

ANTIGUA AND BARBUDA

THE HAZARD | Due to its location on the Caribbean Plate that subducts a much denser North American Plate, Antigua Barbuda is at risk of an earthquake and tsunami; Antigua and Barbuda's tsunami hazard is classified as medium. This means that there is more than a 10% chance of a tsunami occurring in the next 50 years, which could potentially impact up to 80% of critical infrastructure lying within two kilometres of the coast.

THE GAP | Antigua and Barbuda identified the need to improve its multi-hazard warning, dissemination and communication capacities. Coordination, broadcasting of alerts, and community tsunami evacuation routes needed to be tested.

THE ACTION | The priority EWS actions taken by Antigua and Barbuda included the adoption of Common Alerting Protocol (CAP) -an international standard format for emergency alerting and public warning-, community early warning awareness efforts in the communities of Bethesda, Gray's Farm, Point, and Urlings, training in emergency drill scripting, and the execution of a tsunami community drill.



The Caribbean region is highly prone to natural hazards. Due to this vulnerability, there is a significant need to strengthen disaster preparedness and response.



Early Warning Systems (EWS) contribute to prevention, mitigation and response at the institutional and community level and are enhanced by mutual learning and collaboration. To strengthen EWS, it is critical to identify the gaps, the Multi-Hazard Early Warning System Checklist was used, accompanied by a guide to the development of an assessment process. The application of the checklist should lead to an analysis and result in a national report outlining gaps and the priority actions into a road map to direct investments in EWS and disaster risk reduction at the national level.

This EWS gap analysis and process was implemented in five countries in the Caribbean region. It was supported by technical assistance from Cuba and benefited from the community level expertise provided by the Red Cross and Crescent Movement. Pilot projects, addressing a specific hazard and gap, were tested in the five countries. Focus was placed on knowledge transfer and the development and application of tools, models, and methodologies to strengthen EWS at the national and community level.

STRENGTHENING EARLY WARNING SYSTEMS IN THE CARIBBEAN FIVE CASE STUDIES


PRIOR KNOWLEDGE AND IDENTIFICATION OF RISK


MONITORING AND WARNING SYSTEMS


DISSEMINATION AND COMMUNICATION


RESPONSE CAPACITY



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DOMINICA

THE HAZARD | Dominica has made advances in its disaster preparedness; however, the impact of Hurricane Maria in 2017 left 80% of the population affected, damages and losses estimated at 1.3 billion USD, and provoked a reassessment of the country's state of readiness for major emergencies.

THE GAP | Dominica identified the need to strengthen the baseline information and analysis on risk so that planning, alerts, and preparedness actions can be more targeted and effective.

THE ACTION | Dominica elected to focus on disaster risk knowledge and the systematic collection of data and execution of disaster risk assessments. With Cuban technical assistance, technical teams were trained the application of a hazard, vulnerability and risk methodology specific for flooding. The teams tested the methodology and undertook a process of investigation, identification, characterization, quantitative and qualitative estimation of risks in the Bath Estate Community in the Roseau River Basin.



DOMINICAN REPUBLIC

THE HAZARD | An historical analysis of events in the Dominican Republic indicates that storms and floods are the primary hazards. In 2016, floods affected nearly 1.8 million people in the country and demonstrated the need to improve local forecasting systems. Potential impacts of floods in the river basins, coastal and low-lying areas includes damages and economic losses projected to reach nearly 17% of GDP.

THE GAP | As part of the national EWS assessment process, the Dominican Republic identified the need to improve monitoring of river basins.



THE ACTION | The priority action focused on the management of flash floods, through capacity building in numerical forecasting and weather monitoring. Cuban institutions and specialists provide materials, methodologies and training. The Weather Research Forecasting Model (WRF), and Immediate Forecast System (SisPI) were applied, and two hydrological modelling systems were developed to monitor flash flood risk.

SAINT LUCIA

THE HAZARD | Given its disaster history, the most likely hazards to affect Saint Lucia are flooding, hurricanes, and storms. Coastal flooding and floods from intense rains are a major concern particularly in low-lying areas and consistently result in the displacement of people and the destruction of property.

THE GAP | Saint Lucia acknowledged that the lack of a systematic risk assessment, monitoring networks, and risk management solutions were limiting preparedness and resilience planning. The management of flood risk is a key priority.

THE ACTION | Saint Lucia focused on building local capacity, using the Cuban risk study model for intense rains and coastal flooding. With Cuban technical support, they undertook a hazard, vulnerability and risk study; the coastal community of Dennery was selected as a pilot. The risk study process involved the creation of risk and hazard maps, training in flood studies, and a numerical simulation exercise. A series of practical recommendations were made to increase local EWS capacity including the need to understand and increase the community's perception of risk.



SAINT VINCENT & THE GRENADINES

THE HAZARD | Hydro-meteorological events in SVG occur frequently and represent a significant source of average annual losses. Floods in 2013 affected 13,000 people; the floods in 2016 left 25,000 affected and generated losses estimated at 5% of the GDP (2015), mostly in infrastructure, social and productive sectors.

THE GAP | The priority gaps identified by the national EWS assessment process in SVG included the lack of data collection on the river network, the need for improved data analysis, the lack of trained technicians and human resources to maintain the equipment, and the need to improve community monitoring of the hazards.



THE ACTION | The action aimed to strengthen the local river monitoring capacity; volunteer observers in flood-susceptible zones of the Colonair and Buccament river basins were trained on the installation, operation and maintenance of gauging stations, and the evaluation of hydrological information for flood early warnings. Cuba experts provided the training, and support to analysis and adaptation of the tools. The training was complemented by the acquisition and installation of additional river monitoring equipment and the development of public messaging and standard procedures for information dissemination.