

Canada

**CANADA CARIBBEAN DISASTER
RISK MANAGEMENT FUND**



Snapshot Document
Jamaica

About The CCDRMF

The Canada Caribbean Disaster Risk Management Fund (CCDRMF) is one component of Global Affairs Canada's larger regional Caribbean Disaster Risk Management Program. The CCDRMF is a competitive fund designed to support community-driven projects that enhance the resilience of communities and reduce risks from natural hazards (e.g. floods, droughts, tropical storms, hurricanes) and climate change.

Established in 2008 as a small grant facility, the CCDRMF finances projects ranging from CAD \$25,000 to CAD \$75,000, and up to CAD \$100,000 in exceptional cases. The target audience is community-based organisations, non-governmental organisations, civil-society organisations, and government agencies wishing to undertake community projects in the following beneficiary countries¹ : Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

For the purposes of the CCDRMF, a 'community' is defined as 'a group of people living in the same geographical area (such as a neighbourhood, district, city or town)' or 'a group of people

with similar interests (such as youth and women) or livelihoods (such as farmers or fishers)'.

Between 2008 and 2015, there have been nine (9) Calls for Proposals and in total, the Fund received 212 project applications. Only forty-three (43) projects, 20%, from thirteen (13) countries, met the criteria and were eligible for consideration.

Following a rigorous development process, the Fund has supported thirty-four (34) sub-projects in 11 countries valued at just over CAD\$2.2M. The projects have strengthened disaster risk management through improved emergency communication systems, shelter retrofits and safer building practices, flood mitigation and land stabilisation, water storage, food security and climate-smart agriculture, and mangrove restoration.

¹In addition, one small community project was approved for the British Virgin Islands



Jamaica
National Flag

Island Overview

Jamaica is the third largest island in the Caribbean consisting of one large inhabited island (10,990 km²) and over 60 small cays and islands. Some of the Pedro Cays are partially inhabited by fisher folk and others used for recreation. Jamaica is volcanic and its topography consists of coastal plains, valleys and plateaus, and high interior mountain ranges which extend across the island from east to west.

Jamaica has a tropical climate with considerable regional variations in rainfall and two distinct wet seasons. Jamaica is home to a rich diversity of flora and fauna, and is fifth among islands of the world in terms of plant endemism. More than 120 rivers flow from the mountains to the coast. Jamaica is vulnerable to several natural hazards, with hurricanes and tropical storms, storm surges, floods, landslides and droughts being the most frequently recurring hazards with high potential impacts. Located in the Atlantic hurricane track, numerous tropical cyclones have made direct impact or have passed within close proximity (100 km) of the island.

In 1988 Hurricane Gilbert passed directly over Jamaica resulting in wide-scale flooding and landslides, an estimated US \$4 billion in damages, 49 deaths, and 810,000 persons affected to become one of the most expensive natural disasters

in Jamaica's history. In 2004, Hurricane Ivan left US \$580 million in damages, claimed 17 lives, and damaged 14% of the housing stock; while Hurricane Sandy in 2012, moved from south to north across eastern Jamaica, resulting in an estimated US \$56 million in damages and disrupted various essential services such as electricity, water and sanitation, transport and communication.

Landslides account for most of the natural disasters that have occurred on the island during the last decade and continue to present risks to life and property – between 2007 and 2010 there were 44 landslide events recorded across the island. Flooding in Jamaica tends to occur with heavy rainfall events during the wet seasons or tropical cyclones. Although there have been no major earthquakes since 1907, Jamaica is located within a seismically active zone and is traversed by major faults which are often associated with seismic activity across the island (mostly in the eastern section). Of course, like other small island developing states (SIDS), Jamaica is also vulnerable to the impacts of climate change, including changes in temperature and precipitation, intensified hydro-meteorological events and associated hazards, and sea level rise.

CCDRM Fund Projects in Jamaica

The CCDRMF has received forty-two (42) project applications from Jamaica. Of these, six (6) community-based projects were approved and successfully implemented. These projects support disaster risk management through improved emergency communication networks and early warning systems, shelter upgrades, flood mitigation, drought alleviation, and marine ecosystem restoration.

The Jamaica Amateur Radio Association (JARA)

The Jamaica Amateur Radio Association (JARA) works closely with the Office of Disaster Preparedness and Emergency Management (ODPEM) to support and strengthen emergency communications in Jamaica. A number of repeater sites had become unstable with outdated equipment resulting in only 60% coverage in radio communications. This left some vulnerable and remote communities unable to benefit from early warning and relief information before, during and after emergencies.

The project enabled JARA to upgrade five repeater sites, install two additional repeaters to increase coverage to 85%, as well as provide back-up battery power to the sites. The upgraded communications network can now reliably support the ODPEM, the Red Cross and other local Government agencies during disasters and emergencies. The JARA used the project to work more closely with the large and newly formed Emergency Affiliated Radio System (EARS) group at ODPEM, assisting in training to upgrade them to radio amateur status. Additional groups of trained volunteers are now available to serve and to assist both JARA and the ODPEM.



Project

Telecommunications
Infrastructure
Strengthening
Project for
Emergency
Communications
and Early Warning
Systems Efficacy

Organisation

**Jamaica Amateur
Radio Association
(JARA)**

Objectives

To enhance the ability of communities² to prepare for, cope with, and recover from extreme climatic events by:

Project Period

2011-2014

GAC Contribution

\$37,446.33

Total Project Cost

\$45,963.40

²The seven (7) locations of the JARA Repeater Sites are: Catherine's Peak, St. Andrew; Marley Hill, St. Catherine; Winchester, St. Thomas; Solomon's Peak, St. Mary; Flower Hill, St. James; Spur Tree, Manchester; and Shafton, Westmoreland.

PANOS Caribbean

Portmore in southeastern Jamaica accounts for nearly 10% of the country’s population, and several neighbourhoods are vulnerable to a variety of hazards. The Combined Disabilities Association estimates that 5,000 people with disabilities live in the Waterford, Gregory Park, and Bridgeport communities of Portmore. A government forum revealed significant gaps in emergency communications within the disabled sector and this stymied the sharing and distribution of critical disaster information with representatives of the disabled community.

Panos Caribbean’s mission is to amplify the voices of the poor and the marginalized and ensure their inclusion in public and policy debate. Panos therefore undertook this initiative to ensure that the needs of people with disabilities were better met in times of disaster.

Panos worked with a number of agencies to improve disaster planning in this area, in particular with regard to the inclusion of people with disabilities. The register of people with disabilities and the help they required during a disaster was updated for three beneficiary communities. Training was delivered to 375 people on: climate and disaster risk; experiences

of people with disabilities and how they are differentially impacted by climate change; communication and advocacy training; as well as training in the use of the radio technology that forms the basis of the new early warning system. The Early Warning System was developed and tested in a simulation exercise. Ten (10) Public Service Announcements (PSAs) were produced and aired as well as a booklet titled, ‘When disaster strikes be ready – a survival guide for persons with disabilities.’ Finally, the project improved the infrastructure at the Naggo Head Shelter with a ramp, rails and a bathroom with toilet facilities for better access for persons in wheel chairs.

The project placed great emphasis on people with disabilities being able to participate and own the project and so a lot of time was spent in consultation to ensure that all the activities carried out fully accommodated them. While the consultations required more time to implement activities, it nonetheless meant that there was full buy-in and support. This approach has been held-up as a model for a number of projects working on similar initiatives.



Project

Early Warning System for the Disabled in Portmore

Organisation

Panos Caribbean

Objectives

To reduce the vulnerability of the disabled population in three communities³ in the city of Portmore by addressing disaster preparedness, relocation and evacuation needs of physically challenged, deaf and blind persons through:

- 1) a pilot early warning system;
- 2) enhanced information sharing; and
- 3) improved disaster shelter infrastructure.

Project Period

2012-2015

GAC Contribution

\$75,000.00

Total Project Cost

\$93,003.00

³Gregory Park, Waterford, and Bridgeport, Portmore, St. Catherine.

Jeffrey Town Farmers Association

The Jeffery Town Farmers Association (JTFA) comprises individual farmers who have working together to improve the quality of rural life. Farming communities such as Jeffrey Town face increased vulnerability as a result of climate change – with drought and flooding affecting their livelihood. Production has become unpredictable, compromising the commercial viability of small farm operations and forcing them towards subsistence farming. Predictable and regular access to water for irrigation enhances crop production, making business outcomes more predictable. This in turn improves the livelihoods of all farmers and improves the economic conditions of the community.

The project supported the installation of twenty rainwater harvesting tanks, a series of 10 check dams to control rainwater run-off,

establishment of community catchments, hillside stabilisation through the planting of 300 flowering Pride of Barbados, 400 fruit trees and 800 pineapple suckers, construction of soak-aways to control tank overflow and the production and airing of radio public awareness programming. The benefits of this project have been far reaching and have affected all areas of this community because it has dealt with the critical issue of the availability of water supply. Elderly, young and regular community members now have easier access to water, particularly those with water harvesting systems installed at their homes and the five with completely new roofs. The people living in the valley are extolling the merits of the water control system as an improvement to the viability of their homes.



Project

The Mitigation of the Adverse Effects of the Extreme Hydro-metrological Events in the Jeffrey Town Community

Organisation

Jeffrey Town Farmers Association Ltd

Objectives

To reduce vulnerability to drought and flooding through the implementation of eight (8) project sub-components: (a) Pump Installation; (b) Installation of Tanks for Rain Water Harvesting; (c) Training, Health and Sanitation; (d) Construction of Check Dams; (e) Tree Planting and Contouring; (f) Public Awareness Sessions; (g) Radio Programs; and (h) Construction of a website.

Project Period
2013-2014

GAC Contribution
\$77,941.81

Total Project Cost
\$87,833.81

Abacus for Communities

Abacus for Communities are a team of experts who are working towards a vision of better-prepared communities and enhanced resilience to environmental and other disasters. The intent of this initiative was to ensure that the selected communities have access to communication in the event of a natural disaster or other emergency. Ready access to communications can help to avoid chaos and allows emergency agencies to speedily and effectively respond to individual needs.

Communities vulnerable to rainfall hazards were identified from parts of the country to participate in a pilot. These communities are often cut-off from emergency services and food supplies, potentially leading to additional impact and even casualties. Three hundred and twenty one participants from ten communities were trained in emergency telecommunications and those who

successfully completed the training, 293, were equipped with the necessary items to form an emergency telecommunications network. The volunteers received a pocket manual that provides a synopsis of the training materials for future reference. Community groups were established with the support of the Parish Councils to ensure buy-in at all levels as well as equipped with solar battery charging stations. During the life of the project, the Manchioneal community had the opportunity to use the radios in a real situation during a rainfall event that negatively influenced their community. It was reported that the radios were used effectively to save lives and property throughout the community.



Project

Community
Emergency
Communications for
Natural Disaster and
Climate Change
Adaptation in
Jamaica

Organisation

**Abacus for
Communities (AfC)**

Objectives

To enhance emergency telecommunications across 10 communities⁴ in Jamaica, leading to a reduction in the impact of natural and man-made disasters.

Project Period
2015-2016

GAC Contribution
\$80,661.00

Total Project Cost
\$176,568.30

⁴Clarendon: Rocky Point and Portland Cottage; Portland: Manchioneal and Skibo; St. Ann: Lime Hall; St. Mary: Annotto Bay, Jeffrey Town, and Port Maria; St. Thomas: John's Town and Trinityville.

Caribbean Coastal Area Management Foundation

During the passage of Hurricanes Ivan (2004) and Dean (2007), the communities of Portland Bight were extensively damaged and mangroves destroyed. Some areas of mangrove are regenerating naturally, but others needed intervention such as replanting or hydrological modification to stop or reverse continuing losses. The communities in this area are typically low-income, rural, coastal communities that are vulnerable to disasters and reliant on fisheries. These communities benefit from the coastal protection and livelihood resources provided by healthy mangroves.

The Caribbean Coastal Area Management Foundation promotes sustainable development of the Portland Bight Protected Area (PBPA) through stakeholder participation in the implementation and management of projects. With support from the Fund, a mangrove restoration project was undertaken in order to rehabilitate the mangrove forest

along critical sections of the coast as a means of enhancing coastal protection for the area. Members of the community and university students were trained in the identification of types of mangroves, tagging, planting of seedlings and monitoring growth. Two thousand mangrove seedlings were planted over four days at two sites, Cunny Fish and Long Island, and monitored by interns. The experiences gained in implementing this project have led the Foundation to develop their own mangrove nursery, so that they can respond more quickly to small-scale rehabilitation needs. The surrounding communities are also much more aware of the importance of healthy mangrove ecosystems to their lives and livelihoods.



Project

Portland Bight Protected Area Disaster Risk Reduction Project

Organisation

Caribbean Coastal Area Management Foundation

Objectives

To reduce vulnerability and disaster risk in the low-income and rural coastal communities in the Portland Bight area; as well as enhance the livelihoods of the community through the protection and improvement of the environment (mangrove restoration and conservation).

Project Period
2014-2016

GAC Contribution
\$15,780.00

Total Project Cost
\$23,534.00

Dolphin Head Local Forest Management Committee

The Dolphin Head Local Forest Management Committee (DHLFMC) was established in collaboration with the Forestry Department to protect the Dolphin Head Forest Reserve by increasing forest cover; promoting enforcement; capacity building; livelihood projects and public education of the surrounding communities and schools. Their work is guided by the Dolphin Head Forest Management Plan with the goal of increasing the knowledge and skills of those who interact with the Dolphin Head Forest Area as one aspect of the plan.

Many community members employ poor land use practices resulting in unsustainable agriculture and deforestation, which exacerbate the risk of landslides and land slippage during storms and heavy rainfall. This project aimed to reduce disaster risk in the Lucea River watershed by implementing sustainable and climate-smart agriculture

technologies and slope stabilisation mechanisms in the upper watershed within the Dolphin Head Forest Reserve. This was achieved with the construction of a Greenhouse to promote the expansion of protected agriculture (PA) systems among farmers and farming groups in the area. Greenhouses help reduce deforestation. Slope stabilization practices were piloted using pineapple and vetiver grass and farmers from nearby communities benefitted from Farmer Field School's practical demonstrations of good practices. Twenty sessions were held at five community sites with forty-one farmers trained.



Project

Climate-smart Technologies and Training to Reduce Disaster Risk in the Dolphin Head Area

Organisation

Dolphin Head Local Forest Management Committee (DHLFMC)

Objectives

To reduce disaster risk in the Lucea River watershed by implementing sustainable and climate-smart agriculture technologies and slope stabilisation mechanisms in the upper watershed within the Dolphin Head Forest Reserve.

Project Period
2017-2019

GAC Contribution
\$83,114.00

Total Project Cost
\$109,688.00

References

ODPEM. (2012). Hurricane Sandy. Office of Disaster Preparedness and Emergency Management.

ODPEM. (2014). Jamaica Country Document on Disaster Risk Reduction, 2014. Office of Disaster Preparedness and Emergency Management

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