; (Reference Templates in Appendix 2 &3);
- (iii) There must be a strong demonstration of the use of online virtual strategies and technologies to deliver the proposed activities, which also recognizes the national COVID-19 protocols for Grenada and Saint Lucia.
- (iv) A Curriculum Vitae (CV) ;
- (v) A List of similar work completed in the past inclusive of date and location.
- (vi) Copies or links to community hazard maps completed by the applicant.

### **(b) The Contract Price:**

The contract price for this exercise is USD 8,000 per country. The contract price will cover all expenses associated with undertaking the exercise,



inclusive of professional fees, and other expenses such as transportation and communication costs.

#### 8.02 Criteria for Evaluation of Proposal

- (i) Demonstration of minimum requisite experience and qualification - **25%**
- (ii) Methodology/Approach proposed which demonstrate a logical approach to achieving the stated deliverables - **40%**
- (iii) Methodology/Approach which accommodates the restrictions that limit in-person interactions due to the COVID-19 Pandemic - **20%**
- (iv) Demonstrated experience working with established methodologies for developing community-based hazard maps -**10%**
- (v) Demonstrated experience working in Caribbean communities to deliver similar projects -**5%**

#### 8.03 Deadline for Submission of the Proposal.

Submissions in PDF format must be e-mailed to [procurement@cimh.edu.bb](mailto:procurement@cimh.edu.bb) on or before **September 15, 2021**. All inquiries for information regarding this solicitation should be directed to [sdcr@cimh.edu.bb](mailto:sdcr@cimh.edu.bb).

## **APPENDICES-**

### **APPENDIX 1- Recommended Criteria for the Compilation of Past Flood and Landslide Events & the Selection of the Communities**

#### **1.1 Type of Information Required For Past Flood and Landslide Events**

The information compiled per community should include

- (i) event type,
- (ii) date of event
- (iii) duration (how long did the event last)
- (iv) flood depths,
- (v) extent of flooding/landslides such as losses (economic valuation of losses; number of houses/building damaged/destroyed; number of deaths, or loss of land/soil in landslide zones).

Note further that this is not an exhaustive list and that a final decision on the types of information to be collected will be made at the inception stage of the consultancy.

#### **1.2 Criteria for the Selection of Communities**

For the purposes of this consultancy at least four (4) communities in each of Saint Lucia and Grenada will be targeted. The communities must be identified as having experienced flood and/or landslide event in the past. The selected consultant will be required to work with national/local stakeholders to choose the most suitable communities. The selection should also consider the data available and past interactions with the community.

## APPENDIX 2- Work Schedule Template Table: Level of Effort

Work Schedule Template Table: Level of Effort

Tasks	Team				Total (Man Days)	Timeline
	Team Member 1 (Man Days)	Team Member 2 (Man Days)	Team Member 3 (Man Days)	Team Member 4 (Man Days)		
<b>Broad Task 1</b>						
Sub-task 1.1						Start Month – End Month
Sub-task 1.2						Start Month – End Month
Sub-task 1.3						Start Month – End Month
<b>Broad Task 2</b>						
Sub-task 2.1						Start Month – End Month
Sub-task 2.2						Start Month – End Month
Sub-task 2.3						Start Month – End Month
<b>Total</b>						

## APPENDIX 3: Work Schedule Template Table: Timeline/Work Plan

Work Schedule Template Table: Timelines/Work Plan

	Month 1		Month 2		Month 3		Month 4		Month 5		Month 6	
	Weeks											
	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4
<b>Broad Task 1</b>												
Sub-task 1.1												
Sub-task 1.2												
Sub-task 1.3												
<b>Broad Task 2</b>												
Sub-task 2.1												
Sub-task 2.2												
Sub-task 2.3												
<b>Total</b>												