

MONTSERRAT NATIONAL REPORT AND INFORMATION ON DISASTER REDUCTION

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Political Commitment and Institutional Aspects:

1.0 General Comments:

Disaster risk reduction is high on the political agenda in Montserrat. The political agenda here is not only that of the Government of Montserrat (GoM) but also of Her Majesty's Government through Her Excellency The Governor and the Department for International Development (DFID).

In 1997, the GoM created a new unit to coordinate the activities of the emergency sector following the aftermath of Hurricane Hugo in 1989 and the Soufriere Hills Volcano, which came to life in 1995. The enactment of the Disaster Preparedness and Response Act 1999 further strengthened the Emergency Department. There are plans to further enhance the work of the Emergency Department commencing with a name change to reflect its coordination role. The proposed name change will be Disaster Management Coordination Agency.

Disaster management is now seen as an integral part of the development process where the absence of effective disaster management and control and/or

the lack of adequate mitigation, preparation and planning programs, can lead to major disruptions to the island's developmental agenda.

1.1 National policy, strategy and legislation addressing disaster risk reduction: There is national policy and strategy. These form part of and are included in the Government of Montserrat Corporate Plan 2003-2006 and in the Montserrat Sustainable Development Plan 2003-2006. A Disaster Response Act No. 10 of 1999 exists. All development projects take into account disaster risk reduction as a matter of critical importance. All development projects have to include Environmental Impact Assessments part of which is a natural hazard impact assessment. This must be included for the project to be approved. This is routinely enforced through the various government departments.

1.2 National body for multi-sector coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/land use and planning, health, environment, education, development planning and finance: There is a national body provided for by law for multi-sector coordination and collaboration including the bodies mentioned. This body is the Emergency Department. This body will in due course evolve into a Disaster Management Coordination Agency to more correctly reflect its current and anticipated functions. The Emergency Department consists largely of two sections i.e. a Policy section comprising mainly the political directorate of Montserrat headed by the Governor and an Operational section including all Heads of sectors, Ministries and Key agencies.

1.3 Sector plans or initiatives that incorporate disaster reduction concepts into each respective development area (such as water resource management, poverty alleviation, climate change adaptation, education and development planning): There are several sector plans that incorporate disaster reduction concepts. The Montserrat Corporate Plan 2003-2006 for example includes provisions addressing sustainable environment & disaster management, economic growth & financial stability, Social Development & Quality of Life. Other plans exist for example in the Health sector, Water sector, Education sector. There is also a Participatory Poverty & Hardship Assessment of Montserrat Plan 2000. One of the most successful initiatives including disaster risk reduction concepts is the Ash Clearing Assistance Project to clean up after the volcanic dome collapse disaster event of July 2003. This initiative focused on reducing health hazards in the environment and air pollution.

One of the main challenges faced in this area is determining the factual financial status of individuals and hence their right to qualify for assistance in programs and initiatives.

Other challenges include availability of adequate funds, inadequate skilled human resources in the population and over-tasking of existing skilled personnel. The small size of the population (approximately 5000) poses special challenges.

1.4 Disaster risk reduction incorporated into national plan for the implementation of the UN Millennium Development Goals (MDGs), Poverty Reduction Strategy (PRS), National Adaptation Plans of Action, National Environmental Action Plans and WSSD (World Summit on Sustainable Development) Johannesburg Plan of Implementation: National plans for the implementation of these thematic areas are led by specific sectors and agencies and generally they all incorporate risk reduction. Climate change and national adaptation plans for example are led by the Minister of Agriculture and is closely coordinated with the Emergency Department. A similar situation prevails in respect of the MDGs with close coordination between Emergency Department and the Ministry of Health in collaboration with PAHO.

1.5 Building codes of practice and standards in place, which takes into account seismic risk: There are building Codes and Standards available. The Caribbean Code CUBiC and the Eastern Caribbean Codes are used. In addition there is a Code specific to Montserrat that is in draft. This is based on the above standards and Codes and address seismic risk. This national code is to be ratified in the Legislative Council in due course. Codes and Standards are generally enforced quite strongly but the main challenge to such enforcement is inadequate numbers of staff.

1.6 Annual budget for disaster risk reduction: There is an annual budget voted for specifically for the Emergency Department. There is also funding for specific disaster reduction projects that is provided for by the Legislative Council after being approved technically by the Development Unit in the Ministry of Finance.

1.7 Private sector, civil society, NGOs, academia and media participation in disaster risk reduction efforts: All of the agencies mentioned are participating. Coordination is done by the Emergency Department. They are included in the organs, such as committees and teams of the Emergency Department. For example the Red Cross is part of the Health Committee; the Montserrat Christian Council exercises responsibility for counseling services; the private sector with heavy duty vehicles form part of the team of Public Works Department to support road clearing, landslides works etc.
A key difficulty or constraint in this area is inter-agency coordination.

Risk Identification (including early warning):

2.0 General Comments:

A Vulnerability and Hazard Study was completed for Montserrat in June 2003. One of the outputs of this study was a multi-hazard map in a scale of 1:25,000, which is being used by the engineers, disaster practitioners and sustainable development personnel to inform the various projects and programs.

Recognizing the importance of early warning systems, Montserrat has invested significantly in this area. We note the island-wide siren system, the new transmitter site on Silver Hills, the MVO seismic stations, and the soon to be constructed Media Center at the Emergency Department. The latter project will allow for the simultaneous transmission of radio and television signals from the Emergency Operations Center to the public.

All development projects must have an Environmental Impact Assessment (EIA) or an environmental section completed before the project can be approved by the funding agencies. Quite recently, the OECS-Environment and Sustainable Development Unit has conducted an assessment of damage to selected environmental assets in Montserrat following the volcanic dome collapse of June 2003. It is the intention of the Emergency Department to add the Environmental Department in the Ministry of Agriculture to the Damage Assessment Team.

2.1 Hazard mapping/assessment: Hazard mapping assessments have been done. An island-wide natural hazard vulnerability assessment was completed as recent as 2003. This study resulted in the preparation of island-wide GIS based multi-hazard map showing risks to natural hazards. Also hazard mapping of the volcanic risks to the island was done.

These products are used by many including Public Works, Physical Planning, Private sector Investors, Architects & Engineers, Emergency Department, Ministry of Finance Sustainable Development Unit and generally all government departments. They are available to any interested party.

2.2 Vulnerability and capacity assessments: Vulnerability assessments have been completed for all critical infrastructure such as shelters, hospital, all key public buildings e.g. police station, fire and rescue service. A capacity assessment was completed for the Public Works Department. Contact for these assessments include the Emergency Department.

2.3 Mechanisms for risk monitoring and risk mapping: There are mechanisms for monitoring risks and these exist primarily within government departments. These exist in sectors, technical agencies and ministries. There is a Montserrat Volcanic Observatory for volcanic risk, and the Emergency Department coordinates and its EOC provides island-wide mechanism for early warning to the public. Risk mapping is done mainly through consultancies with government and support of Regional and International agencies.

2.4 Systematic socio-economic and environmental impact and loss analysis after each major disaster: This is routinely done after the impact of each hazard impact and particular attention is usually given to environmental impacts. For example a specific assessment was done following the volcanic dome collapse of July 2003 (Assessment of Damage to Selected Environmental Assets in Montserrat following the Dome Collapse On July 12, 2003". Results are available at the Emergency Department.

2.5 Early warning systems in place: Early warning systems are in place. For example there is an island-wide emergency siren system for multi-hazard threats. There are seismometers for volcanic risks, Early Warning system for mudflows in specific at risk areas e.g. in the Belham Valley.

A hot-line telephone system exists among the Montserrat Volcano Observatory, the Royal Montserrat Police Force, the Emergency Department and the Government Radio Station.

Main institutions involved include Emergency Department, Montserrat Volcano Observatory, Media, Governor's Office, the Office of the Chief Minister, Police, fire and Rescue Service.

One of the main lessons learnt is that constant public education is required to maintain high levels of public preparedness and to facilitate efficient response procedures. Several previous activations of emergency early warning systems have shown that public response was generally good. Resident guides with response plans and procedures especially for high frequency hazards such as storms and prevalent risks such as volcanic are produced and widely disseminated.

Knowledge Management (education, research, information, public awareness):

3.0 General Comments:

Information management and communication, education and training, public awareness and research are all parts of improving and managing knowledge on disaster risks and their reduction.

This area is a huge challenge given Montserrat's limited resource capacity and the need to constantly upgrade the skills of the service providers and the requirement to constantly update the public. Some successes has been realized from the education campaigns where it has been recognized that the primary school students are the best vehicles of information to the adult population.

One of the main challenges in this area is to introduce a consistent disaster reduction program on the syllabus of the schools at all levels of the education system.

3.1 Disaster risk information management systems (governmental and/or non-governmental): A disaster risk information management system exists. There are risk maps, resident guides for response procedures to high risk high frequency hazards e.g. volcano, storms/hurricanes. Disaster risk information is routinely disseminated through the Government Information Unit, Radio station, newspaper, pamphlets and lectures/presentations.

Users include the general public, government agencies, and private businesses. Information products are available at the Emergency Department.

3.2 Academic and research communities in the country linked to national or local institutions dealing with disaster reduction: The school system is linked to the Emergency Department through the Ministry of Education. The Information & Education Officer of the Emergency Department manages disaster reduction public information and education programs, which includes information sharing.

Research work is largely done through consultancies with support of Regional and International agencies. Post-graduate students do research on island. A disaster management center is being established to provide field based training for research students and disaster management/disaster risk reduction practitioners. This will be linked to other institutions already delivering/offering disaster risk reduction educational programs and training.

3.3 Educational programs related to disaster risk reduction in public school system: There are educational programs at all levels in the primary and secondary schools education system. A community college is to be opened shortly and its curricula will include disaster reduction topics.

Educational materials for teachers exist at the primary school level. Existing materials of CDERA, UNICEF, ECHO, ISDR etc. are also used. The Emergency Department and other technical agencies deliver programs. One of the major lessons learned was that the best vehicle to influence parents was through the primary schools system.

3.4 Training programs available: Many training programs are available. These include training for District Disaster Committees, Community Preparedness, Mass Casualty Management, Supplies Management, Basic Disaster Management, Search & Rescue, Shelter Management, Emergency First Aid etc. All of these are multi-sector and have contributed significantly to influencing island-wide awareness, preparedness and efficient response. There is a very high level of preparedness in the population and remarkable improvement in response times. Evacuation readiness of the population is also very high.

3.5 National public awareness programs or campaigns on disaster risk reduction: There are public awareness programs on disaster reduction. Main players include the Government Information Unit, Government Radio Station-Radio Montserrat, Red Cross, Emergency Department, Fire & Rescue Service, and Ministries.

The main target group is the general population. Programs are evaluated mainly by the Emergency Department for example from public responses and requests for information, checks on preparedness and observations of change in habits and practices.

Risk Management Applications/Instruments (technical, social, financial, environmental):

4.0 General Comments:

Montserrat has had a successful integration between the sustainable development unit and the emergency sector. In fact the damage assessment function within the emergency sector is executed by the sustainable development agency.

It is mandated through the Disaster Preparedness and Response Act 1999 that a Contingency Fund be established which is voted on by the Legislative Council annually. Additionally, the Emergency Department is entrusted with a separate "Emergency Operations" budget line that can be used as an initial response in the aftermath of a disaster.

4.1 Examples of linking environmental management and risk reduction practices: One of the most significant and successful examples of linking risk reduction and environmental management was the Ash Cleaning Assistance Program. This was undertaken to reduce the health risks by removing volcanic ash from occupied areas to an exclusion zone and stabilizing it to prevent air pollution.

There was also a watershed and reforestation management program led by the Ministry of Agriculture to protect water spring catchments that provide the only source of potable water to the population of Montserrat.

There is a wetland project, which has declared a specific at risk area "Piper's Pond" as a protected area to prevent a mangrove swamp and endangered species of that area.

Additionally in Montserrat, zones above a certain elevation are protected. No cutting of forests or other removal of vegetation is allowed.

4.2 Use of financial instruments as a measure to reduce the impact of disasters (e.g. insurance/reinsurance, calamity funds, catastrophe bonds, micro-credit finance, community funds, etc.): Insurance is the most commonly used instrument to influence a hazard resistant culture. Incentives are usually offered through reduced premiums for disaster resistant construction. Private insurance companies manage this.

Additionally government by law votes annually contingency funds. The Ministry of Finance manages this.

4.3 Examples of technical measures or programs on disaster risk reduction that have been carried out: Examples include a vulnerability Assessment study, the Caribbean Hazard Mitigation Policy Project which inter-alia would train persons in comprehensive disaster management, preparation of emergency evacuation plans.

Preparedness and Contingency Planning Good practices in disaster risk management:

5.0 General Comments:

Montserrat has a number of contingency plans that are regularly rehearsed and exercised. This constant exercising of the Plans has been the backbone of the disaster management program.

The Emergency Department has been fitted out as self-contained unit. It has a purpose-built building that houses the Emergency Operations Center. It has a communications suite covering HF, VHF, satellite phones and an emergency broadcast studio. It also has its own water storage, emergency generator, national warehouse and a fleet of various vehicles including bobcats and a water tanker for transporting potable water.

The department is staffed by seven (7) permanent staff but the Disaster Preparedness and Response Act 1999 provides that additional personnel can be co-opted should the need arise. A number of hazard specific plans are maintained and the Emergency Department ensures that there exists proper coordination among all the Response Agencies. It also ensures that the relevant training is conducted by these agencies and the drills and exercises are used as an evaluation tool to confirm each agencies response and readiness status.

5.1 Contingency plans in place for both national and community levels:

There are several contingency plans at national and community levels in place. Standard practice is to have all plans reviewed and updated annually. At the community level the District Disaster Committees are responsible for community plans and at the national level the Emergency Department is responsible. All government departments, statutory bodies and utility companies are required to submit plans annually. Review and Coordination takes place through the Emergency Department. All evacuation plans also exist for two levels i.e. for community level evacuation from specific at risk areas and for evacuation of the entire island – OPERATION EXODUS.

Other plans include Oil Spill, Mass Casualty Plan etc.

Contingency plans have been used for example the evacuation plan for the SALEM area and its environs were activated due to volcanic threats. Results included no loss of life and well coordinated evacuation operation.

5.2 Government established emergency fund for disaster response and national and community storage facilities for emergency relief items – mainly food, medicine and tents/shelters: By law government votes contingency funds annually.

The main storage facility is a warehouse at the Emergency Department. At the district level storage bonds are used to preposition emergency stores. Medical stores are usually held in Health Department stores.

5.3 Responsibility for coordination of disaster response preparedness and coordination body equipped with enough human and financial resources for the job:

The Emergency Department coordinates response preparedness. Additional personnel can be co-opted by law from other agencies and departments. They are usually co-opted from government departments as and when needed.

Additional funds to effect disaster reduction programs would be welcome.

Coordination has generally proven to be effective and largely because of involvement at the highest political levels. The Governor and Chief Minister are closely involved. Also agencies are committed by law and in practice only decision makers of response agencies is part of the Emergency Coordination Centre.

Good practices in disaster risk management:

6.0 General Comments:

Background

The volcano dome collapse of July 2003 is the largest collapse to date at the Montserrat Soufriere Hills Volcano. Ash enveloped the entire populated area of Montserrat. Given the extent of the damage, the Government of Montserrat (GoM) declared the island a disaster area triggering the national, regional and international response mechanism.

The National System

The Emergency Operations Centre (EOC) was activated immediately following the declaration of the island as a disaster area as initiated the function as the coordinating body for all response and relief activities. The two (2) main groupings within the EOC, namely the Emergency Policy Group and the Emergency Operations Group, set about their respective tasks as outlined in the EOC Guidelines. The Director, Emergency Department alerted the regional response mechanism via CDERA of the developments on the island.

The Regional Response

The response from the region to assist Montserrat was ably coordinated by the Caribbean Disaster Response Agency (CDERA). They acted as the regional clearinghouse for members of the Eastern Caribbean Donor Group (ECDG) and other regional partners including the media houses. The success of this regional arrangement meant that the officials on Montserrat were not overloaded with various requests from within the region but was able to provide information to a single source that then disseminated it to the appropriate agencies.

The International Response

Montserrat, being a British Overseas Territory, received international assistance primarily from the United Kingdom. The coordination was done through the Conflict and Humanitarian Affairs Department (CHAD), the unit within the Department for International Development tasked with the UK's emergency response. Here again, based on the protocols developed prior, the coordination was very efficient resulting in the timely delivery of both financial aid and plant and equipment necessary for the response phase of the operation.

Conclusion

Montserrat can attest that there is in existence, effective and efficient regional and international response mechanisms. The efficiency of these systems is however highly dependent on a number of factors.

1. That there is in place a national coordinating mechanism or EOC functioning in the affected country that is ably supported by the political directorate.
2. That all relief and response agencies (including NGO's) operating within the affected state recognize the importance of the EOC mechanism and are prepared to operate under its umbrella
3. That all personnel in positions of management of the EOC are familiar with the protocols of the regional mechanism and are prepared to follow them
4. That Standard Operating Procedures are in place with international donor agencies and international response entities prior to an event
5. That environmental concerns be addressed as part of the damage assessment phase of the operation so as to minimize additional damage to the environment as a result of the response efforts

Priorities to address at WCDR:

7.0 Suggestions:

Consideration should be given to establishing and or strengthening arrangements to influence political commitment and ensure accountability especially in non-emergency times.

The Montserrat experience can be used as a useful case of a small island developing state where collaboration of political establishment, civil service, scientific communities and disaster reduction sectors are making positive changes to reduce risk to disasters by committing to the integration of risk reduction into all planned development.