

# Caribbean Handbook on Risk Information Management



**GFDRR**  
Global Facility for Disaster Reduction and Recovery

**ACP-EU Natural Disaster Risk Reduction Program**  
An initiative of the African, Caribbean and Pacific Group, funded by the European Union and managed by GFDRR

[Home](#) > 1.1 Objectives of this book

## 1.1 Objectives

### Body:

The Use Case Book is the central component of the Caribbean Handbook for Risk Information Management (CHARIM). The use case book contains a number of example applications of tasks of spatial planners, Engineers and Geo-Information specialist within the Caribbean countries that requires natural hazard and risk information. The use cases are related to general examples that illustrate the methodological process needed to conduct a range of activities that are common in the region, rather than detailed efforts to produce specific recommendations for action in specific applications. The use cases have been identified by a collaborative process with participating government ministries and other regional technical experts, during the workshops in the five target countries. The use cases indicate the requirements in terms of basic information depending on the scale of the work and the objectives of the use case.

By using the use cases the users will have an improved understanding of the way hazard and risk information is generated, and how it is used in risk assessment, early warning, design of risk reduction measures, spatial planning, and the management of critical infrastructure.

The screenshot shows the website's navigation bar with links: Home, About CHARIM, Countries, Methodology book, Use case book, Data management book, Forum, and Geonode. Below the navigation bar are five colored boxes with descriptions:

- Countries section:** contains specific information (maps, reports) for the 5 target countries.
- Methodology Book:** contains the theoretical background on how hazard and risk is assessed, and used.
- Use Case Book:** contain many examples of typical activities related to spatial planning, critical infrastructure.
- Data Management book:** explains how spatial data is collected, managed, analysed and shared for Risk Information Management.
- GeoNode:** is the data sharing platform where you can find the spatial data.

At the bottom of the screenshot are the logos for ACP-EU Natural Disaster Risk Reduction Program, World Bank LAC, and a 'Log in' button.

## Main intended users

This book is intended for the following main users:

### Engineers from the Public Works Departments

They require flood and landslide information to better identify the most vulnerable sections of the road network, plan for road clearance after the occurrence of triggering events, to plan remedial measures for impacted road sectors, and for planning new roads, and alternative routes. They would require digital information on the road

network in the form of a road database, which stores information for each segment of the road network. These segments should be based on the specific characteristics of the road and the terrain through which the road passes.

### **Planners from the Physical Planning Departments**

They need landslide information to better include unsuitable areas for development in national and local level land use plans. They also need to include this information in the building permit issuing and in land subdivision process. They need landslide and flood susceptibility maps for national scale planning, or hazard maps for the larger scales. These should be integrated with other natural hazard maps in a multi-hazard restriction map that should have a legal status and serves as base data for planning. After a landslide event has taken place, they need to know the characteristics of the affected area, in order to develop reconstruction plans.

### **Spatial Analysts from different government organizations.**

There are relatively few experts on collecting and managing spatial data in the target countries. They need to work on the development of a geospatial framework, addressing data availability, challenges in use and interoperability, current use and collaborations, gaps and areas of improvements and the status of the national GeoNode. Whereas they are the main target users for the Data Management book, also they need to know how landslide and flood susceptibility, hazard and risk maps are made and what the data requirement are.

### **Staff of the National Emergency Management Organisations (NEMO) / Office of Disaster Management (ODM)**

It is very important for the disaster response organisations to learn from past events, in order to better prepare for future ones. A good knowledge on the location of historical floods and landslides, and the characteristics related to blockage of roads, destruction of buildings, electricity networks, telecommunication facilities, and the number and type of casualties is very important. Specific emphasis should be given to hazard assessment of the shelters, and other critical facilities, and to shelter planning. Also Early Warning is an important issue. This requires good spatial information. As the NEMO's/ODM's are also playing the role of first responders (911 centers) they receive a lot of direct information on hazardous events

### **Staff from Forestry Department**

Floods and landslides may impact forests substantially, and for forest management it is important to take into these into account, and how vegetation regrowth takes place in areas affected. It is also very important to rapidly map affected forested areas after a major triggering event, as the debrisflows and flashfloods that may follow from these events can have a large impact on downstream areas. From previous events, such as hurricane Tomas in Saint Lucia, we have also learned the importance to monitor the areas affected by landslides and floods during a large triggering event, as they may slowly recover, but could be reactivated if a new event occurs (e.g. the Christmas eve trough in 2013).

### **Water Resources department**

For watershed management purposes it is very important to know the location of historical landslides, and to estimate the discharge, amount of sediments, and treetrunks that may be transported through the drainage channel in case of strong rainfall events. Similar data requirements as indicated for the forestry department can be outlined for the water resources department, although the interaction of landslides with the drainage network (e.g. in terms of sediment delivery but also in terms of potential blocking sites) is of large importance.

## **Typical questions that will be addressed**

The main questions that will be addressed in this book are:

- How hazard information is used in spatial planning:
  - National level development planning
  - Local level physical planning
  - Relocation planning
  - Building control
  - Land subdivision
- How hazard and risk information is used for critical infrastructure planning and management:
  - Planning relocation of buildings, roads and other infrastructure
  - Design guidelines for building, roads and other infrastructure
  - Design of structural mitigation measures to protect buildings, roads and other infrastructure from floods

and landslides

- Design of non-structural mitigation measures to protect buildings, roads and other infrastructure from floods and landslides
- How hazard and risk information is used in the analysis of different alternatives for planning and risk reduction?
- How hazard and risk information is used in the design of early warning systems, and shelter planning?
- How risk is assessed at national and local level for landslides and floods?
- How elements-at-risk and vulnerability are assessed?
- How hazard maps are generated at different scales and for different hazard?
- What basic information is used for generating hazard and risk maps?
- How spatial data is managed and shared?

## How to use this book?

---

**Source URL:** <http://charim.net/use/11>