



After Action Review of Saint Lucia's Response to Hurricane Tomas of 2010

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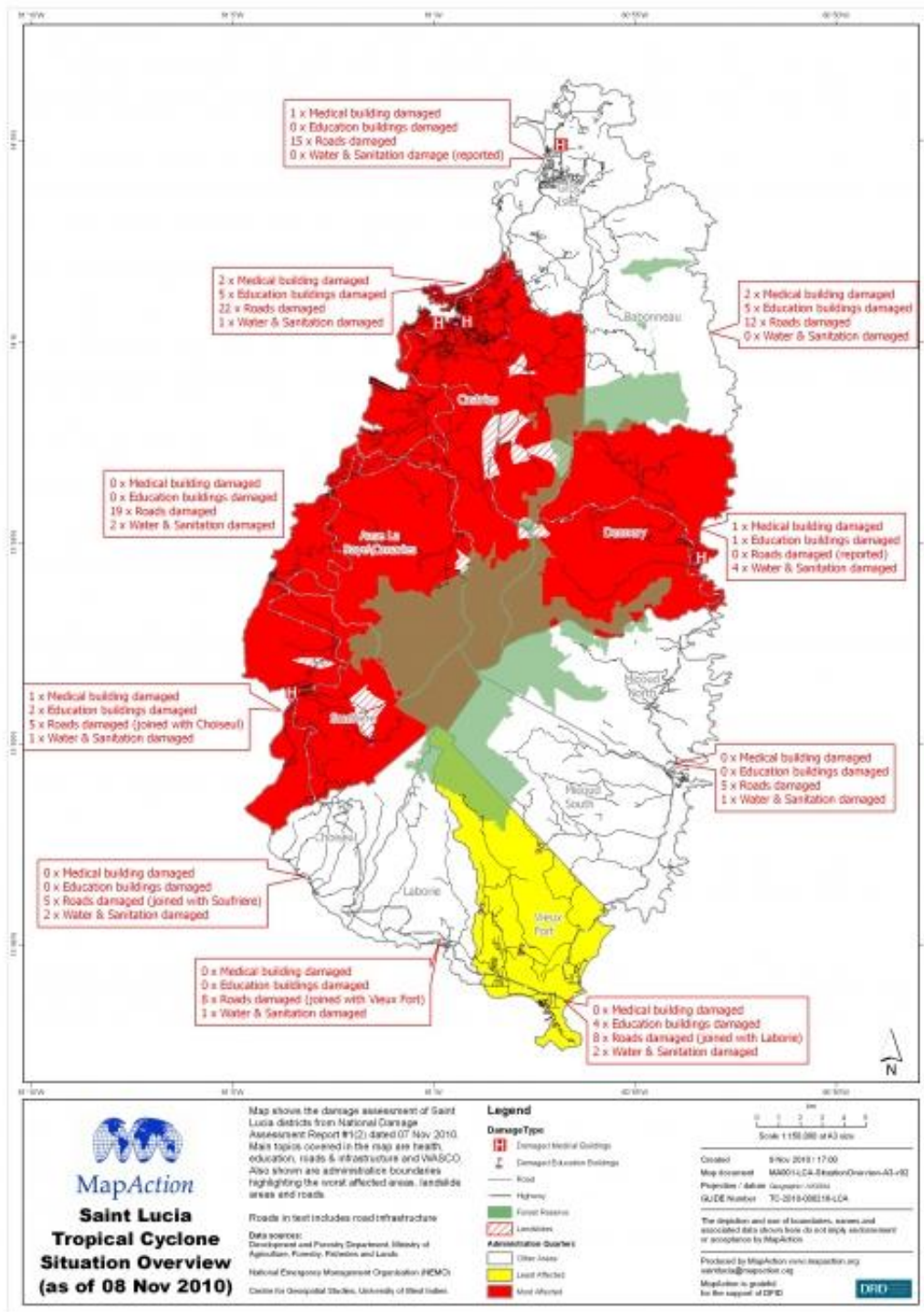


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ACRONYMS

CB	Citizens Band
CDB	Caribbean Development Bank
CDEMA	Caribbean Disaster Emergency Management Agency
CDRT	Community Disaster Response Team
DALA	Damage Assessment and Loss Analysis
DANA	Damage Assessment and Needs Analysis
DCA	Development Control Authority
DFID	Department For International Development
ECDG	Eastern Caribbean Donors Group
ECLAC	Economic Commission for Latin America and the Caribbean
EOC	Emergency Operations Centre
FAO	Food and Agriculture Organisation
GIS	Government Information Service
IICA	Inter-American Institute for Cooperation on Agriculture
ISO	Initial Situation Review
NEMAC	National Emergency Management Advisory Committee
NEMO	National Emergency Management Organisation
NIPRO	National Insurance Property Development & Management Company Ltd
NGO	Non-Governmental Organisation
NRDU	National Reconstruction and Development Unit
OECS	Organisation of Eastern Caribbean States
PAHO	Pan American Health Organisation
PDNA	Post Disaster Needs Assessment
RNAT	Rapid Needs Assessment Team
SDES	Sustainable Development & Environment Division
SLHTA	Saint Lucia Hotel and Tourism Association
SLTB	Saint Lucia Tourist Board
SOP	Standard Operating Procedures
SSDF	Saint Lucia Social Development Fund
SSU	Special Services Unit
UNDP	United Nations Development Program
USAID/OFDA	United States Agency for International Development/Office for Foreign Disaster Assistance
WASCO	Water and Sewerage Company

INTRODUCTION

This report represents a comprehensive account of the discussions/issues emanating from a two day consultation on the national response effort following the passage of Hurricane Tomas, a Category one (1) hurricane which severely impacted Saint Lucia on October 30-31, 2011. Hurricane Tomas was accompanied by extensive rain which resulted in much devastation as well as loss of life.



The report presents the actions taken by different agencies, the implications of those actions and the lessons learnt from the response effort. The workshop was sponsored by the following partners:

- United States Agency for International Development/Office for Foreign Disaster Assistance (USAID/OFDA)
- Government of Saint Lucia
- Caribbean Disaster Emergency Management Agency (CDEMA)
- Pan American Health Organisation (PAHO)

The Director had high commendation for staff of the National Emergency Management Organisation who arranged all the logistics for ensuring a successful two day consultation.

Welcome Remarks by Ms Dawn French: Director NEMO

The Director welcomed all to the two day consultation and in her brief remarks stated the following as the primary objectives of the consultation.

- to improve existing response mechanisms and
- to garner lessons learnt from the Hurricane Tomas experience which can inform future action in situations of this nature.

She applauded the wide cross section of agencies represented and felt that the outcome of the exercise should result in a very comprehensive analysis of the national response.

The presence of the regional and international partner organisations which assisted in the response effort was acknowledged and the Director indicated that their contributions during the two day consultation would be invaluable to the decision making process as it relates to future response efforts to catastrophic events. She encouraged all to participate actively in the discussions and to contribute meaningfully to the process of developing a response mechanism that would assist in the development of a very well managed and coordinated approach to disaster management.

Brief Remarks - USAID/OFDA (Mr. John Kimborough)

The representative from USAID/ OFDA expressed immense pleasure for the opportunity to participate, along with his

colleague, Mrs. Beryl Armbrister, in this very important and critical exercise. He explained that the Office for Foreign Disaster Assistance (OFDA) was the office in the United States Agency for International Development (USAID) legislated by the United States Congress, to coordinate and



lead the United States government's response to foreign disasters, whether complex, emergencies or natural disasters. Mr. Kimborough added that the mandate of OFDA was to save lives, alleviate human suffering and reduce the social and economic impact of disasters.

He applauded NEMO for coordinating the two day consultation and providing an opportunity to learn new lessons; as each event produced unique challenges and provided information for improved coordination and collaboration; to ensure that persons affected receive timely and appropriate assistance. In that regard, he emphasised the need for the existence within the affected country of a lead counterpart

agency to coordinate and provide appropriate assistance in any disaster response effort. In Saint Lucia this agency is the National Emergency Management Organisation (NEMO) under the leadership of the Prime Minister. The NEMO has developed a thorough National Emergency Management Plan which was approved by the Cabinet of Ministers in August 2007.

- He emphasised the need for the government and all agencies to give the fullest support in coordinating the response effort which will ultimately redound to the benefit of the entire nation. Quoting from the National Emergency Plan, he made reference to the following:
- the critical role of NEMO in ensuring that the nation is in a state of preparedness in the event of an emergency,
- responding in a timely fashion to the needs of the country after a disaster and
- coordinating the response at the local, regional and international levels.

He concluded by reiterating that USAID/OFDA was very pleased to support the two-day consultation and was looking forward to a productive two day exercise that would be of benefit to the people of Saint Lucia.

Brief Remarks – Session Chairperson (General [Ret] Earl Aurrhurs)

General Earl Aurrhurs – The representative from CDEMA and former disaster coordinator for Belize, chaired the session in which agencies reported on their response effort to Hurricane Tomas. He explained that the purpose of the exercise was to identify weaknesses and gaps in the response process which could be addressed. He emphasised the importance



of the consultation as a forum for proper after action review and analysis of lessons learnt as well as a forum and an opportunity for gaining insight into alternative response mechanisms. The ultimate aim of this exercise he continued was to improve future response efforts.

PRESENTATION: NEMO

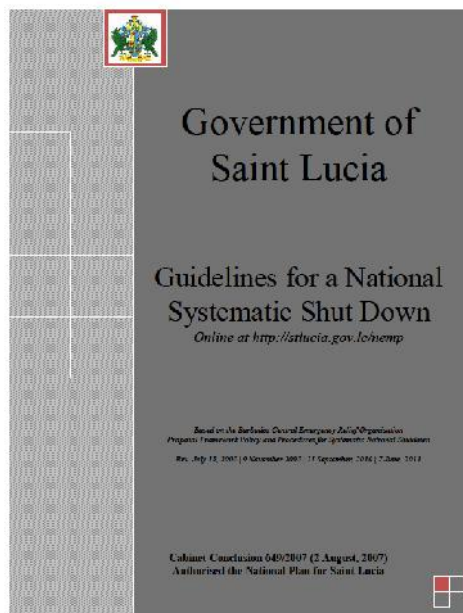
The Director presented and used a map produced by MapAction to illustrate the zone of devastation after the passage of Hurricane Tomas.

Shut Down Procedures

The Director of NEMO described the procedures for a shutdown order:

When a storm is approaching Saint Lucia the Prime Minister calls a pre-strike meeting of the National Emergency Management Advisory Committee (NEMAC). Some of the issues discussed include: closure or reopening of school, the staging of national activities such as carnival celebrations.

At the time of Hurricane Tomas, the focus was on Jounen Kweyol, an annual celebration of Saint Lucia's creole culture. The recommended action to the NEMAC was to shut down the country and postpone Jounen Kweyol. This decision was made based on the advice regarding the impending threat to Saint Lucia by Hurricane Tomas. The recommendation was supported by the Red Cross, GIS, Saint Lucia Cadet Corps and the Supply Management Committee. However, the remaining members of NEMAC took the suggestion on the advisement and decided they would not shut down the country at that moment. The instruction to shut down the country was issued on October 31, 2010 at 6:30 am. via Radio Saint Lucia.



Information Management

A critical area which proved to be very problematic during the response effort was the management of information coming in and going out of the Emergency Operating Centre (EOC). The various media houses, both print and electronic across the island descended on the EOC in an attempt to seek updates on the response efforts. This also

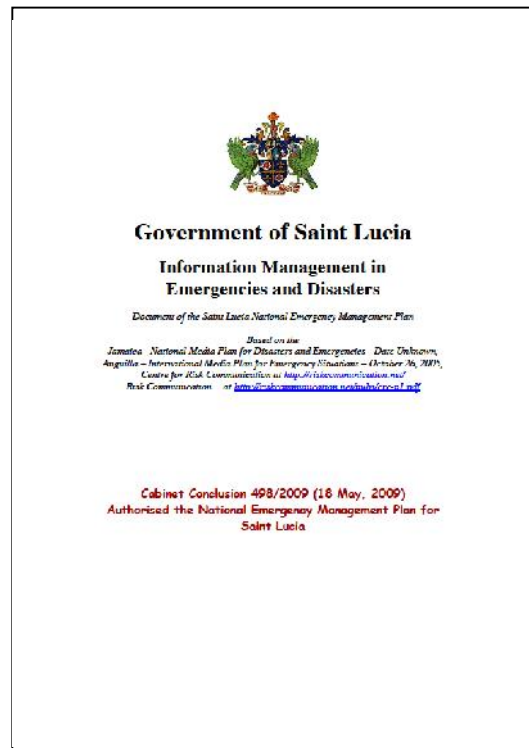
involved the freelance media personnel, the regional and international landscape for media were all requesting information from the EOC seeking for updates on the weather situation. The information management, particularly liaising with the media was handled by a volunteer. The protocols for managing information in emergencies call for a particular government agency to handle information management.

Management of the Information (EOC Management)

Managing information coming into the EOC is critical for historical significance and for validation of source.

The EOC Management Standard Operating Procedures document describes unified command where the decision makers/those of us who control the resources of the country assemble at the NEMO building which at this point in time is transformed into the EOC. However, in practice this was not the reality. In effect, what actually happened appeared to be remote command where key agencies chose to operate individually to the response within their respective areas/organisations. As a result, the stipulated protocols as described in the Cabinet approved National Emergency Management Plan 2007 did not manifest in the command. At a

recently held meeting of NEMAC called by the Prime Minister, members present committed to the unified command in the event of any emergency/disaster.



Discussion

Saint Lucia Cadet Corps:

Concern was expressed with the low attendance (50%) at the NEMAC meeting and whether the legislation guiding NEMAC made provisions for punitive action. In response, the Director indicated that there were no regulations to the Disaster Management Act and this made it difficult to hold people accountable.

Reply: In accordance with the Disaster Management Act 2006 some of the key positions in NEMAC include:

- Director of NEMO
- Commander Special Services Unit (SSU)
- Permanent Secretaries
- Red Cross

(There is also a clause which allows the Prime Minister to make inclusions to NEMAC)

At the first meeting of NEMAC in 2002 the Prime Minister instructed all the National Chairs to be part of NEMAC. Consequently all National Disaster Committee Chairpersons, as well as representatives from Political Parties have been instructed to be members of the NEMAC. Legislation guiding the composition of NEMAC is contained in Section One of the Act.



Rep UNDP Barbados and OECS: Ian King

The UNDP representative made reference to the mode of operation to be adopted in any response effort and supported the unified command approach. He highlighted the supporting legislation. Mr. King was of the view that as a learning experience one needs to revisit the stipulated functions/roles of persons and officers within the various committees. In particular, there was need to educate and inform stakeholders as well as provide clear guidelines on the specific roles and responsibilities of those committees.

The Director of NEMO informed participants that a comprehensive report on the consultation will be prepared and circulated to all relevant persons and agencies. As a means of familiarising Permanent Secretaries with the process of Disaster Management and Response, Permanent Secretaries will receive a briefing on the subject and subsequently be led on a tour of the NEMO physical plant by the Director of NEMO.

The Director of NEMO informed participants that NEMO has continued to conduct sensitisation meetings with new Permanent Secretaries on their role as it relates to the work of NEMO. At those meetings the role of the officer and the respective government ministry/agency are articulated.

The Director of Bureau of Health Education: supported the call for a unified command in terms of ensuring that information disseminated



should emanate from a reliable source that would result in decisive and appropriate action. The management of information was viewed as a major challenge in the management of the EOC. The Director called for the appointment of an information manager to serve on the NEMO Secretariat.

Deputy Director – NEMO: The Deputy Director of NEMO made reference to the misinformation which was associated with the declaration for the National Shut down and proposed that timing of the declaration should allow sufficient time for persons working far away from their place of residence to make a decision whether to leave their immediate residence. In the case of Tomas some persons working in the southern and south western areas on the island had left their homes enroute to the city long before the shutdown notice was issued. As a result, those persons experienced difficulty in returning to their respective communities due to inaccessible roads and serious land slippages.

He added that in terms of casualties resulting from the passage of Hurricane Tomas, the Chief Medical Officer's report indicated the number of persons confirmed dead; however the number of persons missing were not reported.

Response: There was an extensive discussion on misinformation surrounding the decision to issue the shutdown. In the case of Hurricane Tomas the system moved quickly. Reports clearly indicated that a strong tropical wave with sustained winds at 74

miles per hour was heading for Saint Lucia. However, during the night the system quickly developed into a Hurricane accompanied by extensive rainfall.

The Director sought to clarify the appropriate action in terms of the declaration of a shutdown by outlining the following protocols:

- The Director of NEMO makes the recommendation based on information from the Met Office and weather bulletins within the region.
- The NEMAC endorses or does not endorse the recommendation. In the final analysis the Prime Minister issues the directive to shut down.

One needs to take into consideration that Hurricane Tomas was a rainfall event. There was no indication that this amount of heavy rainfall for a Category 1 hurricane was expected during a 24 hour period. In effect Saint Lucia actually experienced a rainfall event which caused the bulk of the damage.



Red Cross: The Saint Lucia Red Cross gave much credence to the unified command and uses this approach in its response protocols. The Red Cross is of the view that there is need for actions to be informed by proper planning which delineates designated assignments at the EOC.

Response to Tomas cannot be effective without opening the EOC or without decision makers at the EOC. Lack of coordination of operations at the EOC resulted in a core of volunteers functioning for long hours in roles they were not fully trained to perform effectively.

There is need to revisit the role of NEMAC in providing advice that would result in decisive action to issue a shutdown order. Only the Prime Minister can make that decision. The NEMAC cannot take such a decision in its capacity as an advisory body.

The Red Cross representative highlighted the following:

1. Attendance at meetings by NEMAC members needs to be improved.

2. Both the unified command and the remote control have their strengths and there is need to develop a mechanism that would allow for a coordinated approach to managing the response effort from the EOC
3. There is need to develop a system for communicating reliable information, particularly when it relates to loss of life.
4. Orientation sessions on Disaster Management for all Permanent Secretaries with an emphasis on their roles and responsibilities are necessary. Presentations to be made by the Director of NEMO and the Met Office at these sessions.

PRESENTATION: MINISTRY OF COMMUNICATIONS WORKS TRANSPORT AND UTILITIES



Presented by the Chief Engineer

The Ministry of Communications, Works, Transport and Public Utilities is considered one of the first responders in any event of that magnitude. In that regard, work commenced immediately. Hurricane Tomas posed a number of challenges and constraints and in the process many lessons were learnt.

Again the issue of communication was a major challenge, considering the complete shutdown of a major telecommunications system (LIME). The team had to rely on limited cell phone service across the island. Internal and external communication systems among agencies and individuals were also a challenge.

In the immediate aftermath of Hurricane Tomas, a number of persons with heavy equipment volunteered their services in clearing inaccessible areas. In the absence of a centralised, coordinating mechanism, such efforts can result in an added financial challenge to the country.

Challenges

1. Coordination of volunteer persons with heavy equipment, including persons within the community. Lack of coordination between Ministry of Works and the Disaster Committees.

2. Cooperation of the public: Impressing upon people the need to adhere to the precautionary measures in accessing treacherous and dangerous areas. For instance, traversing the Barre D'Lisle immediately after the hurricane was virtually impossible. Roads were inaccessible and slippery as a result of mud slides. In times like these, motorists need to exercise patience and cooperate with the emergency services. The practice of persons visiting the area simply for sight-seeing, compounds the problem and seriously hinders progress in clearing the roads.

Centralised Communication

The Ministry is of the view that some level of centralised communication needs to be established for use in times of events like Hurricane Tomas. One assumes that in such a modern technological age, the use of cell phones to communicate with persons in inaccessible areas would be possible. The



reliance on cell phones has resulted in a reduction in the use of ham radios and ham radio operators. There is need to provide training in the use of ham radios. Ham radios allow for better coverage both regionally and locally, a feature which makes such a system more reliable.

Shortage of Fuel

A major challenge was the shortage of fuel for the Ministry's fleet of vehicles and heavy equipment operators. The Soufriere area was blocked off by major landslides especially at Colombette and there was no alternative access except through the port. There is need to consider an alternative means of access in terms of using coastal waters to transport fuel, water and other essential supplies. The Ministry had to resort to the use

of a vessel from Guadeloupe to assist in the transportation of all the heavy equipment, containerised cargo and also fuel vehicles into that area.

Lessons Learnt

Lessons learnt from Hurricane Tomas emphasises the need for adequate preparedness.



In that regard, the Ministry of Communications, Works, Transport & Public Utilities is in the process of reviewing its Disaster Plan to improve on internal response mechanisms and to be in a preparedness mode in the event any natural disaster affects the island.

Discussion

Saint Lucia Cadet Corps: indicated that acquiring and operating ham radios is a costly venture and suggested the provision of concessions to increase the number of ham operators on the island. A proposal can be forwarded to the Cabinet of Ministers for consideration with the justification for such a measure clearly articulated. Such a facility can be made available to private individuals as well as District Disaster Committees.

Chief Engineer: There is need to establish linkages between disaster committees and the first responders such as the Ministry of Communications and Works and emergency services. The Ministry of Communications works closely with the emergency services ensuring access to emergency vehicles. The Ministry has attempted to place heavy equipment in strategic locations across the island. As a result, clearing operations commenced immediately after the passage of Hurricane Tomas.

Representation on Disaster Committees

The issue of representation from the Ministry of Communications on District Disaster Committees was raised. The presenter indicated that such a structure was not in place. However, the local district interacts on community issues with the individual responsible for the zonal department. Information on zonal supervisors for the various districts will be made available



to NEMO for dissemination to the relevant district councils. It was suggested that the zonal supervisors become part and parcel of the district disaster committees.

Accessibility to Roads

The issue of passes to persons desirous of traversing inaccessible roads was raised. Mr. Arnold indicated that the first couple of days after the hurricane, many of the roads were totally impassable and limited access in the first few days after Hurricane Tomas allowed access to only service vehicles and emergency personnel. Persons need to understand that an area deemed a disaster zone is restricted unless given authorisation from the relevant authorities. Some persons went as far of parking their vehicles and travelled on foot to the area while the heavy equipment was in operation.

PRESENTATION: MINISTRY OF AGRICULTURE, LANDS FORESTRY AND FISHERIES

Presented by Director of Agricultural Services – Eden Compton

Importance of the Agricultural Sector to Saint Lucia

The report provided a contextual background to the Ministry's response to Hurricane Tomas; indicating that the Ministry of Agriculture, Lands, Forestry and Fisheries was the agency responsible for providing direction for the growth and development of the agricultural sector through technical support and advisory services. The regulatory

function pertains to agricultural health and food safety, natural resource management, marine environment, forestry and soils.

Hurricane Tomas

In the aftermath of Hurricane Tomas there was tremendous social dislocation, extensive damage and all sectors within the Ministry were affected, in particular the agricultural sector. Total cost of damages to the sector including forestry and fisheries was estimated at EC151.74 million dollars. This



constituted direct damage estimated at 108.8 million EC, i.e. damage during the passage of Hurricane Tomas and indirect damage such as inflows over time in production and income. Forestry was the sector most impacted (37%), followed by the banana industry (36%), infrastructure (17.4), other crops (8%), fisheries (%) and livestock (0.7%).

In November 2010, the Ministry commenced its recovery effort which is expected to end in December 2011. The primary objective of the recovery effort is to bring the level of production to normalcy at the earliest possible time and secondly to establish mitigation measures in light of the global climate.

Funding

The main source of funding for this activity is the Government of Taiwan in the amount of \$617,000.00 Government of Saint Lucia, Banana Industry Trust Fund over 8 million dollars and WINFRESH, \$10,000.00. The Ministry also received assistance from FAO/IICA and the European Union amounting to approximately two million dollars. The Australian government is also assisting with over two million dollars. The total amount is estimated at XCD13 million. This amount is way below the financial injection required to replace the heavy losses suffered by the Agricultural sector

Progress to date

The clearing and chopping of banana fields is incomplete. Farm roads have been cleared (95%), forest trails have been cleared, (45%) of major drains have been dissilted.

(There are many drains which cannot be cleared because the main drains remain clogged. 85% of the aqua culture ponds have been dissilted. Most farmers are involved in a vegetable recroping programme which is subsidised. This has resulted in a resurgence of vegetable production. There is need to complete the clearing of farm roads to commence major repairs. Dissilting of major farm drains and water ways continues. The Ministry will also continue with the cultivation of planting materials for distribution to farmers particularly as wind breaks. Repairs to approximately sixty green houses will be completed. Free applications of fertilizer have been made available to farmers.

The Ministry of Agriculture will provide subsidies to livestock farmers as well as fishers



for repairs to boats damaged by the hurricane. Materials for the construction of fish pots as replacement for those lost will be procured and distributed to fishers who qualify. The dissilting of the remaining aqua culture ponds will be undertaken. Damage assessment of the forest reserves as well as an inventory of wild life

including the Saint Lucia parrot is necessary. Vital river measurements and rainfall instruments will be procured and installed in strategic areas. Major repairs to irrigation infrastructure will be undertaken before the onset of the dry season.

Challenges and Lessons learnt

- Due to delays in the clearing of farm roads because of the continuous heavy rains and dangerous conditions, many farmers were unable to access their farms for weeks.
- Delay in the distribution of inputs due to inadequate supplies on island at the time of the hurricane.
- Delay in the release of funds from some agencies has hampered the level of assistance to farmers. The Ministry of Agriculture is aware that a number of farmers have not received the required assistance to get their farms operational.

- Employees of the Ministry of Agriculture need to be familiarised with the UN ECLAC assessment procedure/instrument - Disaster Assessment methodology.

Discussion

Rep - Communications and Works: Reference was made to the large deposits of logs which accumulated at bridge points in the aftermath of Hurricane Tomas. It was suggested that this was due to deforestation or uncontrolled tree cutting in the highlands. The presence of these large deposits of log seriously affected the island's bridge infrastructure and resulted in heavy flooding at bridge points. There is need for the Ministry of Agriculture to engage in monitoring and educating farmers on the negative implications of deforestation. Further, the high



level of siltation evident after Tomas is also a reflection of poor farming practices in the highlands. There is need for urgent monitoring of such practices within a comprehensive water shed management system to reduce significantly the effects of events like Hurricane Tomas.

The Ministry of Agriculture has been advocating for diversification by encouraging soil conservation and land use. However, farmers have continued the indiscriminate planting of bananas. Currently, the Ministry is engaging in a process of reforestation and diversification by replanting most of the land that has been exposed through those negative practices.

Rep - Ministry of Planning: In terms of the plan for farmers in the Fond St. Jacques area whose farms were seriously affected by Tomas, the Ministry is planning to declare the area as a protected area. Other areas to continue farming practices will also be identified. The Forestry Act allows the Chief Forestry Officer to declare an area as protected forest because of severe landslide.

Supplies Management Chair: called for greater collaboration among key sectors such as Ministry of Communication and Ministry of Agriculture with regard to use of heavy equipment and mitigation practices. He felt that addressing issues of land slippage and the requisite excavation works should be informed by a clear policy and plan of action. Usage of such heavy equipment used in the excavation process should be regularised.



PRESENTATION: MINISTRY OF HEALTH

This was a joint presentation. The first part was by the Senior Medical Officer – Dr. Sharon Belmar

The Ministry of Health and its agencies were seriously affected by Hurricane Tomas. Handheld radio was the preferred choice for communication but did not work during and after Hurricane Tomas. The following challenges were highlighted:

Challenges:

1. Destruction to the Dennery hospital and other health facilities.
2. Extensive flooding caused serious damage to access road to the Soufriere hospital.
3. Health Centres in Mon Repos, Bexon had suffered severe flooding. This resulted in loss of supplies, medication and other essential materials.

4. Access to safe water in health facilities was a major problem. One private company assisted in supplying some water.
5. Lack of electricity resulted in loss of supplies such as vaccines and other medication which must be stored at a certain temperature.

Restoration of Services

The severe damage to the road infrastructure across the island resulted in the absence of key health personnel to assist in the recovery process. The only means of transportation to Soufriere was by boat. The medical services had to rely on the police for transportation. Health facilities had to remain open to provide services to persons who sustained injuries.

Transportation of Patients

Dialysis for treatment of kidney failure was done only at Victoria Hospital. Persons living in the south requiring such treatment three times a week could not be transported by boat and had to be transported by helicopter. Without an organised system, transportation cost by helicopter to receive treatment was a major challenge.



Lessons Learnt:

1. Dialysis unit in the south is being considered.
2. Rain water harvesting with assistance from PAHO is being explored at some health facilities.
3. Generators are necessary in each region to allow for storage of vaccines and medication.

The next section in the presentation was by the Chief Environmental Health Officer

The primary focus was to re-establish and maintain a system of restoring general hygiene and sanitation, food safety and vector control. In the aftermath of Hurricane Tomas water quality was a major challenge. In the more severely impacted areas,

persons experienced problems with access to water and they had to resort to apparent safe sources of water such as springs, ravines, rivers, etc. Consequently the following issues posed serious concern to health authorities:

1. Sanitation and hygiene
2. Implication for food safety
3. The threat of Bilharzias which is endemic to Saint Lucia.

Under the Public Health Act the Ministry of Health has the mandate to ensure that the public consumes safe water. However, there are constraints in realising this mandate.

1. Limitations in field testing equipment to undertake the necessary lab testing and further testing outside of the normal parameters.
2. Lack of co-ordination to ensure that water supplied to Saint Lucia from donors is safe.
3. Contamination of food as a result of flooding. In the Cul de Sac area people were harvesting animals which drowned in the flood.
4. Absence of a well-coordinated system to ensure quality of food supplied or donated; in some cases expired food supplies were being distributed.
5. Breakdown of refrigeration facilities particularly in food handling establishments and refrigeration outlets. The department had to be monitoring these areas to ensure food was not distributed.
6. Preparation of cooked food, especially at shelters. In the future there is need to have a cadre of trained /health certified persons handling food at shelters/facilities.
7. Maintaining sanitation and hygiene as a result of the unavailability of water at emergency facilities. Refuse collection service was a problem in many places.
8. Problem housing displaced people at Fond St. Jacques in tent city. This situation should not be repeated.



9. Displaced toilet facilities washed away by rivers resulted in the contamination of the water course. More people were deprived of toilet facilities for disposal.
10. Problem with providing accommodation and supporting infrastructure for displaced persons.
11. Vector control was a major challenge.

Discussion

Chief Architect: The issue of slowness of response by key government agencies in the aftermath of Thomas was highlighted.



While there appeared to be a response mechanism in operation at NEMO, at the interagency level there was an apparent lack of urgency to mobilise persons into appropriate action. In terms of the lessons learnt the opportunity may have been lost to implement measures/policies to inform decisive and coordinated action

in response to future events of this nature. There is a call for a smoother/seamless transition between immediate response in which NEMO takes a leading role and the handover to key agencies for decisive action into the immediate recovery mode.

Rep - Pan American Health Organisation (PAHO): The PAHO representative expressed pleasure at the invitation to participate in this two day process. She reiterated the commitment of the Pan American Health Organisation in support of the Ministry of Health and Saint Lucia in ensuring that the health sector is prepared to adequately respond to any form of disaster. She added that as the process moves from disaster response to addressing developmental issues, PAHO is working closely with the Ministry of Health to provide support through the presence of a Country Programme Specialist based at the Ministry of Health.

Chief Environmental Health Officer: lauded the support of PAHO in a number of areas within the Ministry of Health and indicated that PAHO and the European Commission were responsible for the presence of a team operating in Vieux Fort in the area of Vector

Control. Under this arrangement a vehicle was made available to the team. The Chief Environmental Officer also expressed the Ministry's gratitude to the German Government through the GTZ, Agency for their assistance in providing toilet facilities in Fond St Jacques, Soufriere and other areas in Saint Lucia.

PRESENTATION: MINISTRY OF EDUCATION AND CULTURE

Presented by NEMO Liaison

The presenter gave a brief account of the impact of Hurricane Tomas on the education sector and in particular the school system. She indicated that the education sector was still recovering from the impact of Hurricane Tomas. The Ministry of Education was continuing its efforts at replacing furniture, educational and instructional materials. Renovation to most of the schools which were seriously affected by Tomas was also being addressed. Damage to the sector was estimated at approximately **\$7,946,574.62**.



Challenges

The following challenges were noted in the aftermath of Tomas:

1. Delays in assessing the extent of damage in some schools such as George Charles Secondary as a result of inaccessibility caused by accumulation of debris.
2. The heavy siltation from flooding rendered the Soufriere Infant, Soufriere Primary schools and the Special Education Centre inaccessible.
3. Delay in the reopening of school by three weeks as a result of the extent of damage to schools. To date students of the Soufriere Special Education Centre are housed at the Soufriere primary school.

4. Cleaning and clearing of schools also caused a major delay. NGOs and other organisations, NEMO, friendly citizens and corporate donors assisted in the rehabilitation to achieve some level of normalcy to the school system.
5. Inability to continue the school feeding programme. The school feeding programme is offered to students at the primary school level and as a result of the hurricane, food items in storage were lost. Further, the lack of electricity resulted in the loss of perishable food items. There was damage to appliances such as refrigerators, stoves and those had to be replaced.
6. Co-curricular activities could not be offered e.g. music because of the loss of musical equipment e.g. guitars, xylophone.
7. Information Technology and science labs in some schools were affected and these programme had to be suspended.
8. There is need to improve the water storage capacity at a number of schools. In the aftermath of Hurricane Tomas, a 1000 gallon water tank was made available to every school through the assistance of NEMO. At this point in time every school has a minimum capacity of 2000 gallons. The Ministry of Education is planning to increase capacity at secondary schools to 8,000 gallons and at primary schools to 5000 gallons. In addition, the Ministry is considering the Mabouya Valley Development Project as a best practice to implement rain water harvesting in schools on the island.
9. Sanitation/Garbage disposal and treatment of moulds at some schools. In the aftermath of Hurricane Tomas piles of garbage had accumulated on the school compound, particularly, Bexon Primary, Soufriere Infant and Primary and this affected the reopening of those schools.



10. Another major challenge was securing alternative accommodation for shelterees housed at the Bexon Infant school, so that students can return to classes. The Ministry of Education in consultation with the Coordinator of the Disaster Committee made the necessary arrangements to house shelterees at the building which formerly housed the Bexon Primary School. This decision received support from NEMO, Red Cross and the relevant Ministries.

Lessons Learnt

1. Need to increase water storage capacity in schools.
2. Regular practice of flood mitigation measures required e.g. maintenance of drains around schools.
3. Rebuilding of retaining walls at a number of schools.
4. Maintenance and upkeep of the physical plant.
5. Revisiting the design of school buildings to reduce damage to school property and to mitigate against heavy flooding. Location of classrooms in schools in flood prone areas needs to be revisited. Consideration should be given to the use of the ground floor for co-curricular activities whilst the upper floors can be used to conduct classroom instruction.
6. Need to ensure the development and implementation of a school disaster management plan at every school to inform regular evacuation drills.
7. The need to improve school security.
8. Need for close collaboration between the District Disaster Management Committee and the Shelter Manager.
9. Need to establish protocols to guide public access to shelters when in operation. Vandalism of school property is a concern. The Ministry is in the process of developing floor plans for buildings used as shelters and certain areas will be designated for use by shelterees.



10. Limited toilet and bathroom facilities at schools used as shelters. Under the Brazilian Living School project the Ministry of Education has received a grant of US\$10,000 from CDEMA to enhance the facilities at a school used as a shelter. The Anse Ger Secondary School was selected for this intervention and under the project two shower stalls will be installed at the school. The Ministry of Education will attempt a similar project at other schools to enhance bathroom facilities.
11. The Ministry has a Draft Continuity of Operations Plan which needs to be finalised and circulated to all educational districts to serve as a guide for disaster preparedness, management and response.
12. In partnership with USAID/OFDA the Ministry is currently engaging key stakeholders in the development of a National School Safety Policy. The School Safety Policy will inform school safety and emergency management practices at all schools on the island.

The following concerns were considered to be of priority in the management of shelters, particularly, primary schools used as shelters:

1. Inadequate and in most shelters the nonexistence of showers.
2. Condition of the limited toilet facilities
3. Insufficient water storage capacity.
4. Security of persons and their belongings



Shelter Occupation

The Cadet Corps representative emphasised the need for adequate security at shelters. Further persons need to understand that occupation at shelters must be a last resort and such occupation is a temporary arrangement. Some persons chose to go to shelters

on the pretext that their homes were unsafe. In many instances, the homes of such persons were intact. There is also need to educate persons on the procedures guiding the occupation of a shelter. Some principals had difficulty in having persons in shelters comply.

Discussion

Deputy Chairperson, Canaries

Disaster Committee: the issue of trained personnel at the school level who serve as NEMO volunteers was raised. He suggested the education sector needs to utilise the



knowledge and skills of such individuals to advance the disaster management agenda in the school's programme.

The Deputy Chair called for a greater appreciation at the policy level for emergency management to be viewed as a critical aspect of living and as such should be given greater attention at the school level.

PRESENTATION: MINISTRY OF TOURISM

Presentation was made by the Coordinator Crisis Management Unit (Tourism Sector)

The presenter reported that immediately after the passage of Hurricane Tomas the first order of priority was to ensure that all staff and their families were safe. Five members of staff who were critical to the response could not report to work in the first week. In addition persons responsible for conducting damage assessments were not immediately available. The condition of the office immediately after the hurricane was unsafe for staff to conduct any mopping up operations and assistance from **NIPRO** was sought.

Internal Damage Assessment Report

The Minister and Permanent Secretary were provided with an assessment of the impact of Tomas on the sector and the island in general by email. The assessment reports indicated a need to activate the Ministry's Crisis Management Committee.

Staff reported to work in early November and immediately teams were assigned to conduct assessments within the sector. This was necessary to provide a status of the industry to critical agencies like the Saint Lucia Tourist Board (SLTB) and the Saint Lucia Hotel and Tourism Association (SLHTA). The process of collating



information and conducting assessments to determine the impact of Hurricane Tomas on the industry took three weeks.

Challenges/Lessons Learnt

Lack of water, disruption to electricity and the communication network had a significant impact on the sector. Further, the inaccessibility of roads called for major internal adjustments and hotels partnered by sharing resources and in the relocation of guests. The utility companies restored the water supply and electricity in a number of areas and this brought some relief.

Using the UNECLAC instrument for conducting the Assessment posed a serious challenge. The Ministry of Tourism recommends specific training for the Damage Assessment Team in the use of the instrument.

Training

As a result of training conducted last year, prior to Hurricane Tomas, one guest house invested in generators and was able to continue business as well as provide assistance in accommodating guests from another hotel which had no electricity. In a number of hotels guests provided support in the mopping up operations to achieve some level of normalcy in the business of most properties. To date many hotels and guests houses

have invested in water harvesting and water storage facilities to augment their water storage capacity. The Ministry continues to make available Business Continuity Planning training to the small hotels annually.

There is need to ensure that persons trained in the development of the Business



Continuity Plans are also able to implement such plans. The response to training in business continuity planning for the small hotel sector within the industry, prior to Hurricane Tomas was very disappointing. The training was planned specifically in response to an expressed need by the small business sector. Training will be

rescheduled later in the month or early next month. There is need for the Ministry of Tourism to develop its own Business Continuity Plan.

Communication

The Ministry of Tourism supports the unified command approach in the disaster response process. In the aftermath of Hurricane Tomas a joint press release was issued on November 3, 2011 by the SLHTA and SLTB indicating that the two airports were fully operational and business would recommence from November 5, 2011.

The inconsistency in messages relayed and/or issued in the media subsequently, regarding the status of the airport for conducting business caused much confusion outside of Saint Lucia. Consequently, it was necessary for the Ministry of Tourism to clearly articulate the status of travel to and from the island as a means of ensuring that the international community was not confused by the information disseminated. In that regard, the representative reinforced the need for a coordinated approach to information dissemination and called for the establishment of a recognised medium for information dissemination to be established at NEMO during the disaster response process.

Civil Aviation

Civil Aviation Division is manned by two persons and through this division, the Ministry



was able to bring relief to various places that were isolated e.g. Canaries. The Brazilian Military also brought in supplies through the civil aviation department.

The Ministry has facilitated an additional incentive for those properties that sustained damage during Hurricane Tomas. Information on damage suffered will be verified to determine the level of assistance required.

Discussion

Director NEMO: In response to training in the use of UNECLAC instruments, Ms. French explained that the content for training in damage assessment is similar across the region and the module used by NEMO is similar to that used by other CDEMA participating states as well as USAID/OFDA training module.

Director NEMO: re: Training -- In the first eight hours after an all clear is issued, an Initial Situation Review (ISO) is required. This is undertaken by contacting the District Disaster Coordinator who provides quick information on the situation. Within forty eight hours more detailed reports are submitted and this would be forwarded to the Prime Minister to apprise him of the situation within two days of the event. Two weeks into the system an examination/assessment of the macro socio-economic situation is undertaken.

Ms. French stated that the information to feed into the UNECLAC System was not available at the time. She added that had the time lines unfolded as expected, there would be sufficient time to compile the information to communicate to the external team on their arrival.

Saint Lucia Cadet Corps: The meeting was informed that Major Lake initially assumed the role of coordinator to the assessment team that arrived on the island. He reported



communication as a major challenge. Initial communication was through Blackberry Messenger and that proved very useful. There were issues with arrangements regarding the use of the chopper. Coordination and communication among the respective parties and the non-adherence to specific protocols for use of the

chopper were serious challenges. The weather condition at the time was also a factor. A coordinated approach between the Ministry of Foreign Affairs and the Ministry of Tourism, Civil Aviation Department was necessary to manage the use of airlift services.

WASCO: The representative made reference to the water harvesting initiative undertaken by some small businesses and inquired whether the larger hotels on the waterfront had considered exploring salt water harvesting to improve water storage capacity. A recommendation made during the drought of 2009-2010 as a result of the high demand placed on WASCO by the hotel sector which has to serve the entire nation. Properties located along the water front have been encouraged to pool their resources in exploring the possibility of investing in reverse osmosis plants for harvesting sea water. In response Mrs. St. Hill stated that the Ministry of Tourism has received request from three properties and those properties were provided with the necessary incentives to acquire the desalination plants

Sustainable Development and Environment Section: SDES supported the call for hotels to increase their storage through rain water harvesting. The representative reported that under the Special Project on Adaptation to Climate Change, the Sustainable Development & Environment Division is undertaking a rain water harvesting initiative with the Coconut Bay Hotel.

Chief Environmental Health Officer: raised the issue of a responsible regulatory authority with respect to reverse osmosis, or desalination plants in light of the significant environmental implications associated with the proliferation of these plants. In that regard, rain water harvesting was viewed as the preferred option.



Response

In terms of the installation of desalination plants, the presenter indicated that the Ministry of Physical Development has certain regulations guiding the establishment of such plants and the two Ministries are collaborating to assist hotels that have expressed interest. She added that desalination is a costly venture which is difficult to sustain.

Deputy Chair Canaries Committee: called for greater interagency cooperation and sharing of information through constant dialogue and consultation among relevant sectors on matters of national interest.

NEMO: NEMO employee made reference to the loss of life during Hurricane Tomas as a result of land slippage in the Soufriere area. He advocated for attitudinal change in the indiscriminate disposal of waste. He is of the view that accumulation of waste substances on the same site over an extended period can result in land that appears to be suitable for development. Whereas this land is entirely solid wastes and slippage is likely. There is need to institute disciplinary measures to ensure that solid waste are deposited in the designated disposal site.

PRESENTATION: SOUFRIERE DISASTER COMMITTEE:

The presentation was made by the Chair Soufriere Disaster Committee:



The chairperson reported that all key stakeholders in the Soufriere Committee, volunteers and business sector were informed of the shutdown declaration. However, bus drivers took no notice of the shutdown declaration and proceeded to transport commuters to Vieux Fort and Castries.

Hundreds of persons were housed in shelters. Ten persons whose homes were completely destroyed are requesting assistance to rebuild their homes.

Under the Good News project, three homes were constructed and the team is expected to return in February 2012 to construct 4 more homes. The Saint Lucia Red Cross has also volunteered to provide assistance in the construction of homes. NEMO assisted some persons in Fond St Jacques with materials for building e.g. plywood, galvanise as well as house hold items such as beds, mattresses, chairs and food supplies. The Initial Damage Assessment was conducted by NEMO's Damage Assessment Team.

Lessons Learnt

1. Educate persons in the community on disaster preparedness and response.
2. Reinforce the need for developing disaster plans, particularly for the business community.
3. Persons whose businesses where affected are still awaiting help from the disaster committee.
4. Need to train persons other than principals to serve as shelter managers.
5. The use of loud speakers and town hall meetings at the community level proved to be effective in communicating information on disaster preparedness and response.

6. Residents of Soufriere appear to be more responsive to changes and inquire or seek information on any pending adverse event.
7. Mr. Frederick views the coordinated response to Hurricane Tomas executed by the Chairperson of the Soufriere Disaster Committee as a best practice that Disaster Committees can emulate.

Challenges

1. Most shelters have no showers. Make shift showers were created.
2. Inadequate radios for communication. Only five radios were available and this had to be shared among the emergency services (hospital, police, and fire).
3. Transportation was inadequate. Transportation cost was high because much of the food items, materials required had to be transported by hired vehicles and persons were requesting payment immediately.
4. Some shelters are unsafe because of their location.



Recommendation:

1. Transportation should be immediately assigned to severely affected areas.
2. The following can be used for early warning: mega horn, church bells, police siren.

In terms of collaboration within the Soufriere district, the committee provides support to schools in developing their disaster plans

Planning

1. Workshops for new volunteers (60) were conducted.
2. In collaboration with the Ministry of Agriculture, the committee held a root crop festival. The committee had a booth in which disaster preparedness information was disseminated to the public.

Inspection of Shelters

It has been recommended that Disaster Coordinators accompany the Ministry of Communications and Works when shelters in their respective communities are being assessed. This would allow the Disaster Coordinator an opportunity to obtain first-hand information on the status of shelters as well as identify shelters which require refurbishment prior to the hurricane season. There is need to reinstitute procedures for collaboration between key agencies in the inspection of shelters.

Discussion

Chair Castries North Committee: The Disaster Coordinator for Castries North viewed dissemination of information and public awareness as major challenges encountered by all Disaster Coordinators. The coordinator felt that there is a need to begin the education process at the school level and a deliberate attempt should be made to include disaster preparedness issues/content within the school's programme. In many instances, schools solicit assistance from disaster coordinators and NEMO to facilitate disaster preparedness sessions at professional development exercises.



PRESENTATION: MINISTRY OF HOUSING AND LOCAL GOVERNMENT

Housing Situation Prior to Hurricane Tomas

The presenter reported that housing space is limited since Saint Lucia is a small island with a rugged topography. 60% of homes are squatter settlements and most are unplanned with no approval given from the DCA. There is an absence of information /data on the following:

1. House mapping for persons who live in isolated areas e.g. numbers living in forested areas.
2. Temporary housing shelters.

In the immediate aftermath of Hurricane Tomas the Ministry of Housing was confronted with two major issues:

1. Inaccessibility of several settlements as a result of land slippage and damage to roads. (West Coast Road and the Barre D' Lisle).
2. The initial damage assessment of the housing situation in terms of the time frame for assessment was problematic. The housing sector is different from other sectors such as agriculture, communications and possibly under lessons learnt there may be a need to consider a slightly different approach to the assessment of housing damage post a disaster.



One of the factors hindering the process of assessing the extent of damage to the housing sector was inaccessibility to areas severely affected. In the immediate aftermath of the hurricane, a helicopter assessment was undertaken and the Ministry of Housing was not included in the team. The inclusion of personnel from the Ministry of Housing in the aerial

assessment has been proposed. This would facilitate comparison of the housing condition pre and post Hurricane Tomas to inform quick intervention.

Lessons Learnt

1. The use of Geographic Information System for mapping informed the decision/actions post hurricane disaster. For instance, only the houses which appeared in the mapping were considered for attention.
2. The approach to housing was informed by the National Emergency Housing Plan. In the plan, the Ministry of Physical Development and Environment and the Ministry of Housing, Urban Renewal and Local Government are jointly responsible for Housing Damage Assessment and receipt of proposals for assistance.

As stipulated in the National Emergency Housing Plan, the Ministry adopted a two pronged approach. A committee of heads of department was established to include

personnel from both Ministries. This committee was responsible for examining proposals emanating from the damage assessment report.

The second element constituted a team comprising officers of both Ministries. This team



was responsible for conducting damage assessment of housing. The team encountered difficulties in conducting the assessments as a result of lack of cooperation and dishonesty among persons in terms of the damages suffered. As time elapsed, the process of ascertaining the number of persons who legitimately required

assistance post Hurricane Tomas proved to be difficult.

Recommendation

Satellite pictures compared with the corresponding representation from the Ministry of Housing or the team in the helicopter assessment will possibly alleviate this problem in the future.

Absence of proper co-ordination among relevant agencies in addressing the housing situation of displaced persons was a major issue. The authorised committee responsible for overseeing proposals such as, the Housing Assistance Grant Assessment for persons whose homes were damaged was not contacted. However, before the committee began its mandate, tents were being distributed to persons. This resulted in a tent city problem and the burden of instituting structures was left to the committee.

PRESENTATION: MINISTRY OF LOCAL GOVERNMENT

The presentation was made by the Director of Local Government

The Director revealed that he was given the responsibility by the Prime Minister to institute structures at tent city. Amidst a myriad of problems/challenges, the committee was able to move persons from tent city by December 31, 2010.

A major issue at Soufriere was getting individuals in shelters to respond to the



instruction to move. The team was presented with severe limitations in that occupants refused to adhere to the instruction to vacate tent city. In effect persons whose homes were intact chose to remain in shelters when they got wind of the various forms of assistance given to displaced persons. The team was not authorised to enforce the

evacuation order or mandate persons to remain in their homes.

The availability of land for housing in the Soufriere and Fond St. Jacques areas is limited. A site at Morcap was identified and the committee has submitted a few development proposals for this site to secure housing for displaced persons. Proposals have been forwarded to the National Reconstruction Unit for consideration.

Crestlands at Soufriere was heavily impacted by mudslides. However, the committee managed to clear the site speedily and with the reinstallation of electricity. Persons from Barons Drive were relocated to Crestlands. The Soufriere Foundation and the Soufriere Council assisted in the provision of basic amenities and water.

The government has acquired parcels of land at Forestierre, Bexon and in the Marigot area. However funding is necessary to explore housing arrangements for displaced persons. Some persons who have registered their interest in purchasing small lots were referred to the Crown Lands Department.

General Housing and Physical Development Approach

This Unit has indicated a willingness to accommodate persons who may not have owned the land or have limited ownership of land and wish to reconstruct. Persons have been given limited permission; however, there is need for DCA approval. The Ministry continues to liaise with agencies such as, Red Cross who have consented to provide materials and other forms of assistance to affected persons.

Councils in the south were ill prepared for an event of that magnitude and the response to Hurricane Tomas was chaotic. Councils at many levels collaborated with the various

committees in undertaking housing damage assessment. The council, where necessary, was able to activate their relationship with various French counterparts. Boats from Martinique provided assistance voluntarily to some communities. The absence of a reliable information dissemination mechanism created further chaos.

To facilitate the recovery process, the Government of Saint Lucia provided financial assistance to the various councils. The Council in Soufriere played a critical role in serving as a major linkage to information and access to the community. The council provided much assistance in the post Tomas activity to Soufriere, in terms of clearing schools by removing silt and debris. The Council extended their responsibility and activities from Soufriere Town to Fond St. Jacques.



In response a disaster, donor agencies/organisations must observe stipulated protocols, rules and regulations when providing assistance. The agency which established twenty-two tents initially in the Fond St. Jacques area had genuine good intentions to assist in this near crisis situation. However, the inability to secure guidance from the responsible agencies in this effort could have resulted in a serious health threat to the community and possibly the entire nation.

In an attempt to relocate persons from tent city, the Saint Lucia Social Development Fund (SSDF) collaborated with the Ministry of Housing by providing materials to construct plywood houses and in one day six homes were constructed. However, by the weekend there was a directive from the Ministry of Physical Development to discontinue the construction of these houses.

With regard to the legal authority for the erection of those tents, the Ministry of Housing does not give approval for setting up of any physical development in Saint Lucia. The

Ministry expected that approval would be sought from the DCA. Consequently, joint approval from DCA and public health was necessary to set up tent city.

Lessons Learnt

1. Local Government must become more involved in terms of its reorientation towards disaster management with regard to improving its governance capacity to collaborate, and manage with other agencies.
2. Communities must be encouraged to examine/revise disaster plans particularly as it relates to the use of financial resources
3. The Ministry must continue to provide support and assistance to councils and other agencies for greater transparency in the management of resources from government and other agencies.



Discussion

NEMO: The Director of NEMO impressed upon agencies/committees the need to provide information on assistance required within two days of the event. There is the tendency for agencies to wait for a completed and finalised report. In the initial assessment period agencies/communities are encouraged to submit whatever information is collected. This information will be communicated to the international community who are prepared to release the manpower and material resources to begin the recovery process immediately. In the absence of such information, assistance will not be forthcoming.

Evacuation Order

The Director of NEMO informed participants that an evacuation order is a legal instrument issued by the Prime Minister under the Disaster Management Act of Saint

Lucia. The people of Fond St. Jacques and Minee were instructed to move based on the assessment of those areas by the engineers.

Saint Lucia Red Cross: The Red Cross Disaster Coordinator made reference to the work of Red Cross in disaster response and highlighted the critical role of the Community Disaster Response Team in this process. He highlighted the importance of the team as a mechanism for initiating a mode of preparedness and not entirely a response mechanism. Mr. Pierre recommended the change in acronym from CDRT to DRT (Disaster Reduction Team)



NEMO: The Director of NEMO is of the view that the time has come to give some serious thought to the role of the political directorate in response to disaster and emergency. She added that there was need to review current disaster plans to reflect greater visibility of the political directorate. The Fire Chief emphasised the need to acquaint persons assuming political office with their roles and responsibilities in disaster preparedness and response.

PRESENTATION: RAPID NEEDS ASSESSMENT TEAM

The presentation was made by the RNAT Team Leader

Background (RNAT)

Easter Caribbean Donor Group Entity led by CDEMA. All members are experts from their respective donor group. The major role of the team is to provide support to the affected government in a rapid assessment of damage impact, immediate identification of critical needs and programmes.

Pre-Deployment

The presenter explained that external agencies must receive a request to enter any



country before deployment. The Eastern Caribbean Donors Group (ECDG) was activated and on standby on October 30 to conduct Rapid Needs Assessment because Tropical Storm Tomas was heading for Saint Lucia and two other countries. RNAT was activated on standby awaiting approval from Saint Lucia.

Formal approval from the Prime Minister and Cabinet of Ministers was given on Monday November 1, 2011 at 11:00 am. The RNAT team comprises experts from the following agencies/organisations (DFID, UNDP, PAHO, CDEMA)

Deployment

The self-contained team, with its own satellite system, left Barbados at 2.00pm. On arrival the team met with Meteorological Officer, the Chair of the Damage Assessment Team and Director – NEMO, and was briefed and given a copy of latest report. The team worked in small groups in the hardest hit areas. The Cadet Corps were very helpful in providing security, transport and local knowledge.

Each day between the hours of 8:00 am and 6:00 pm. the team conducted assessments in various situations which included; shelters, people, crops, road infrastructure, utility, bridges, homes, water system, electricity. Daily reports on assessments were prepared and verified by the Director before dissemination at midnight to the headquarters of team members.

Redeployment

At the end of the period a comprehensive report was developed. The team regrouped in Barbados to complete the final report which was submitted on the 4 November, 2010.

SWOT Analysis

A SWOT Analysis was conducted and the following issues were highlighted:

Strengths

1. The multi-agency mission response was a very positive intervention for the RNAT who are expert leaders in their own fields/areas.
2. The involvement of local officials in the process, including, Ministry of Health, and representatives from Ministry of Communications and Works proved to be very helpful.
3. Knowledge of the island by some team members assisted with communication in creole and local knowledge.
4. Expertise and commitment of the RNAT members were exemplary.

Weaknesses

1. The Director provided support. However, the coordination within NEMO was limited. There was insufficient capacity in the EOC to provide support to keep the team better informed.

2. **Information Management**

There was limited input from NEMO in the preparation of the Situation Report.

The team experienced difficulty in receiving timely feedback from NEMO because of the absence of a designated information management desk within the EOC.

There was insufficient time to prepare because the directive to proceed with deployment came late.



Opportunities

1. The presence of the team within the main coordinating body facilitated access to information and decision making. (NEMO Secretariat was present). Greater clarity of function would be evident if the Terms of Reference is agreed upon before deployment.
2. The process provided an opportunity for National Disaster Coordinators and the RNAT to collaborate with NEMO in determining the role of the team in the assessment process.

3. Strong logistical support from NEMO headquarters in terms of access to vehicles, facilities, organisation of transportation for the mission, security. The Cadet Corps provided immense support.

Threats

External:

1. Lack of expertise and commitment of members, if persons of similar personality and experience of the Saint Lucian environment are not available for future mission.
2. Limited delegation of authority within NEMO which resulted in team relying on one person. Need for more support to the NEMO in the EOC.
3. Limited staff/representation from key agencies at the EOC.
4. The dissemination of RNAT reports suffered from certain protocol issues.
5. Limited sectoral coordination which impacted on NEMO and the capability of the team to get an overall picture of the situation.



Lesson Learnt from RNAT

Recommendations

RNAT

1. Terms of References to be agreed for each RNAT mission including where possible confirmation of the purpose, Standard Operating Procedure arrangements and reporting formats, team leadership composition, local counterpart and daily briefings.
2. Ensure information management capacity is reinforced within the team.
3. Joint forces with UNDAC team to conduct assessment in the event of a major disaster. This would expedite the assessment process as well as response to critical needs from donor groups/agencies.

4. Ensure some members remain in the EOC to support general coordination function and on site coordination centre (a UN protocol). This would assist in monitoring persons going in and out.
5. CDEMA needs to produce key information sheets and maps on each participating state to include relevant/pertinent information required for the team's mission.
6. Data information officer to assist and provide support to EOC when required.
7. The EOC needs to identify support required from RNAT and if available that support can be provided while the team is on island.
8. RNAT composition and rules to be revised. Saint Lucia RNAT was larger than foreseen. A team of about (6) possibly 10 is recommended and that number to be selected based on needs. An update of RNAT SOP is intended.
9. Improve clarity on RNAT reporting including presentation of national focal points. The identification of counterparts is necessary through the presence of logo or insignia of the representing agency in the form of vests, caps, badge, arm band, etc.
10. Consider designing a logo for RNAT and emails should be sent out with the label Rapid Assessment Team rather than the label of respective agencies. ECDG is the representation for team.



General Recommendations:

1. Disaster committees should brief NEMO on situation needs and response on a more regular basis, ideally daily.
2. There should be an information sharing meeting at the operation level at the end of each day during the response process.
3. Protocol should dictate that information from Disaster Committees and individual sectors/agencies should be communicated to NEMO rather than the Director attempting to find persons or information.

4. Other international partners deployed to Saint Lucia should participate in the operational information sharing meeting so that every actor involved in the response process has up to date information of the situation on the ground. All can benefit from these meetings, particularly as it relates to assessment reports.
5. Availability of preliminary and revised DANA is seen to be vital to effective response.
6. A critical but under performing area regionally is the need for training and orientation.



SUMMARY

The impact of Hurricane Tomas on Saint Lucia was a significant event in the island's history with approximately 533mm of rainfall in 24 hours. As a result, there were severe landslides and extensive flooding. Infrastructure suffered the most with a drastic reduction of water production. Another major impact was the road network resulting in several key communication points cut off and communities isolated.

This was the first opportunity to deploy the RNAT team since 2004 when it was used in Grenada post Hurricane Ivan. The team performed superbly. The needs assessment report was well received by all donors and the government of Saint Lucia. Approval had to be given by the Government of Saint Lucia before the report was disseminated. The report was submitted on November 4, 2010 and approved on November 6, 2010.

REPORT

Eight donor agencies were represented on the team which developed the report. The report highlighted the problems which currently exist and the possible needs. The Director of NEMO reinforced the issue of timely submission of information by emphasising that the needs of agencies cannot be addressed if those needs are not captured in the report.

UNDP representative reinforced the need to get information into the EOC from the various sectors/agencies for the following reasons:

1. To institute a mechanism for saving lives and addressing needs on the ground.
2. Pressures from outside to know the status on the ground.
3. Information requested from numerous points; press, media from Saint Lucia, within the Caribbean region and internationally.

Information received provides an indication of the areas most impacted and the most pressing needs for decisive action.

DAY TWO

JULY 26, 2011



PRESENTATION: UNDP

The presentation was made by the Program Manager Disaster Risk Reduction

The UNDP representative noted that training and capacity building were critical in the development of skills sets and competencies to conduct DANA and the DALA assessments at country level. A call was made for UNECLAC to expand training establishing the linkage between the DALA and the DANA.



The external Rapid Needs Assessment Team gathered information from various sources one of which was DANA. There is need to revisit DANA and DALA training. For instance, the focus of training has been on information gathering. Ten to fifteen years ago issues such as vulnerable people, gender etc. were

integrated into needs assessment. At this point, specific information that would inform appropriate action in the recovery process is necessary. For instance, information on gender should be disaggregated to provide specific data e.g. male, female, age range, on shelter occupancy. The data garnered from DANA often results in a fleet of recommendations for action. There is need to view DALA in terms of a strategy and plan for recovery.

Recommendation

Have the early recovery advisory support in the country. In other countries, consideration is being given to move from the DALA to the PDNA (Post Disaster Needs Assessment). The country would need to indicate requirements to move from saving lives to returning to a situation where the economy is growing and livelihoods are being addressed.

Moderator

Coordination among agencies/sectors at the national level is imperative in ensuring that the recovery process is focused on critical areas of need. Coordination should not be left to the external sources of support.

PRESENTATION: USAID/OFDA

The presentation was made by the Regional Advisor USAID/OFDA

The Disaster Declaration process allowed the response mechanism from the United States Government to be activated. As a result, the US government made available to Saint Lucia resources (money), relief flight to Saint Lucia.



It is extremely important that all participating agencies in the response recovery process (international, regional, local) have access to a functioning, coordinating unit in country. (NEMO

Secretariat and the EOC unit needed to manage information received). If the EOC was functioning as it should, information would be coming from one source and would be available upon request.

Lessons Learnt:

The request for assistance must follow the established protocols for positive response. Some agencies were requesting helicopters and other forms of assistance directly from the Barbados headquarters.

The question remains as to whether those needs have been sanctioned by the EOC or NEMO? Requests for assistance can only be honoured when cleared by USAID representatives in consultation with NEMO. Requests for assistance from international, bilateral, and regional donors can only be honoured in a functional emergency operating Centre. To assist beneficiaries, requests for assistance need to be appropriate, timely and sanctioned by NEMO and the government of Saint Lucia.

The limitations evident in the response process clearly indicate the need for strengthening of EOC. In that regard, OFDA is volunteering to provide additional training in the following areas:

1. EOC training System
2. Incident Command training for the decision makers within the NEMO Coordinating Unit.

There is tremendous need for continuous disaster risk reduction activities, such as, working with community disaster response teams in disaster risk reduction activities. Every effort must be made to ensure a well-coordinated and effectively functioning EOC exists within NEMO.

Discussion

USAID/OFDA Disaster Risk Management Specialist/Consultant: indicated that some of the needs identified could have been honoured if there was a coordinated response to Hurricane Tomas. For instance, refrigeration for medical supplies and transportation problems could have been addressed if reports were submitted within the specified time frame. In Belize, USAID provided vehicles for evacuating persons from flood zones. In the absence of an effective coordinating mechanism within the EOC the following issues arose. Those include:



1. Red Cross was requesting transportation assistance from government for their work. Such a request should be made through NEMO. The United States coordination is done through OFDA.
2. Vehicles were available to Red Cross. However, Red Cross wanted to utilise their own drivers.

Chair Supplies Management: expressed concern regarding the time frame between the shutdown declaration and the availability of funds. The Chair explained that there exists a Memorandum of Understanding with suppliers as it relates to the supply of fuel

in the event of a disaster. USAID representative promised fuel to a certain amount, however, the funds were not released.

The OFDA representative explained that administrative and operational issues within the regional coordinating office caused a delay to the process.

Lesson Learnt: Tardiness in release of funding for essential supplies (fuel, services).

PRESENTATION: ROYAL SAINT LUCIA POLICE FORCE

The presentation was made by the Deputy Commissioner Responsible for Operations

He commenced by emphasising that in conducting their operations, the focus of the police is law enforcement. He added that the policy of the police has centred on the development of Standard Operating Procedures in response to any situation which has a national impact. The Standard Operating Procedures are used to reinforce protocols established by NEMO.



The Police National Disaster Response Plan outlines the various systems which include:

1. Weapons of Mass Destruction
2. Police Incident Response Plan

Operational Support

The operational support of the Police involves Maritime, the Special Service Unit, and Traffic. Most of the police operations are intelligence driven.

In conducting its operations the police ensure that protocols are adhered to and a certain standard of safety is maintained in facilities used for public access. The private security industry works in partnership and supports the work of the police.

The following areas are given priority in the operations of the police:

1. Safety of strategic key points, facilities
2. Testing and review of contingency plans
3. Building capacity at the district level.

In responding to an event of the magnitude of Hurricane Tomas the primary responsibility is to ensure crime prevention, safety and that the affected area is secured. It is also the responsibility of the police to manage the flow of traffic within the affected area allowing access only to emergency personnel. Mapping of the location of key officers worked well during Hurricane Tomas. Many officers remained in their home communities to provide assistance, particularly in the Dennery area.



Challenges

1. The availability of chain saws at strategic locations.
2. The capacity of the police to engage in law enforcement in response to a disaster. (Personnel in the Special Service Unit are used to provide support during such incidents).
3. Traffic measures had to be put in place because of extensive damage to roads.
4. Looting during such incidents is very common. This happened at Big J's in Cul de Sac.
5. Shut down of ports: There was pressure from persons who wanted to enter or leave the country.
6. Maritime assets are of the greatest concern in terms of disasters. Protection of such assets is a major challenge.

PRESENTATION: SAINT LUCIA FIRE SERVICE

The Presentation was made by the Deputy Fire Chief

The activation of the agency's disaster response mechanism created some problems for the fire service because persons were on leave. There was insufficient time to mobilize personnel within the timeframe in which the tropical storm was upgraded to a hurricane.

Challenges

1. Communicating with the Fire Chief who was at NEMO on hurricane night.
2. During the passage of the hurricane, the Fire Service experienced difficulty in getting persons out of vehicles in dangerous areas of high flooding. There was one loss of life in the north.
3. Most stations were affected by flood waters.
4. Firemen had to abandon the central fire station in Castries as a result of heavy flooding. Several supplies and equipment were also affected.
5. In the aftermath of the hurricane, communication to all the stations was disrupted. However, the Fire Service was able to coordinate response via cell phone (Digicel). Several attempted rescue missions were mounted into Soufriere.
6. Water storage capacity was limited. NEMO assisted through the provision of water tanks.
7. The Fire Service experienced difficulty in accessing fuel in the south. Suppliers who reserved fuel for the fire service were of assistance.
8. Coordination of responses was hampered because of the isolation of areas like Soufriere and Dennery. Coordination from headquarters was not possible.



Recommendation

There is need to augment the water storage capacity at police stations.

Hurricane Tomas was a significant event that brought to the fore some serious concerns which will be addressed as the fire department engages in an in-depth review of its operations.

Discussion

Cadet Corps: The Cadet Corps viewed communication as a major challenge in the response process and called for a general communication plan which would include CB hand radios to facilitate joint response to disasters.

UNDP: the representative felt that emergency telecommunications was a critical issue to be addressed in the unified command approach. He added that the CB radio served its purpose and this system needs to be revisited to facilitate communication.



Response: the Deputy Chief stated that the fire service supports a unified response and indicated that the fire department was exploring the establishment of a mechanism which would result in a joint approach to communication among fire, police, health, customs, NEMO and other key agencies. However, the cost of this initiative proved to be exorbitant and the idea was shelved.

PLENARY

A panel discussion was held which focused on the assessment of the operational capacity of Saint Lucia to the response process, the identification of gaps in the system and procedures used by respective agencies in their response.

EOC Management and Response: Capacity in Response to Hurricane Tomas.

EOC Personnel

The EOC was not activated due to lack of personnel. Some persons who volunteered to provide support in the EOC worked tirelessly for six weeks and this took a toll on their emotional, psychological and physical wellbeing. Response was coordinated at the district level through the District Disaster



Coordinators. Through that mechanism support and assistance were provided to persons within their respective communities. Needs list was not submitted at the time requested from a number of sectors. To date some sectors have not submitted while others submitted six weeks after the stipulated time frame.

Saint Lucia Fire Service

The Deputy Fire Chief of the Fire Service pledged the support of the fire service as a key participant in the EOC. In this regard, the fire service maintained a presence at the EOC to ensure that their role was fulfilled.

Castries North Disaster Committee

The Chair reported that the EOC was not activated and as a result, Disaster Coordinators were not given the directives/all clear to proceed with work on the ground. Teams had to rely on the radio for updates. As a result of the level of publicity given to areas like Fond St. Jacques, other areas such as Bexon which were seriously affected was not given the level of support required.

Shelters were activated in Castries North because fourteen (14) persons lost their homes. In terms of coordination, it was felt that there was need to solicit the assistance of disaster coordinators whose communities were not affected.

The deactivating of shelters was problematic. There is too much reliance on volunteers to man shelters. Other sectors such as health, social services need to provide support.

WASCO

As a result of damage in forest areas and landslides, damage to every single system



resulted in a serious water shortage island wide. In the aftermath of Hurricane Tomas, WASCO attempted to salvage the remaining equipment to restore the system where possible. However, the current system is archaic and the company has no financial resources to implement and upgrade existing systems to provide a more reliable and safe water

supply. Storage capacity has been reduced significantly because there was 84 feet of silt in the dam. Another hurricane on the heels of Tomas can result in serious problems.

Castries South East Disaster Committee

The Chair reported that Castries South East, Bexon, Marc and its environs were among the worst affected communities in the aftermath of Hurricane Tomas. He noted the following challenges:

Challenges:

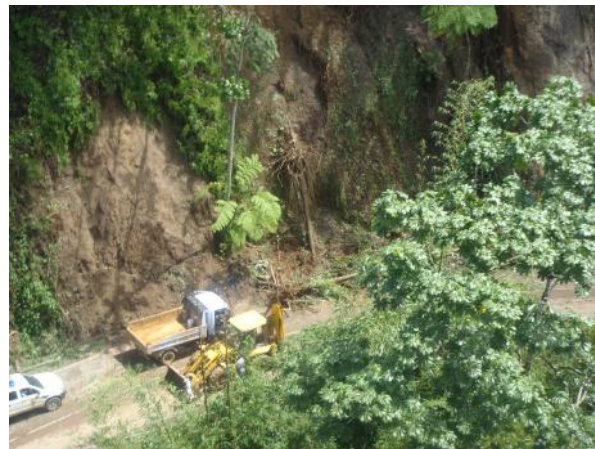
1. Difficulty in getting principals to open schools to accommodate displaced persons.
2. NGOs ventured into the affected communities without any directive from NEMO or guidance from the Disaster Coordinator.

3. Parliamentarians (MP) were involved in the process of providing assistance without any clear directives and this created a major disruption in the distribution process.
4. Lack of information from NEMO and government to manage persons in the shelter.
 - a. Need to reopen school, and the relocation of persons became a problem. Alternative location of persons was a cost borne by the Disaster Coordinator. Reimbursement required.
5. Location of warehouse was inaccessible because of the condition of roads.

SPECIAL PRESENTATION: RECOVERY AND REDEVELOPMENT UNIT

The presentation was made by the Director - Reconstruction and Redevelopment Unit in the Ministry of Finance

National Reconstruction and Development Unit (NRDU): The Director presented a brief background to the establishment of the National Reconstruction and Development Unit. She reported that this unit is located within the Ministry of Finance; former Special Projects Unit which dealt with Strategic Planning and was established in February 2011.



Responsibility of the NRDU:

- 1) Coordinating the national reconstruction programme
- 2) Implementation of Special Projects
- 3) Development of National Vision Plans

In carrying out its role, the work of the unit starts in the latter stage of early recovery into rehabilitation, reconstruction and mitigation. In terms of reconstruction there is a

strong focus on building resilience and addressing issues of reducing vulnerability, issues regarding construction, quality assurance, land use planning, improving frameworks for guided and improved scientific assessments which is required as background information to commence re-planning.

The theme which guides the work of the unit is: Rebuilding to Reduce Vulnerability to Future Disasters. Immediately after the hurricane a national recovery unit was set up in the Ministry of Finance with the responsibility to coordinate the early recover effort.

A priority of the unit was to identify funding for the reconstruction, clean up, as well as assist in facilitating the damage assessment.

Integrated Plan

In terms of reconstruction the unit is in the process of developing a comprehensive and integrated plan which will require input from key agencies such as forestry, agriculture, in its implementation. Areas such as Bexon, Marc, and Fond St. Jacques that were severely affected by Hurricane Tomas are given priority in the plan. The Director emphasised that the plan must be informed by scientific assessments. She highlighted the need for some serious attention to developing the plan. In the absence of such a plan the government can only offer a recovery effort.



Development: The project unit has met with people who were directly affected by the hurricane to get a sense of their needs, and socio-economic profile. A direct survey will be conducted to obtain information on the status of persons affected. An area of land has been identified and the Agreement will be signed to hand over the site for construction. Under the Programme 27 lots will be made available in Fond St Jacques which will include land and house for relocation.

The unit has also undertaken the structural assessment of buildings. The difficulty in addressing this issue is that houses appear to be structurally sound in the Fond St

Jacque area; however, those houses are located in the vulnerable areas. The determination that areas considered vulnerable or not vulnerable areas needs to be verified through a scientific study.

The unit also worked in collaboration with the Ministry of Agriculture to determine which areas in Fond St Jacques should be placed under National Forest, and also facilitated water assessments of all the springs found in the Soufriere area.

Ministry of Housing, Physical Development and NEMO can be provided with support for capacity building. Funding to the tune of \$1.5 million is available for assistance in procuring equipment, and training.

The unit will also make provisions for the rehabilitation of schools, damaged items, school buildings and critical Infrastructure. The repair of health centres and construction of the new hospital are areas of priority.

The Caribbean Development Bank has made available funding to the tune of **17.9** million dollars which is earmarked for conducting major studies, e.g. Water supply and transportation study. There is need for a public relations agenda to inform the nation on the various initiatives that are being undertaken to address the post Hurricane Tomas challenges. The



government's programme is clearly articulated in the budget process.

Reconstruction and Development

The unit is attempting to adopt a formalised approach to the reconstruction and development process through the establishment of a Steering Committee comprising Permanent Secretaries and technical persons from key agencies. In an effort to ensure that critical areas are given priority there is need to consider the following;

1. Agencies need to highlight emergency issues.

2. There is need to outline an effective National Disaster Reconstruction Recovery process or procedure based on the lessons learnt from the Hurricane Tomas experience.
3. Review and assess the operational gaps within response agencies to inform future response efforts.
4. WASCO should be included in the multi sectoral discussion.

The Director reported on the work of the unit post Hurricane Tomas. She indicated that



Permanent Secretaries from the various government Ministries will meet to develop a work programme which would provide a focus in prioritising the work required to undertake the reconstruction and redevelopment process. A very significant part of the recovery programme will relate to the Ministry of Communication, Works, Transport

and Public Utilities, Ministry of Housing, Ministry of Health and Ministry of Education.

Immediately after Hurricane Tomas a Recovery Committee was formed in the Ministry of Finance and the model selected was coordination. There is need for a concerted effort to coordinate programmes within agencies.

In the early phase of the recovery process, it was commendable that many agencies submitted very good programs for consideration. However, those programmes were not included in the budget. The focus has been on housing in Fond St. Jacques.

There are serious concerns with the level of silt in drains. Strategies are required to rectify those issues. WASCO was not included in the reconstruction plan. Funding from external sources has not been forthcoming.

The Director emphasised the need for access to a safe water supply as a critical cross cutting development issue in the reconstruction effort.

In an effort to augment the water supply WASCO is considering the following alternatives.

- Underground water
- Other sources of supply e.g. Ravine Poison

The Reconstruction Unit, at the time, a Special Projects Unit, commissioned Massachusetts Institute of Technology to conduct a full water supply assessment in terms of location of best supply. An assessment was also done on the impact of Tomas and a critical area was ground water in terms of river beds in Grande River and the Mabouya Valley.

Discussion

Director – Bureau of Health Education: The severe water shortage in the aftermath of Hurricane Tomas led to the proliferation of a number of portable water systems in areas



such as Micoud and Canaries. The Director inquired whether there was any plan to make such a system available as a cheaper alternative to trucking water in the event of a similar situation.

Response: the representative for WASCO indicated that during the drought the company attempted to secure treatment plants through government but this did not materialize. In the aftermath of Hurricane Tomas the government of Martinique assisted in the provision of treatment plants and those were used at Canaries and Micoud. At this point in time, WASCO has requested assistance from Martinique in securing similar plants. The company has no resources to purchase, rent or lease such plants.

Response: Director NEMO indicated that the annual allocation for training for 2011 was EC\$4,000.00 and each quarter one thousand is disbursed. The agency has secured GIS equipment; software for training, however, personnel to conduct training has not been made available. The License which accompanies the package has now expired and

the programme was never used. Budget submission by respective agencies should include training for members and training should not be the sole responsibility of NEMO.

Director Recovery Unit: Budget line under World Bank for Hurricane Tomas, component II Section for capacity building, is not a huge budget, specifically targets, NEMO, Ministry of Housing and Physical Development and includes:

1. GIS training
2. Getting image processing software
3. Makes provision for other pertinent training

NEMO has met with the Director (NRDU) to determine how training can be secured under this project. The USAID/OFDA consultant has encouraged collaboration among all training to determine training needs in an effort to maximise the impact of training.



DISCUSSIONS

Use of Vehicles

Saint Lucia Cadet Corps: In addressing the use of vehicles in the recovery process, Mr. Wells raised the following issues:

1. The use of inappropriate transportation was cumbersome. Different phases of the response require different types of transportation.
2. Inventory of vehicles in the government service needs to be made available to the emergency services. This will inform availability for particular transportation tasks or needs.
3. Vehicles identified for use need to be inspected on a regular basis to ensure good working condition.
4. Reassignment of vehicles needs to be in place.

Chair Supplies Management: made reference to the following protocols guiding the use of vehicles:

1. Standard Operating Procedures states that all Permanent Secretaries must supply NEMO with all vehicles.
2. NEMAC took the decision that vehicles will be accompanied by designated drivers. However, payment for overtime needs to be submitted through the responsible agency.
3. Vehicles must be assigned to NEMO.
4. In an emergency, agencies need to understand that NEMO assumes responsibility for vehicles and during that period the respective agency has no authority over the use of vehicles.

Release of Persons

In light of the difficulty NEMO experienced in securing the release of persons to work at the EOC, the following recommendation was forwarded:

- The establishment of a national service policy to release persons for a particular period.

Executive Orders

The Director of NEMO emphasised that it is an executive order when senior volunteers are requested to assist in the Emergency Operating Centre. In that regard, in response to a disaster their release must be facilitated.

She highlighted the three levels for EOC activation



1. Director and staff commence monitoring and communication to District Disaster Committees.
2. Limited activation – Prime Minister’s consent.
3. Full activation

Training

Rep – Ministry of Education; reported on the utilisation of Shelters and highlighted the following:

1. Training is seen as a fundamental component to be incorporated into the Disaster Management agenda. This should involve continuous training and simulation exercises at the national level for timely, well - coordinated and informed responses.
2. Respective government ministry should shoulder the responsibility for the acquisition, replacement, maintenance of requisite resources through budgetary allocation.
3. There is need to revisit the Shelter Management Policy to reflect a strategy that goes beyond the 72 hour allotted time for occupation of shelters.
4. More handsets need to be made available to critical agencies, such as emergency services, for external communication from an area seriously impacted as in the case of Soufriere.
5. Repeaters are necessary for emergency telecommunications.
6. To ensure dissemination of information on matters of importance in relation to disaster management, there is need for the appointment of a Disaster Management Officer and an alternate at every government ministry. The officer will be responsible for promoting disaster management within the respective Ministry and its associated agencies.



Training Officer – NEMO: In terms of training provisions, the NEMO Corporate Planning Officer indicated that the training plan for August 2011 will focus on Damage Assessment and Needs Analysis for decision makers, particularly for persons who must

be at the EOC. The training will be funded by USAID/OFDA who has assisted in building capacity at the local level in various areas of disaster management.

Rep – UNDP: As a means of addressing the apparent challenges that agencies experience in securing essential requirements in their budget, the following were recommended:

1. Establishment of an Advisory Committee to identify short and medium term priority needs.
2. Requirements need to be identified within the framework of an overall national development plan that would place less pressure on the responsible Ministry/Agency to justify that budget head e.g. generators for medical services can be seen as a priority.

The representative from Customs and Excise made the following recommendations:



Recommendations:

1. Personnel from the Ministry of Housing need to be part of the aerial team.
2. Emergency Housing Committee to be functioning as stipulated in the Housing Act.
3. There is need to revisit how the Housing Committee works in order to be functional on the ground. There is need for those persons to have some authority over the distribution of resources to address immediately housing needs in the short term.
4. Collaboration with NGOs to ensure that the emergency committees function more effectively.
5. Build capacity at NEMO in terms of communication, telecommunications officer, mass events coordinator, business continuity officer.
6. NEMAC should be more visible. Government Ministers should be more involved in the process.
7. Public service needs to be activated during a pre-strike period through the Disaster Coordinator at each Ministry.

8. Early notification of meeting is necessary to facilitate attendance of the respective Permanent Secretary.
9. There is need for more effective coordination between the Disaster Committee and the local Council.
10. An effective model of managing disaster issues at the community level was evident, where the Town Clerk and the Chairperson of the Disaster Committee is one and the same person.
11. There is need for an established mechanism for the distribution of assistance at the community level. The suggestion is that the council should be given the responsibility for managing finances and assistance from NGOs and other donors; while District Disaster Committees manage the technical or operational arrangements in the response process. The local council should be held accountable for government funding.



Response – Disaster Committees: the committees' presentation assessed the response of Disaster Committees and highlighted the following observations/recommendations:

1. EOC was not functional after Hurricane Tomas. Absence of top level management (lack of involvement).
2. There is need for on-going training for top level management to facilitate greater involvement in emergency management.
3. Serious problems were evident with communication. Disaster Committee groups experienced problems with hand held radios.
4. Backup generators were required to power equipment for proper response.
5. There was conflict in the coordination of the response. NEMO was inefficient in coordinating the response process.
6. Red Cross operated independently. There is need for a unified command to maximize resources and facilitate a coordinated approach to response.
7. There was a problem with the use of shelters and the relocation of shelterees. There is need to establish policies for the relocation of shelterees.

8. Training and orientation would allow greater involvement in the EOC.
9. There is need for the enforcement of legislation to ensure participation of key personnel in the EOC.
10. Need for the availability of contact information of key personnel or members of the respective communities to expedite communication within the community.

Agreement

The two day workshop from all indication met the intended objectives which were:

1. To identify gaps in the response process of all responsible agencies
2. To garner lessons learnt
3. To determine critical areas of intervention in the response process.



Recommendations



Political Directorate

1. Permanent Secretaries need to be trained and oriented. Enshrine responsibilities in job contracts.
2. Legislation should be enacted to enforce the participation of Permanent Secretaries particularly at the pre-strike meeting.
3. NEMO needs to actively engage the political directorate in its operational mechanism.
4. Government Ministers should attend pre-strike meetings.
5. NEMAC should be more visible. Government Ministers should be more involved in the process.
6. Public service needs to be activated during a pre-strike period through the Disaster Coordinator at each Ministry.
7. Early notification of meeting is necessary to facilitate attendance of the respective Permanent Secretary.

National Emergency and Management Organisation (NEMO)

1. Strengthen the Management Capacity of NEMO through the appointment of Media personnel - telecommunications officer, Business Continuity Plan Officer, Mass Events Coordinator, etc.
2. Director of NEMO should be given more authority.
3. The NEMAC composition should be more visible.
4. Public Service needs to be activated during the hurricane season to review essential services.
5. Clear directives must be given on the advice of key technocrats.

District Disaster Committees

1. Strengthen coordination between local councils and local disaster committees.
2. Collaboration with NGOs to ensure that the emergency committees function more effectively.
3. More functional models to be developed.
4. Develop specific guidelines for equitable distribution of assistance, financial and otherwise.

5. Develop the capacity of district committees to conduct damage assessments.
6. An effective model of managing disaster issues at the community level was evident, where the Town Clerk and the Chairperson of the Disaster Committee is one and the same person.
7. There is need for an established mechanism for the distribution of assistance at the community level. The suggestion is that the council should be given the responsibility for managing finances and assistance from NGOs and other donors; while District Disaster Committees manage the technical or operational arrangements in the response process. The local council should be held accountable for government funding.
8. Increase the supply of communication equipment available for use in situations where national telecommunications are disrupted.
9. There is need for continuous training at the district level to build capacity.
10. There is a need for regular stimulation exercises.

Communication

1. Evacuation Point Person(s) responsible for communication, and all evacuation matters should be identified within each agency.
2. Use interrupted notices on popular radio and television stations to disseminate critical information.
3. Greater involvement of town\ village councils in communicating information to residents e.g. use of town criers.
4. The following can be used for early warning: mega horn, church bells, police siren.
5. Need for greater collaboration between the local councils and disaster committees in the dissemination of information on disaster preparedness.
6. Information on impending storm and other such information should be part of the news headlines and not the last news item.
7. Need for a GIS Officer to be stationed at NEMO to coordinate/manage information flow.
8. Repeaters should be installed for Emergency Telecommunications.
9. Increase the number of hand held sets to be used by critical agencies in emergency response.
10. Use effective mechanisms to educate persons on the role of NEMO and the Emergency Operating Centre.

11. Institute several pathways to alert persons of activation, e.g. text message, phone calls, smoke signals.
12. A study should be commissioned on the Way Forward for Telecommunications in Emergency Response.

Satellite Imagery

1. Satellite imagery should be automatically requested.
2. Need for training programme in imagery with a focus on interpretation.
3. A team trained in the interpretation of imagery should be stationed at NEMO to provide assistance in that area.
4. Satellite pictures compared with the corresponding representation from the Ministry of Housing or the team in the aerial assessment will possibly alleviate the problem of ascertaining the number of persons who legitimately require housing assistance post Hurricane Tomas.

Coordination

1. There is need to clearly articulate the protocols/procedures in place guiding the distribution of gifts/supplies and other forms of assistance to agencies in the aftermath of any event/disaster.
2. Need to establish a centralized area for distribution.
3. Cluster System Approach used by External Donor Agencies: All response agencies must adhere to their mandate and execute a collective response, ensuring that they work with the relevant NEMO District Committees.

Resource Needs

1. Ministries must take responsibility for resource needs and this should be reflected in their budget e.g. Standby power generators.
2. Replacement and maintenance of resources, utilities and tools should be included in budgetary allocation.
3. Have a Disaster Management Officer or an alternate at every Ministry

Shelter Management

1. Revise the Shelter Management Policy to reflect a strategy that goes beyond the 72 hours.

2. Reinforce the protocols/guidelines for use of shelters e.g. outline of floor plan to indicate prohibited areas.
3. Greater collaboration between Principals and Disaster Committee.
4. Clear policies are necessary to inform shutdown of shelters i.e. relocation of occupants.

Training

1. Have continuous training and simulation exercises at a National level.
2. Need for training of all stakeholders for more effective response.

Housing and Physical Development

1. Include the Ministry of Housing in the initial aerial assessment team.
2. Ensure the availability of before and after GIS reference photos for Rapid Damage Assessment.
3. Donor and NGOs need to work more collaboratively with EHC.
4. Emergency Housing Committee to be functioning as stipulated in the Housing Act.
5. There is need to revisit how the Housing Committee works in order to be functional on the ground. There is need for those persons to have some authority over the distribution of resources to address immediately housing needs in the short term.

Police

1. There is need to augment the water storage capacity at police stations.

Transportation

1. Identify fleet of vehicles from various ministries to be used as transportation in emergency situations.
2. Secure fuel storage facility for use on demand.
3. Vehicles assigned to NEMO as Emergency vehicles should be in good working condition.
4. Transportation should be immediately assigned to severely affected areas.

External Rapid Needs Assessment Team (RNAT)

1. Terms of References to be agreed for each RNAT mission including where possible confirmation of the purpose, Standard Operating Procedure arrangements and reporting formats, team leadership composition, local counterpart and daily briefings.
2. Ensure information management capacity is reinforced within the team.
3. Joint forces with UNDAC team to conduct assessment in the event of a major disaster. This would expedite the assessment process as well as response to critical needs from donor groups/agencies.
4. Ensure some members remain in the EOC to support general coordination function and on site coordination centre (a UN protocol). This would assist in monitoring persons going in and out.
5. CDEMA needs to produce key information sheets and maps on each participating state to include relevant/pertinent information required for the team's mission.
6. Data information officer to assist and provide support to EOC when required.
7. The EOC needs to identify support required from RNAT and if available that support can be provided while the team is on island.
8. RNAT composition and rules to be revised. Saint Lucia RNAT was larger than foreseen. A team of about (6) possibly 10 is recommended and that number to be selected based on needs. An update of RNAT SOP is intended.
9. Improve clarity on RNAT reporting including presentation of national focal points. The identification of counterparts is necessary through the presence of logo or insignia of the representing agency in the form of vests, caps, badge, arm band, etc.
10. Consider designing a logo for RNAT and emails should be sent out with the label Rapid Assessment Team rather than the label of respective agencies. ECDG is the representation for team.

General Recommendations:

1. Disaster committees should brief NEMO on situation needs and response on a more regular basis, ideally daily.
2. There should be an information sharing meeting at the operation level at the end of each day during the response process.

3. Protocol should dictate that information from Disaster Committees and individual sectors/agencies should be communicated to NEMO rather than the Director attempting to find persons or information.
4. Other international partners deployed to Saint Lucia should participate in the operational information sharing meeting so that every actor involved in the response process has up to date information of the situation on the ground. All can benefit from these meetings, particularly as it relates to assessment reports.
5. Availability of preliminary and revised DANA is seen to be vital to effective response.
6. A critical but under performing area regionally is the need for training and orientation.

United Nations Development Programme (UNDP)

1. Have the early recovery advisory support in the country. In other countries consideration is being given to move from the DALA to the PDNA (Post Disaster Needs Assessment). The country would need to indicate requirements to move from saving lives to returning to a situation where the economy is growing and livelihoods are being addressed.

List of Participants



Attendance - Consultation on Tomas

George Ephraim	Micoud South Disaster committee
Dorothy Agard	Chair - National Transport Committee
Una May Gordon	Inter America Institute on Agriculture
Ulric Alphonse	Chair - Laborie Disaster Committee
Marion Francis Henry	Ministry of Physical Development
Moses Charles	Royal St Lucia Police Force
Elizabeth Charles Soomer	National Reconstruction Unit
Wenn Gabriel	Environmental Health Department
Nahum Sylvester	Ministry of Communications
Lambert Charles	Saint Lucia Fire Service
Gerald Louis	Gros Islet Disaster Committee
Terry Valcin	Chair - Castries South East Disaster Committee
Paul Francis	Micoud South Disaster Committee
Allison Joseph	Chair - Castries North Disaster Committee
Simon Mondesir	Chair - Soufriere Disaster Committee
Martha Blanchard	Ministry of Social Transformation
Sean Wells	Saint Lucia Cadet Corps
Merlene Fredericks	Ministry of Health
Jenny Daniel	Ministry of Housing
Sharon Belmar-George	Ministry of Health
Alymphina Lionel	Electoral Department
Phillipa Calderon	OECS Secretariat
Cyprian Yarde	Ministry of Health
Anthony T. Robinson	Bureau of Health
Lucia Isidore	Ministry of Health
Ken Powlette Goodman	WASCO
Timothy James	WASCO
Hildreth Augustin	NEMO
Treverne Yorke	WASCO
Jim King	WASCO
Lambert Remy	SLASPA
Oliviere Cadet	SLASPA
Lealou Reballos	PAHO/WHO
Carleen Atkins	Ministry of Agriculture
Wei Weng	National Taiwan University
Fortuna Belrose	Ministry of Home Affairs
Lucy A Joseph	Ministry of Education
George Victorin	Saint Lucia Fire Service
Bryan Jawahir	Royal Police St Lucia Force
Sisera Simon	Ministry of Education
Joseph Joseph	St Lucia Fire Service
Raphael Serieux	St Lucia Fire Service
Elizabeth Bailey	Ministry of External Affairs
Melanie Hippoyte	Customs & Excise Department
Aly Anthony	WASCO Inc.
Ian King	UNDP Barbados
Ian Frederick	Canaries Disaster Preparedness Committee



Roselina Mayers	NEMO
Major Lucius Lake	Saint Lucia Cadet Corps
Seon D Ferrari	Department of Fisheries
Lt. Col. Andre P Mathurin	Saint Lucia Cadet Corps
Lesley Ann Modeste	Lions Club of Castries
Charmaine Gomes	ECLAC
Beverly-Ann Poyotte	Division of Human Services
Chamberlain Emmanuel	Chair - Damage Needs Assessment Committee
Anthony John	OPSR
Florita Jn Baptiste	Ministry of Public Service
Albert Jn Baptiste	Ministry of Communications
Eden Compton	Ministry of Agriculture
Hubert Pierre	Saint Lucia Red Cross
Lois Jean	Ministry of Labour
Winston Lubin	Chair - Vieux Fort Disaster Committee
Lester Arnold	Ministry of Communications
David T. Popo	OECS Secretariat
Denys Springer	Government Information Service
Annette Rattingan-Augustin	Sustainable Development
Thomas Auguste	St Lucia Met Services
Ivaline Joseph	National Printing Corporation
Calvert Emmanuel	DIGICEL
Judith Crane-St Hill	Ministry of Tourism
Herman St Helen	Chair - Castries East Disaster Committee



