

# DISASTER COMMUNICATIONS IN SOLOMON ISLANDS

ITU/ESCAP Disaster Communications Workshop

12 – 15 December 2006

Bangkok, Thailand

By: Rex Manilofia  
Principal engineer  
Spectrum Management Division  
Department of Communications,  
Aviation & Meteorology,  
P.O Box G8, Honiara,  
SOLOMON ISLANDS.

Tel: 677 23018 or 677 25888

Fax: 677 28054

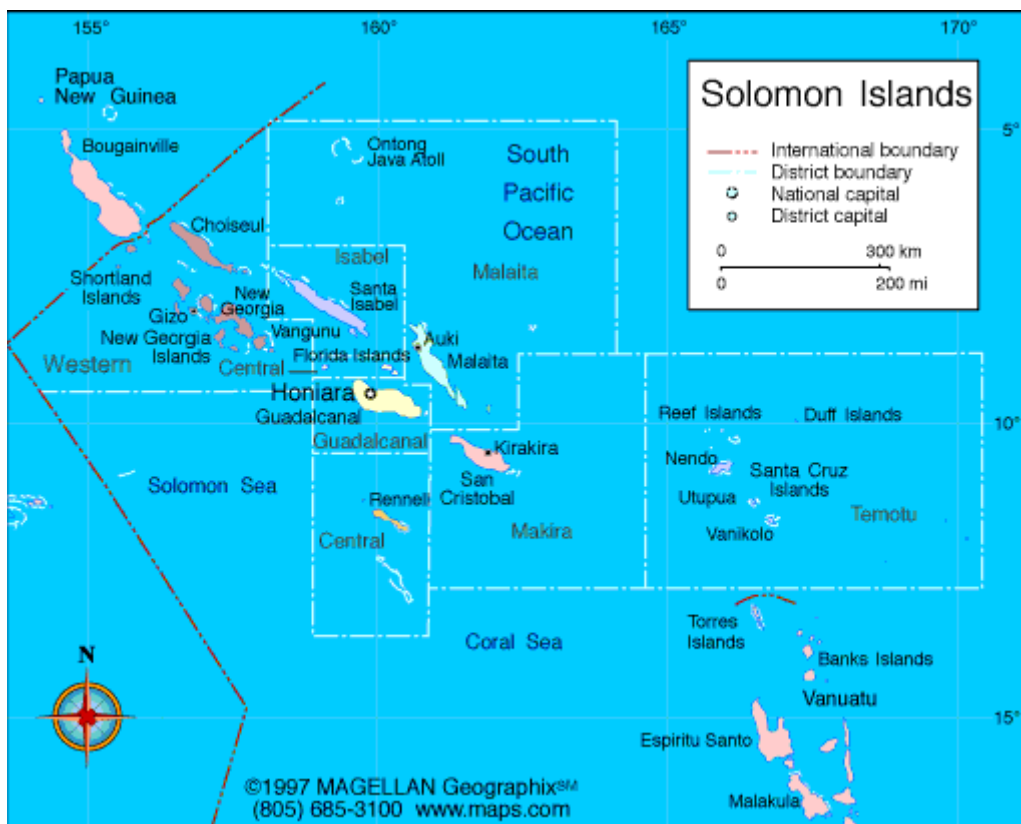
Email: [lo@dcam.gov.sb](mailto:lo@dcam.gov.sb)

## SOLOMON ISLANDS DISASTER COMMUNICATIONS

### 1. INTRODUCTION

Solomon Islands is located roughly about 1,000 north east of Australia and about south east of Papua New Guinea. Solomon Islands like other countries, is situated among one of the world's disaster prone regions. It is situated in what is known as the 'earth quake belt' or "ring of fire". The belt of earthquake and volcanic activity runs through PNG, the Philippines, Japan and Siberia, east through Alaska, southward through Canada, the Andreas Fault of the western USA, Central America, the Andes mountain chain of South America, across Antarctica, and north again through New Zealand, Tonga and Vanuatu. For Meteorologists, the zone is also called a cyclone-genesis area, that is, the area where cyclones are formed.

#### Map of Solomon Islands.



## Ring of Fire

The "Ring of Fire", also called the Circum-Pacific belt, is the zone of earthquakes surrounding the Pacific Ocean — about 90% of the world's earthquakes occur there.



## 2. CLIMATE

The climate is tropical. From December to March, northwest equatorial winds bring hot weather and heavy rainfall; from April to November, the islands are cooled by drier southeast trade winds. Damaging cyclones occasionally strike during the rainy season. The annual mean temperature is 27°C (81°F); annual rainfall averages 305 cm (120 in), and humidity is about 80%.

## 3. ETHNIC GROUPS

In 1999, Melanesians constituted 93% of the total population. Also enumerated were Polynesians at 4%, Micronesians at 1.5%, Europeans at 0.8%, Chinese at 0.3%, and others accounting for 0.4%. Melanesians live mainly on the larger islands; Polynesians tend to inhabit the smaller islands and atolls.

#### **4. LANGUAGES**

English is the official language but is only spoken by approximately 1–2% of the population. Melanesian pidgin is the lingua franca. Some 120 indigenous languages and dialects are spoken, each within a very restricted geographical area. Melanesian languages are spoken by about 85% of the population, Papuan languages by 9%, and Polynesian languages by 4%.

#### **5. NATIONAL AND LOCAL GOVERNMENT**

The government of Solomon Islands is democratically elected every four years. The Queen is the Head of State and is represented by the Governor General. The current government is led by Prime Minister Manasseh Sogavare.

The islands are divided into nine administrative districts, of which eight are provinces, each with an elected assembly and a premier; the ninth is the city of Honiara, governed by an elected council. In outlying areas, village headmen exercise administrative responsibilities.

#### **6. DISASTER THREATS TO SOLOMON ISLANDS**

Solomon Islands is faced with various possible natural threats. Natural threats include:

- Tropical Cyclones and Wind Storms
- Floods
- Earth quakes
- Landslides
- Volcanic Eruptions
- Tsunamis (seismic waves)
- Droughts
- Aviation and Maritime Disasters
- Fires
- Industrial Accidents
- Epidemics
- Marine Pollution

##### **6.1 EFFECTS OF DISASTERS ON THE COUNTRY AND PEOPLE**

Basically, the effects of disasters on the country and its people tend to be:

- Loss of life
- Injury
- Damage and destruction of property
- Damage and destruction of Cash crops
- Disruption of life-style
- Loss of livelihood
- Disruption of services
- Damage to national infrastructure and/ or disruption of government system
- National Economic loss
- Sociological and psychological after-effects

## **7. NATIONAL AUTHORITIES INVOLVED IN DISASTER MANAGEMENT**

### **7.1 Disaster Legislation**

Solomon Islands have a National Disaster Council (NDC) which operates under a National Disaster Act. The Act makes provision for the organisation and management which is necessary to ensure preparedness for, response to and recovery from disasters. The Act provides legal backing for a National Disaster plan for the country. It also makes provision for the use of special powers in times of disasters should the need arise.

### **7.2 Other Legislation**

Other legislation, which may be relevant to disaster circumstances, is contained in the Emergency Powers Act, 1978 which relates to the declaration of a state of public emergency under Section 16 of the Constitution.

### **7.3 Organisational structure**

The following are the key aspects of the disaster organisational structure:

#### **(a) Minister Responsible**

For all disaster- related matters. He/She is the authority for all that is to do with any disaster in the country.

#### **(b) National Disaster Council (NDC)**

Role – to co-ordinate all disaster-related measures which are concerned with:

- Planning
- Organisation
- Preparedness
- Operations
- Relief and rehabilitation
- Training and public awareness
- Mitigation (when applicable)
- Other appropriated aspect

(c) National Emergency Operations Centre (NEOC)

This is the hub of the operational action. The NEOC is essentially a communications room where people collect information from communicators throughout the nation in times of emergencies and disasters. Most of the government Ministries and NGO organisations forward the information to the NEOC. On receiving the information it forwards it to the National Disaster Council (NDC) via a Central Control Group (CCG).

For example, all health related information from clinics and hospitals are passed to a health specialist in the NEOC. Maritime emergencies to a maritime specialist, Aviation to Air Transport specialist and so on.

## **8. DISASTER MANAGEMENT STRATEGY INITIATIVES**

A disaster is a word that describes anything from a minor personal misfortune to some great community calamity. Such broad usage would not be satisfactory to people and organisations that are responsible for taking counter - disaster action. For purposes of scaling, some have arbitrarily categories the continuum of adverse and unfortunate events into the following:

- (a) Accidents
- (b) Emergencies and
- (c) Disasters

Disaster sociologists have suggested that unfortunate events could be distinguished basing on the basis of:

- (a) the number of people affected
- (b) degree of involvement of population within the affected social system and
- (c) amount of disruption caused to the social system.

### **8.1 Accident**

- (a) Affects mainly victims family and close associates.
- (b) No disruptions to larger social structure. Few community services called upon.
- (c) No disruption to community infrastructure.

### **8.2 Emergency**

- (a) Affects many people including those in proximity and those providing emergency services.
- (b) Larger social structure remains intact. Many community services called upon
- (c) Community infrastructure remains mostly intact.

### **8.3 Disaster**

- (a) Affects large section of community
- (b) Widespread disruption of social structure. Community services inadequate to cope.
- (c) Large-scale destruction of community infrastructure.

A commonly accepted definition of disaster is, “a catastrophic event or a situation which produces damage to a large section of a community and their habitations and /or disruption to their patterns of life to an extent which is beyond the normal resources of that community to alleviate effectively and in good time”.

#### 8.4 Causes of Disaster

Disasters can result from two sources:

Natural and Man-Made.

Natural Disasters are often caused by events such as:

- (a) Climatic event
- (b) Geological upheaval
- (c) Pestilence
- (d) Environmental Disasters

(2) Man-made disasters are sometimes caused or resulted from:

- (a) Industrial or technological disasters
- (b) Physical Aggression

#### 8.5 The Disaster Cycle

Disasters can be grouped into four distinct phases for management purposes and with regard to time, each of which requires a management approach.

- (1) Prevention / mitigation
- (2) Preparedness
- (3) Response
- (4) Recovery

#### 8.6 Pre Disaster Phase

The pre-disaster phase is that period of “normal” time and relative tranquility which, in a disaster- prone country, will sooner or later end with a disaster. This period of unknown duration, should be devoted to prevention/mitigation and preparedness activities.

Prevention / mitigation activities are those measures which reduce the probability of occurrence of a disaster or lessen the effects of unavoidable disaster. Some examples of the prevention/mitigation measures are hazard analysis, prediction, vulnerability analysis, flood control, land-use regulations which exclude habitation and crops from high-risk areas, building codes, the construction of cyclone shelters, boat harbours and soil conservation programs. Normally, these measures should be part of the country’s work development program.

Preparedness refers to those activities which will ensure prompt and efficient action, at all levels, to save lives and minimise property damaged when a disaster occurs. Preparedness is important in the areas of the establishment of a counter-disaster body, public awareness programs, training of relief workers, warning systems, stockpiling food and medical supplies and sound planning at all levels for immediate response in case of the occurrence of a disaster.

Often disaster preparedness would involve planning and preparation. Pre-planning and preparation are means to effectively mobilise resources to aid a disaster stricken zone. It is vitally important that emergency communications is restored immediately to assist in the communication of useful information. Transport services should also be restored to bring in the needed supplies or personnel to do rescue work. Assessment teams and relief personnel need to be organised and trained in their roles. The planning, training and rehearsing are essential if a country's resources are to be mobilised quickly and integrated harmoniously into a co-coordinated and efficient relief effort.

## 8.7 Warning

Generally it is hoped that a "warning" will come between preparedness for, and response to, a disaster but it must always be assumed that this phase will be short. The Scientists will make the best predictions and forecasts that they possibly can. It is the disaster managers who must translate this into warnings for the public community that is facing the impending natural occurrence.

Early warning systems are part of the preparedness measures of any disaster-prone country. These systems have the following three components:

### (a) Prediction:

The scientific monitoring of hazards, such as cyclones and earthquakes, by professional staff of meteorological and seismological stations. On the basis of this prediction a disaster manager may or may not release a warning sequence.

### (b) Decision on when to warn:

When evacuation or other steps hang on a warning, this decision can be an agonising one. It should be the responsibility of a senior disaster manager.

### (c) Communication of warning:

Foolproof arrangements to see that all necessary information about the nature, intensity, location and time of impending event reaches all those threatened. Warnings are to be revised as the situation changes and alert levels alter. For example, the following are the warning arrangements that should be released to the public under disaster threat from a cyclone:

- Information from Overseas to Meteorological Services-  
Three weather sources often provide weather or cyclone information-  
Nadi, Fiji, Brisbane, Australia and Honolulu, Hawaii for Tsunami information.



- Information from Meteorology to NDC-  
The Meteorology Department would then inform the Chairman/NDC, the Commissioner of Police, the Chief of Marine, Controller of Aviation and Chairman of relevant Provincial Disaster Committees and Solomon Islands Broadcasting Corporation (SIBC).
- Information from NDC to the Public- Issuing of cyclone warnings is only done with the approval of the National Disaster Council. The Council reconfirms warnings or the retransmission of information or issues notification of “all clear”.

The early warning and stage of alert should enable pre-arranged steps to be taken automatically by those facing the threat. Managers must monitor and check this process. As a community is informed and educated in emergency procedures, the more likely it is that damages and suffering will be minimised.

## 8.8 Post-Disaster Phase

The post-disaster phase is characterised by a short response period when intensive emergency relief operations are undertaken. This is followed by a long period of recovery from the impacts of the disaster.

The response phase should not last much longer than fourteen days. Disaster managers during this phase are to save lives, reduce suffering of the survivors, remove any further threats to life or property and find out the nature and extent of the disaster. It is important that at all levels, automatic actions are taking place according to the disaster plan.

Emergency operations required after a disaster will depend upon the particular situation but could include some or all of the activities such as, evacuation, reconnaissance, search and rescue, treatment of casualties, clearance of debris, food and water, emergency shelter, subsistence supplies, health and sanitation, welfare enquiry, communications and public information.

### 8.8.1 Recovery

The recovery phase is when life is gradually brought back to normal. This phase can be subdivided into a rehabilitation and reconstruction period.

### 8.8.2 Rehabilitation

Involves the provision, at least on a temporary basis, of a reasonably acceptable level of services and facilities so as to restore a workable community infrastructure and some economic life. Essentially, the purpose is to ensure that life is manageable for everyone and there is reduced suffering (although there may still be hardship) such that there is breathing space while deliberate plans are made for permanent reconstruction. The overall aim is to restore the living patterns of the stricken community as quickly as possible and in a planned way which allows resources to be applied fairly.

### 8.8.3 Reconstruction

Reconstruction is based on a detailed survey of damage and involves the provision of long-term or permanent remedies to the effects of the disaster. People from stricken areas might be resettled in permanent housing, new markets might be built, water supply and sanitation systems of permanent nature might also be built or rebuilt. Reconstruction should involve the whole fabric of the community and its cultural life.

Reconstruction should be integrated with the long-term development plan for the community. It will require that resources and priorities be reallocated to the most needed areas, but it must not be allowed to negate the development objectives established previously. Lessons learnt from the disaster and errors created in past constructions will have to be avoided so as to minimise damages in future disasters.

Reconstruction will help to bring us to where the community began before the disaster. Community life has returned to normal or better than normal and hopefully, further attention should be drawn to prevention/mitigation measures and preparedness action to meet future possible disasters.

## **9. FORMS OF COMMUNICATIONS**

Telecommunications is very important for a disaster stricken country. Without it the loss of lives and the needed assistance would not be possible to arrive in time. Modern science and technology have developed a number of forms of communications which can be used in times of disasters. Solomon Islands like others, now has within its reach the following types of technology to assist in the exchange of information in times of disasters:

- (a) High frequency (HF) radio transceiver units
- (b) VHF transceiver units
- (c) Telephone (urban)
- (d) facimile (urban)
- (e) Internet and email service
- (f) AM Broadcasting (SIBC)
- (g) Television broadcasting service
- (h) Portable Mini-satellite station
- (i) conch shell or drum beat (rural areas)

Often, the form of technology that is used depends on other factors like cost, availability, speed to send information, range, simplicity of use, maintenance, experience, and so forth. Generally, in the past and even now HF Broadcasting and radio stations have been of immense help in communicating information to the public in times of impending disasters and happenings.

## **10 CHALLENGES AND AREAS OF ASSISTANCE NEEDED IN DISASTER MANAGEMENT**

Some of the challenges facing the task of those dealing with disasters are as follows:

- (a) Geographic challenges – Solomon Islands is a country of many scattered islands. Sea transport can be hazardous in times of cyclones. During cyclones ships have to seek shelter in safe harbours until the cyclone moves away. Air transport is

there but can only be reached where there are airfields. Not all of the islands have airports. Assistance required is to improve the shipping services by providing efficient ships to operate between the islands and the capital.

Air transport services and more airfields to be built in the rural areas to provide access to those areas. In times of disasters planes and helicopters could use them to bring in the needed relief supplies.

- (b) Infrastructure difficulties – not all of the islands have roads. Even if there are roads they do not cover the whole island. Some of the roads are not suitable for vehicles due to their poor conditions and the improvement is sometimes not possible because of financial difficulties. A lot of the islands do not have wharves where ships could berth satisfactorily. Most of the times canoes are used to move goods and people to the shores.

Roads need to be extended to cover the islands so that people will get assistance both in good times and in times of disasters. Wharves will have to be constructed to enable ships to properly berthing on land.

- (c) Telecommunications services – the rural areas do not have telephones and other modern facilities which are required for accessing the needed information in times of disasters.

HF radio transceiver units have been used over the years in some of the rural centres like clinics, church centres and rural Police stations. Improvements will have to be done so that people have access to the telecommunications networks and radio services.

- (d) Land right issues – the larger part of land ownership in Solomon Islands is customary owned. Customary land is owned by a tribe and quite often, development which should involve the building of good infrastructure can be rejected by the decision of one person or a group of people, simply because of some reasons known only to himself or themselves. Wrong decisions will continue to hinder free access to the provision and supply of the needed relief for people in times of disasters.

One solution is to involve as much of the tribe in the projects so that they see it as their own and to provide full backing to those projects. Roads and other things when built should involve their man power including the maintenance of these.

- (e) Training – Training of staff and manpower to be better equipped to handle disaster and emergency situations is a real challenge. Man power includes qualified, skilled and semiskilled labour. Solomon Islands will still require assistance from overseas in the years ahead to provide backup in times of disasters. There needs to be a continuous training program aimed at improving the level of qualifications, skills and engagement which is required in times of disasters.

## References:

1. National Disaster Plan 1982,Solomon Islands.
2. Report on the National Disaster Preparedness Workshop 15 -17 May 1990.
3. National Disaster Plan 1987,Solomon Islands.
4. <http://www.infoplease.com/atlas/country/solomonislands.html>
5. <http://earthquake.usgs.gov/learning/faq.php?>