OCTs Regional Risk Reduction Initiative (R3I)
Provision of Services to Caribbean OCTs

Building Capacity in Disaster Risk Reduction in Caribbean OCTs
National Outputs with Regional Integration

Lot 1: GIS and Vulnerability Assessment

QUESTIONNAIRE ON HAZARD MAPPING AND VULNERABILITY ASSESSMENT CAPACITY AND DATA NEEDS OF PARTICIPATING STATES

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A STUDY OF HAZARD MAPPING AND VULNERABILITY CAPACITY AND DATA NEEDS OF PARTICIPATING STATES

Dear Respondent,

The OCTs Regional Risk Reduction Initiative (R3I) covers the English and Dutch overseas countries and territories in the Caribbean, with the exception of Bermuda. Their unique ecosystems and socioeconomic dependence on tourism, the marine environment and coastal areas make them highly vulnerable to various natural hazards and climate change impacts. This project seeks to address the risk and exposure of these small islands by providing a network of regional infrastructure, programmes, policies and protocols to strengthen their capacity to predict and prepare for natural and human-induced hazards, and thus improve resilience and reduce risk and subsequent loss. R3I is funded by the European Commission to the tune of €4.932m covering a period of 3 years (2009-2011).

By the end of the project it is expected that there will be:

- Increased capacity in hazard mapping and associated vulnerability assessments, to further be incorporated into spatial information systems to inform planning and development processes
- A regional early warning systems (EWS) pilot for the OCTs, based on the ITU automated alert protocol for warnings
- Capacity built-in response, rescue and recovery in order to shorten recovery periods through the use risk assessment and mitigation practices for development planning
- Strengthened local disaster management structures and capacities in terms of tools and best practices to support comprehensive disaster risk management
- Greater cooperation and coordination between the OCTs, with documentation and dissemination of best practices

The R3I emphasises intra-regional learning and sharing of tools, knowledge and best practices to enhance the territories individual and collective capacities. It will, among other activities, support OCT disaster management and GIS departments with modelling, simulation and planning and build on the related experience and knowledge in the Cayman Islands. Further plans are to integrate results of modelling into quantitative multi-hazard vulnerability maps to support investment in hazard mitigation strategies; and complete and/or initiate building vulnerability studies and improve quantitative risk assessment of critical infrastructure to support the investment in hazard mitigation strategies. To this end, a study of the status of the hazard mapping and vulnerability assessment (HM/VA) capacity and GIS-related data needs of the participating states is being conducted in Aruba, Bonaire, Curacao, Saba, Sint Eustatius, Cayman Islands, Turk and Caicos Islands, and Montserrat over the period May – June 2011. The objectives of the study are:

1. To determine the capacity for hazard map and vulnerability assessment in support of disaster risk reduction in each participating states.
2. To identify the required knowledge and resource gaps and opportunities for sustainable development of the capacity of each participating states with respect to HM/VA.
3. To identify data needs and compile existing/available data needed for HM/VA for each participating state.
4. To develop short and long term strategies that are relevant and sustainable for capacity development in each participating states.

If you have any problem in providing responses to the questions, do not hesitate to contact any of the following persons: **Silvia Grava** Email: grava@gesp.it, **Jacob Opadeyi** Email: jopadeyi@hotmail.com or **Eric Sussenbach** Email e.sussenbach@gis4c.com

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Name of respondent_____ **Official Position**_____

Agency_____ **Country**_____

Telephone_____ **Fax**_____ **Email**_____

Section I: Preparation and Use of Hazard Mapping [HM]

1.1 Has Hazard Mapping been conducted for your country? **Yes** **No**

If yes, please respond to questions 1.2, 1.3, and1.4.

1.2 Provide below the following information on the hazard map produced:.

Title of Hazard Map	*Year Conducted*	*Coverage of the Mapping*	*Sources of the Report*

1.3 Please list below the users and uses of the hazard maps in your country

Name of users	*List of uses*

1.4 Map preparation: Please respond to the following questions relevant to map preparation.

Who were the collaborating local agencies?	*Please name local persons involved in the mapping*	*Who funded the study?*

1.5 Are there plans to prepare other hazard maps for the country? **Yes** **No**

1.6 Where would you get support for the preparation of hazard maps for your country?

_____

_____

1.7 Are you aware of any of your citizens / residents with capacity to conduct hazard mapping? **Yes** **No**

Section II: Preparation and Use of Vulnerability Assessment Studies [VA]

2.1 Has Vulnerability Assessment Studies been conducted for your country? **Yes** **No**

If yes, please respond to questions 2.2, 2,3 and 2.4.

2.2 Provide below the following information on the studies.

Title of Study	*Year Conducted*	*Coverage of the Study*	*Sources of the Study Report*

2.3 Please list below the **users and uses** of the vulnerability assessment studies in your country

Name of users	*List of uses*

2.4 Please respond to the following questions relevant to the preparation of the vulnerability assessment studies.

Who were the collaborating local agencies?	*Please name local persons involved in the study*	*Who funded the study?*

2.5 Are there plans to prepare other studies for the country? **Yes** **No**

2.6 Where would you get support for the preparation of vulnerability assessment studies for your country?

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2.7 Are you aware of any of your citizens / residents with capacity to conduct vulnerability assessment? **Yes** **No**

Section III: Human Resources Available for HM/VA

3.1 How many technical **staff** members do you have working in your Department? _____

3.2 How many of the **staff** in your Department are:

a. Computer literate?	
b. Trained in the use of GIS software?	
c. Trained in the use of database software?	
d. Trained in the use of GPS?	
e. Training in hazard mapping?	
f. Training in vulnerability assessment?	

3.3 What is your Department's annual **budget for training** in Disaster Risk Reduction? US$_____

3.4. How many staff members have received technology or disaster risk reduction **training** in the last 2 years? _____

3.5 Do you have access to hazard mapping and vulnerability assessment **experts outside of your island**? **Yes/NO**

3.6 If yes to question 3.5, are there any constraints in accessing these experts when needed? **Yes/NO**

3.7 If yes to question 3.6, list below the **nature of the constraints**.

_____

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3.8 In the table below, kindly indicate the availability or otherwise of the following **policies and standards** in your Department.

Policy/Standards	Yes/No
a. Hazard mapping policy/regulations	
b. Vulnerability assessment policy/regulations	
c. Damage assessment policy/methods	
d. Disaster management plan	
e. Disaster mitigation plan	
f. Evacuation management plan/policy	
g. Contingency planning and policy	

3.9 Provide a list of other policies and standards currently instituted by your Department in support the Disaster Risk Reduction in your country.

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_____

3.10 On a scale of 5 to 1 (5 very well, 1 not at all), how would you rate the use of data in support of disaster risk management related function in your country?

	5,4,3,2,1
Land development approval	
Relocation from hazardous areas	
Land use planning	
Hazard mitigation	
Hazard risk assessment	

Section IV: Laws and Regulations

4.1 In the table below, kindly list the laws and regulations governing disaster risk management in your country

Title of laws and regulation	Date

4.2 What do you consider to be the challenges in the applications of each of these laws and regulations?

_____

_____

_____

_____

_____

4.3 Indicate below what changes do you consider to be necessary in making these laws and regulations more effective.

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Section V: Technical Equipment Available for HM/VA

5.1 Using the table below, kindly provide following information relevant to the **IT infrastructure** available in your Department

Questions	Answers
1. Is there a Server room in your department?	YES/NO
2. Who manages the computer server? (please provide name and contact information of this person or company)	
3. How many office locations does your department have on the island?	
4. Are these locations connected by local area network (LAN)? (If Yes, please provide the connection type)	YES/NO
5. What is the LAN speed in each location?	
6. What is the bandwidth of your connectivity? (Please specify both for download and upload)	
7. What protocols are utilized in your network? (IP, IPx, Decnet, etc)	
8. Is there a Firewall?	YES/NO
9. Is there a DMZ?	YES/NO
10. Is there a Storage Area? If yes, please provide its details under point 4.2	

5.2 Using the table below, kindly provide a list of **hardware** (**Servers, Storage, Personal Computers, Workstations**) used by your Department in the performance of its activities.

Brand/model	Type (Server, Storage, Personal Computer, Workstation)	Year of acquisition	Number of units	CPU (type and number)	RAM	Operating System	Capacity (Gb)	Main Applications Installed

5.3 Using the table below, kindly provide a list of **information technology equipment** used by your Department in the performance of its activities.

Equipment	Brand/Model	Year of acquisition	Office Location	Number of units (for each location)
Digitizers				
Scanners				
Printers				
Plotters				
Digital camera or video				
Global Positioning Systems				
Other				

5.4 Using the table below, kindly provide a listing **of software** used by your Department in the performance of its activities.

Name of software/Application	Version and year of acquisition (is it under warranty)	Type (Standalone, Client-Server, Web-based)	DB platform (if any)	Operating system (if centralized, please specify both server and client OS)	No. of users	Main uses

Section VI: Inventory of Existing Data Available for HM/VA

Kindly provide the following information on currently existing data relevant to HM/VA of your country.

	Available in map form							% of coverage	Source	Available but not in map form
	Hardcopy		Digital							
	Scale	Year	Scale	Year (created and last update)	Rate of update (Daily, Monthly, Yearly)	Format (CAD, GIS)	Has Database Attributes (if yes, specify the DB)			
Administrative Boundaries Data										
Coastline										
Parishes/Districts										
Geographic Place Names										
Community boundaries										
Natural Resources Related Data										
Geology										
Elevation contours										
Elevation points										
Digital Elevation Model										
Soils										
Rivers/Streams/Watercourses										
Water bodies: Lakes/Lagoons										
Roads – Major and minor										
Land Cover Map										
Rainfall data										
Locations of Rain Gauges										
Beaches										
Environmentally Sensitive Sites										
Wind direction data										

	Available in map form							% of coverage	Source	Available but not in map form
	Hardcopy		Digital							
	Scale	Year	Scale	Year (created and last update)	Rate of update (Daily, Monthly, Yearly)	Format (CAD, GIS)	Has Database Attributes (if yes, specify the DB)			
Anthropogenic Related Data										
Buildings										
Census Layers										
Political Districts										
Government Buildings										
Recreational /Tourist Facilities										
Educational Facilities										
Health Facilities										
Land Use										
Airports/airfields/airfields/runways										
Banks and Financial Centres										
Waste management sites										
Dams and Ponds										
Electrical generating plants										
Water tanks / reservoirs										
Police stations										
Fire stations										
Prisons										
Population centers										
Seaports										
Electricity lines										
Water supply lines										
Emergency operations facilities										
Emergency Shelters										

	Available in map form							% of coverage	Source	Available but not in map form
	Hardcopy		Digital							
	Scale	Year	Scale	Year (created and last update)	Rate of update (Daily, Monthly, Yearly)	Format (CAD, GIS)	Has Database Attributes (if yes, specify the DB)			
Place of worship										
Markets and shopping Centres										
Historic /Archeological sites										
Hazard-related Data										
Flood Hazard Zones										
Flood incident inventory										
Landslide hazard zones										
Landslide incident inventory										
Erosion hazard map										
Earthquake epicenters										
Geological Fault lines										
Volcanic centers										
Hurricane tracks										
Storm surge										
Tsunami inundation zones										
Tsunami Evacuation Zones										
Tsunami Wave Heights										
Building Damage History										
Infrastructure Damage History										
Remotely Collected Data										
Aerial Photos										
Satellite Imageries										
LiDAR										

Thank you for your assistance.