



Office of Disaster Preparedness and Emergency Management

Project Budget Number:

Project Title: Caribbean Regional Emergency Broadband Satellite Repeater System

Start Date: July 2012

Estimated End Date: July 2014

Government Coop. Agency: Ministries of Communications, Regulatory bodies, Ministries of Education

Implementing Agency: ITU & Office of Disaster Preparedness and Emergency Management

Project Site: Caribbean

Beneficiary Country: CDEMA Participating States

ITU Project Manager:

SUMMARY OF CONTRIBUTIONS	
A) Project Budget	
Description	US\$
Project Personnel	56,322
Equipment	923,454
Training of Trainers	15,525
Monitoring & Evaluation	350,000
Miscellaneous and Other Costs	145,530
Total:	1,490,831
B) Cost Sharing	
US\$ 1,490,831	
Participating countries Contribution (in kind)	
<ul style="list-style-type: none"> - Substitute Trainers - Training Room / Business Centre - Staff 	

Brief Description:

This project aims at procuring equipment and training local and regional disaster management stakeholders in the use of equipment to increase communication among and within CDEMA Participating States during disasters. To achieve this objective, funding is required to procure equipment and train trainers on operating and servicing the equipment.

For the	Signature	Date	Name/Title
ITU:	_____	__/__/____	
Partner(s):	_____	__/__/____	
	_____	__/__/____	

1. Background and Context

General introduction

According to United Nations Development Programme (UNDP) (2004), natural disasters exert an enormous toll on development. Disaster losses on average was US\$ 75.5 billion in the 1960s, US\$ 138.4 billion in the 1970s, US\$ 213.9 billion in the 1980s and US\$ 659.9 billion in the 1990s. Many of these losses are concentrated in the developed world and fail to adequately capture the impact of the disaster on the poor who often bear the greatest cost in terms of lives and livelihoods, and rebuilding their shattered communities and infrastructure. Presently, 85 percent of the people exposed to earthquakes, tropical cyclones, floods and droughts live in countries having either medium or low human development.

Caribbean Disaster Emergency Management Agency (CDEMA) Participating States face a myriad of natural disasters annually as a result of their geographical location. Natural disasters may be defined as temporary events triggered by natural hazards that overwhelm local response capacity and seriously affect the social and economic development of a region (IADB, 2000). This coupled with poor economic state of these States and the inadequate risk management policies, increases the vulnerability of the respective populaces. During a natural disaster, chaos ensues with large losses of lives, livelihoods and properties. These losses may be reduced by increasing the capacity of these States in keeping with the risk equation:

$$\text{Risk} = \text{Hazard} \times \text{Vulnerability} / \text{Capacity}$$

Capacity may be increased by training communities, on macro and micro levels, retrofitting buildings, and relocation of communities. Though not often mentioned, strengthening communication infrastructure is also another way of building the capacity of vulnerable populations. This is because of the widespread reduction of losses that may result if information of oncoming disasters is communicated to vulnerable populations before and during the onslaught of a natural hazard.

Present situation/context

During the past thirty years, there has been an average of 32.4 disasters per year, which have caused a total of 226,000 fatalities (or around 7,500 deaths a year) in the Caribbean region. (IADB, 2000). In addition to causing fatalities, homelessness and injuries, natural disasters have represented an enormous cost for the countries affected, and the international community.

The CDEMA is an inter-regional network of independent emergency agencies in the Caribbean. This was formed in 1991, then named the Caribbean Disaster Emergency Response Agency (CDERA), but has undergone mandate and name change to CDEMA in 2009. CDEMA currently comprises of eighteen (18) participating member states which includes: Anguilla, Antigua, Bahamas, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago and Turks and Caicos Islands. These countries are burdened by annual natural disasters, and without proper risk management policies, losses will continue.

CDEMA operates in an environment of small states with large vulnerabilities and limited individual capacity. The Regional Response Mechanism is an arrangement for the coordination of disaster response among CDEMA Participating States, Regional and International Agencies. It seeks to deliver speedy response and effective and efficient use and management of resources. The CDEMA Coordinating Unit, headquartered in Barbados, is the focal point for effecting the plan. To better manage an efficient response, the eighteen (18) participating states are grouped into four (4) sub-regions, each of which is headed by an operations unit known as a Sub-Regional Focal Point (SRFP). The SRFPs: Antigua and Barbuda, Barbados, Jamaica and Trinidad & Tobago are CDEMA's frontline response to member states after a disaster event.

Sub-Regional Focal Point	Responsible for			
Antigua	Anguilla	Virgin Islands	Montserrat	St. Kitts/Nevis
Barbados	Dominica	Saint Lucia	St. Vincent & the Grenadines	-
Jamaica	Bahamas	Belize	Haiti	Turks & Caicos Islands
Trinidad & Tobago	Grenada	Guyana	Suriname	-

According to ISDR 2009 terminology, disaster risk management is “the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster”. Rigid risk management systems ought to be put in place to reduce losses and reduce chaos, which may lead to a secondary disaster resulting in new levels of destruction. Though many times systems are in place, destruction may still be severe that it overwhelms the capacity of the population, without adequately communicating in and out of the crisis areas; this may further increase the impacts of the disaster.

Problem Statement/ Description of the Problem

Risk Communication is the scientific process of informing populations of the probable damage to their person, population and communities. It has been long recognized as an integral part of disaster management. The Hyogo Framework of Action, Priority three requires risk communication. Priority three of the Action is the “use knowledge, innovation and education to build a culture of safety and resilience at all levels”. According to Sarun (2011) disaster risk reduction and management requires effective and coordinated communication to avoid confusion and mayhem among various stakeholders. Effective communication linkages between emergency operations centres, broadcasting system, and front-line responders and affected communities are critical role in the various stages of disaster management. It has an important role in all four distinct phases of disaster management namely, mitigation, preparedness, response and recovery.

However disasters have destroyed lines of communication in the past. After many disasters many countries in the Caribbean have experienced an almost total loss of the ability to communicate with the outside world occurs. Power outages as well as the destruction of critical infrastructure result in a complete or partial disruption of telephone services. In many cases, cell phone services become either non-existent or are so congested that it takes hours to get a call through, (Kennedy, 2006). Other forms of communications (e.g. email and text messaging) may also be disrupted due to overload. In these instances, reliable satellite phone or radio services are often required.

During the Japan earthquake, wireless communication was disrupted due to overload of users. Though infrastructure damage occurred, it was the overload on the communications system that led to the disruption that was experienced. The Pakistan earthquake of 2005 also resulted in communication infrastructural damage. This lack of communication, resulted in poor management of the post disaster activities, and police personnel left the damaged stations and went home, rather than leading the efforts in search and rescue. During Hurricane Katrina, the communication systems in some communities were completely destroyed, preventing communications access to these areas. Communication infrastructure across the Gulf Coast was devastated, incapacitating telephone service, police and fire dispatch centers, and emergency radio systems.

These real examples, coupled with satellite system insufficiencies of only providing voice/data capabilities when the end use is able to see the satellite- Line- Of- Sight, along with the inability of remote locations to

gain internet access when normal internet systems are down, create further disorder added to the chaos of the disaster. The current proposal provides a reliable solution to override these problems and to ensure that reliable communications can be put in place immediately where existing communications systems become redundant.

Process followed in Project identification/formulation

This Project was conceptualized, in response to discussion at the CDEMA Information & Communications Systems Advisory Committee Meetings on discussion regarding the telecommunication challenges across the CDEMA Participating States. As it relates to identifying a suitable solution it was agreed that they would allow countries in the region to establish and maintain Emergency Telecommunications Services in Disaster/Emergency Events. ODPEM was given the task to research and identify an appropriate solution, and this birthed the concept of the Project.

Project Strategy

The Project will bear four (4) main components:

1. Training of Trainers and Servicing of the equipment
2. Procurement of Equipment
3. Community and Institutional Capacity Building (Training and Regional Simulation Exercises)
4. Project Management and Monitoring

Training for Trainers and Servicing of the Equipment

Trainers drawn from each of the 4 SRFPs will be trained in the use and maintenance of the equipment to be deployed to the SRFP and their participating states. The trainers trained, will in time, train other members within the National Disaster Offices across the region that they are responsible for, on the use and maintenance of the equipment. The equipment procured will complement existing communications infrastructure in each of the participating countries. ODPEM will provide support in the training of operators and maintenance of equipment.

Training in technologies will be conducted and will be coordinated with the ODPEM, in collaboration with CDEMA. Trainer of training sessions will be carried out for one person in each of the four (4) Sub- Regional Focal Points and will culminate in four regional telecommunication simulation exercises.

The three-day Training of Trainers course will be held and be conducted by Master Trainers provided by equipment suppliers, in collaboration with ODPEM. This will be immediately followed by a one-day training course for one technical ICT representative/trainer from the NDO of the 18 participating states in the use and maintenance of the hand held radios to be deployed at the community/local level and also to be introduced to the communications system in which they would operate at the regional level. The week of training activities will culminate in a one day simulation exercise and after-action review. The objective of the simulation exercise is to put into practice the deployment, activation, use and deactivation of the communications system to be supported with the instruments. The Simulation Exercise, After Action Report and Project Evaluation will provide participating countries with the opportunity to identify any gaps that are to be addressed in the newly installed local, sub-regional and regional communications system.

Procurement of Equipment

Equipment will be procured, and radio equipment that can operate on these networks, also to further strengthen the communication network of the region.

Community and Institutional Capacity building

The equipment aids in situational awareness, search and rescue and in the coordination of relief efforts. To build community and institutional capacity, a joint simulation exercise will be held in each of the four (4) Sub Regional Focal Points at local (community) and national levels. Base camps will be set up to test the equipment on these levels and to apply the theoretical training received in a practical environment.

A regional training exercise that focuses on a multiple strike scenario will be conducted to test the communications system to be established. Where a hurricane hazard impacts two of CDEMA'S Participating States, requiring the National Disaster Organizations, the Sub-Regional Focal Points and the CDEMA Coordinating Unit to enter into extended operations to monitor and arrest the situation that unfolds. All other Participating States and regional partners will be invited to participate in the exercise to add to the degree of realism and level of coordination required.

2. Overall Project Objective

To strengthen local and regional communications during and after disasters to minimise the loss of lives, livelihoods and property

3. Project Expected Results

- 20X2 equipment procured
- 4 SRFP trainers trained on use of equipment (one (1) from each SRFP)
- 18 technical officers for each NDO of countries participating in CDEMA sensitized to communications capabilities, trained in the handheld radios to be deployed in each country at the local level and have reviewed regional SOPs for the deployment, activation, use and deactivation of the communications systems.
- 216 radios procured and distributed to all CDEMA participating states (12 for each of the 18 CDEMA Participating States).
- 4 persons trained on servicing the equipment
- 4 simulations hosted (one (1) from each SRFP)
- Documentation and dissemination of the gaps, lessons and areas for further action.

Indicators

- 85% of the total relief agencies staff trained are able to fully operate the equipment
- 85% of the total number of individuals trained by the trainers trained by the Funding have over 80% mastery of the materials
- Review of SOPs for the operations of the communications systems submitted to CDEMA.

4. Activities

- Sensitization of CDEMA Participating Member States to the project.
- Selection of representatives from the SRFPs to be trained
- Deployment of equipment, software, at an official ceremony to be held in a selected CDEMA SRFP
- Training of trainers training
- Evaluation of the training and the trainer's mastery.
- Disaster simulation to test practical mastery of the equipment in the SRFPs

5. Inputs

- In kind contribution from the National Disaster Office in each SRFP: Provide a local official coordinator and support for the project.
- Staff will be provided to grant the coordinating efforts for the Project by the ODPEM
- Provision of technical support staff
- Provision of administrative staff to maintain accounts
- Contribution from CDEMA to provide the fiduciary contribution to maintain the accounts of the equipment being purchased.

6. Risks

Some CDEMA Member States have more advanced and staffed disaster management agencies than others. The introduction of equipment may be overwhelming on an agency that is already bearing the weight of managing their respective daily demands of disaster risk management. This may lead to a delay in response, and reluctance to engage in an activity that will increase their workload.

Some States may have storage issues for the equipment provided; this may delay the receipt of the equipment to be sent to those States.

7. Sustainability

An integral part of the project is a post-project self evaluation that each National Disaster Organization and SRFP will provide to partners and CDEMA six months after the completion of the project. Another important feature of the project is that regular sub-regional and regional tests and review of the equipment are to be conducted and reports on the process, maintenance, exercise and event outcomes and lessons/gaps be submitted to the SRFPs and/or CDEMA within a month of the tests or sub-regional/regional simulation exercises.

These annual Regional Telecommunications exercises will facilitate the various disaster agencies and their countries to building the capacity of the region. Equipment received will be reviewed bi-annually and the necessary servicing carried out by technicians so trained. Personnel in the disaster agencies that equipment will be provided will be in charge of ensuring the suitable maintenance of the equipment.

8. Management

Roles and responsibilities for Carrying out the Project

- Project Manager – direct responsibility for coordinating and managing project implementation and evaluation
- Project Assistant
- ODPEM Telecommunications Engineer – Technical Project Advisor and Coordinator
- Senior Director – Preparedness and Emergency Operations Division: oversight and lead for project design and coordination between participating NDO states
- Senior Director – Project Development and Implementation Division: lead for monitoring and reporting of project implementation (project outcomes, process and financials).
- Project Coordinator – support for coordination of training logistics, simulation exercise, project reporting

To carry out the Project, the Telecommunications Engineer at the ODPEM, paired with hired Administrative personnel will be the key point coordinators for the Project. This team along with members of staff in ODPEM will coordinate the necessary communications required for the simulation exercise and also between CDEMA and Participating Member States, The ODPEM team to ensure that all participating NDOs:

- Are appraised of the project implementation and reporting framework, timelines and deliverables and also of their responsibilities under the project
- Are appraised of equipment
- Select representatives to be the point persons in the Sub- Regional Focal Points based on criteria agreed upon with CDEMA and the Sub Regional NDOs.
- Select representatives to be trained based on criteria agreed upon with CDEMA and the Sub Regional NDOs.
- Are present at the multiple Simulations to test the practical knowledge taught in the training session
- Receive equipment if necessary

Overall description of Project Management

The Senior Director of Preparedness and Emergency Operations will have direct responsibility for the implementation of the project and will work closely with the Senior Director of Projects, who provides

oversight for monitoring project implementation and outcomes. The Project Assistant, hired under the Project, will work alongside the Project Manager who will report to the Senior Director of Projects Implementation, Development and Monitoring Division, who reports to the Deputy Director General of ODPEM. Reports will be collated, reviewed and sent to the Funding Agency.

Accountability for Project Implementation

Periodically reports and teleconferences will ensure that the Project is being implemented at the correct pace. Fiduciary concerns will also be communicated during these forums, to ensure that the Project is being administered in a timely manner within budget.

9. Monitoring and Evaluation

The Project Manager will provide the partners reports on the current status of the Project, physical quantities, expenditure and pertinent issues. Meetings will be held to ensure that the Project is being executed within time and budget.

Monitoring of the project will be carried out on a continuous basis, from the commencement to the completion of the implementation. This is essential in communicating the progress of the implementation and the adherence to the contract and requirements of the project.

Milestones and indicators for monitoring will be defined for each project component, prior to the commencement of implementation activity.

Six months after the close of the project or the completion of a project component, an evaluation will be carried out to assess the effectiveness of the project in meeting its objectives. The evaluation will comment on the quality of deliverables, compare the actual activities to that planned. The evaluation will also serve to identify weaknesses or limitations in the future development and planning projects.

Performance Indicators, as stated in this document, will be specified at the beginning of the project for each component, as a measure of verification on the quality, effectiveness, time schedule, budget, and adherence to the scope of work.

During implementation, these monitoring indicators will be updated quarterly as needed and included in the corresponding Project Management Report.

10. Budget

The estimated budget is attached as Annex 1.

11. Work plan

The work plan is attached in Annex 2.

