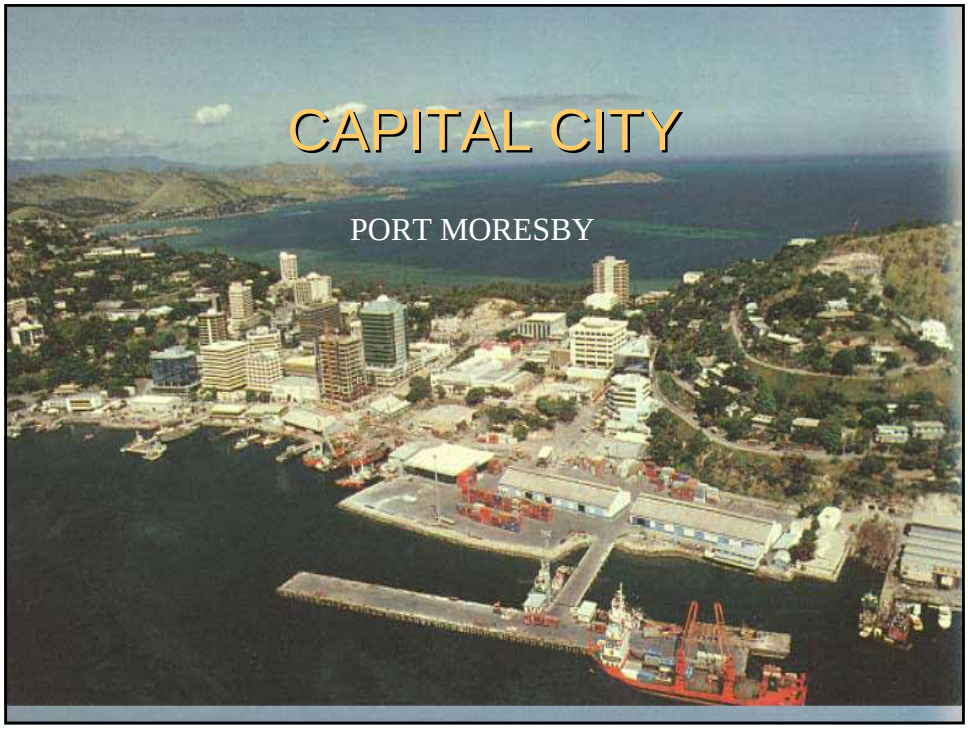
OUTLINE OF PRESENTATION

- GENERAL INFORMATION ON PNG
- DISASTER SITUATION
- DISASTER CONDITIONS
- DISASTER COUNTERMEASURES
- CONCLUSION
- WHAT I WANT TO DO IN ADRC?
- SUGGESTIONS FOR IMPROVEMENT OF ADRC VISITING RESEARCHER PROGRAM

PAPUA NEW GUINEA GENERAL INFORMATION

GEOGRAPHY

- Land area: 462,800 sq. km, ¾ covered by tropical rainforest & ¼ delta plains, flat grassland & mangrove swamps.
- Coastline area: 5,152 km
- Location: Coral Sea & South Pacific Ocean
- Mainland border- shared with Indonesia
- Map location: Latitude of 0-14 degrees south Longitude of 141 – 160 degrees east of equator
- Longest River – Fly 1200km
- Highest mountain – Mt. Whilhem 4509m



CLIMATE

- Hot & humid equatorial tropics
- Seasons: Dry & Wet
- Dry, May – October & Wet, November – May
- Temperature: 14 degrees in the highlands & 32 in coastal areas
- H/lands cool all year round.

PEOPLE

- Population: over 4.5 million
- Port Moresby: 250,000 & Lae: 125,000
- Annual growth rate: 2.3%
- Pop.density: 10 persons per sq.km
- Pop. Growth: 2.3%
- Health: infant mortality rate 59/1000,
- Life expectancy: 58
- Education: compusory year – 8, Literacy rate 70%

LANGUAGE

- Over 750 indigenous languages
- 3 official – English, pidgin & motu.
- English is the official language used for formal business activities, the education system, government bureaucracy & mass media..

GOVERNMENT

- Head of state: Governor General
- Head of government & Political leader: Prime Minister
- System of Govt. West Minister
- Levels of Govt. National, Provincial & District
- Administrative subdivisions: 20 Provinces including National Capital
- Members of Parliament: 109

ECONOMY

- **Traditional economy (70%) mainly subsistence farming or Cash economy (12%) & 8% semi subsistence & cash economy.**
- **Major exports: mainly minerals and agricultural commodities such as coffee, cocoa, copra, tea, sugar, timber, rubber, oil palm, fish, copper ore, gold and oil.**
- **Major markets: Australia, Japan, Germany, UK, South Korea & China**
- **Imports are: machinery, transport equipment, fuel, chemicals, consumer goods & food**
- **Major suppliers: Australia, Singapore, Japan, US, Malaysia, & Indonesia**
- **Banks: 2 National and 4 Foreign**
- **Monetary Unit: Kina**

CULTURE & RELIGION

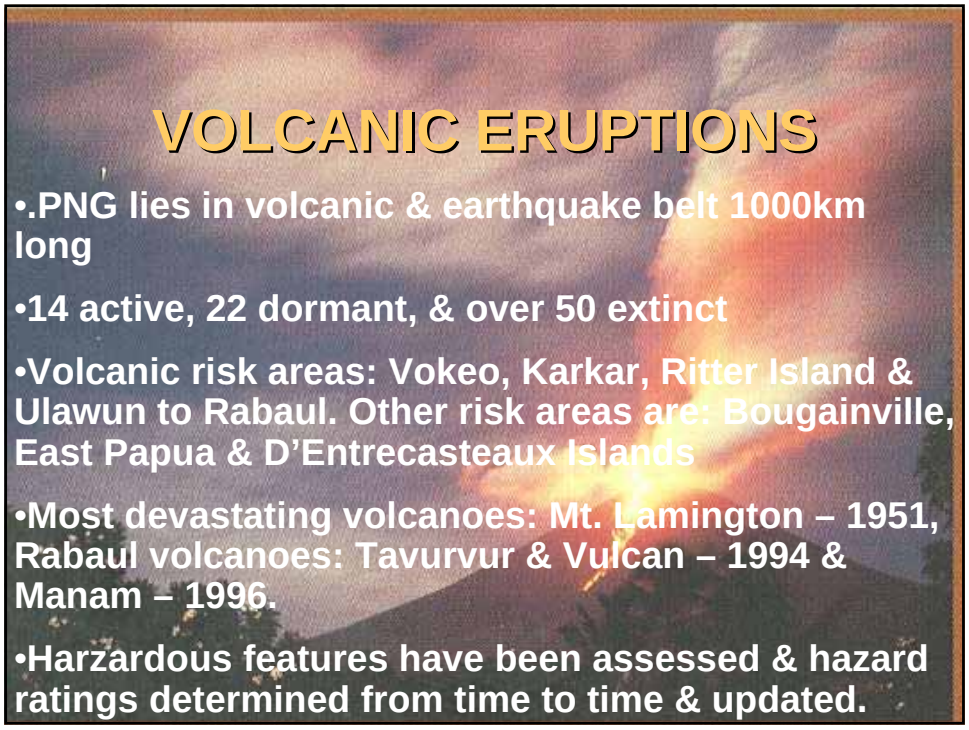
- Culturally, PNG is a diverse country ranging from distinct tribal to mixtures of various cultures, traditions and norms from pure Melanesia to mixture of Micronesia and Polynesia flavours.
- As a nation PNG is professed a christain country. About 66% of the population are christians while 34% belong to other religions and beliefs.

MAN – MADE DISASTERS

- Fire
- Agriculture Infestation
- Oil & Chemical Spill
- Marine & Sea accidents
- Aviation accidents
- Industrial & Technological
- Civil unrest

MAJOR NATURAL DISASTERS

Disaster	Year	Province	Affected	Dead
Flood	1999 1998 1998	Western E/Sepik Madang	10,000 23,000 38,000	 28,000
Tsunami	1998	Sandaun	12,427	2227
Drought	1997/98	Whole nation	3,158961	98
Volcanic eruption	1996 1994 1992	Madang ENB Madang	3,000 105,000 2,000	17 4
Cyclone	1993	Milne Bay	50,000	1



PNG VOLCANOES

- Volcano activities in PNG are observed by the Rabaul Volcanological Observatory and Geophysical Observatory.
- Almost all volcano & earthquake prone Provinces have a sensing station installed purposely to monitor and report on volcanic or seismic activities detected in the region.

EARTHQUAKE

- Situated in the most active seismic region
- Earthquake occur due to unstable continuous movements of lithospheric plates such as North Bismarck, South Bismarck and the Indo – Australian plate on which PNG sits.
- Four zones for earthquake purposes:

  -Extremly high

  -Moderately high

  -Moderate

  -Low

- The Port Moresby Geophysical Observatory operates a network of seismic stations throughout the country, and this network is supplemented by volcano surveillance stations of the Central Volcanological Observatory, Rabaul.

LANDSLIDES

- Occur mainly in the highlands & mountainous areas
- Occurrence related to frequent seismic activities, high rainfall,degradation of forestry environment by developers & slush & burn system of making gardens.
- The worst recorded landslide was in 1993, Kaiapit affecting 7,000 people and killing 14 people.

TSUNAMI

- The noticeable tsunami comes in very rarely according to available records.
- They occur following strong earthquakes and volcanic eruptions.
- Vulnerable areas are within Solomon & Bismarck sea.
- The 1998 tsunami killed about 2227 people, hospitalised over 300 & left 11,000 people homeless.

TIDAL WAVE & COASTAL EROSION

- Surge tidal waves also cause damages to coastlines when low pressure of surge wind or cyclones occur. Usually high seas result and waves with velocity impact the coastlines erosion, environment damages, property destruction and loss of lives. This is quite common in coastal villages

DROUGHT

Location :

- normally lowland outer island areas

Period :

- dry season from July to October

Vulnerable areas:

- Western, Simbu, Eastern Highlands, Central, Milne Bay, Oro & Other outer islands & atolls in the Solomon & Bismarck seas.

- **1997 – 98 Drought**
  - **worst disaster scenario in the country's history**
  - **comes in every 8 – 13 years**
  - **no. of people affected, 1,792,417**
  - **cost involved K90.00 to K100.00 million**
  - **no. of people killed, 98**
- **There are also water projects installed in respective Provinces for drought impact counter measures.**

TROPICAL CYCLONE

- Tropical cyclones or strong winds could occur in Papua New Guinea waters or coastal areas anywhere more than about five degrees south of the Equator. The prone provinces are the northeastern areas of the country like Oro and Milne Bay Provinces. The cyclone season follows the wet season pattern from November to May.

FROST

- Frost is another hazard that mainly occurs in the Highlands Provinces of PNG where the elevation is above 5,000 feet above sea level. The season of frost is from May to October. When frost occurs, the plants are destroyed.The worst hit frost was reported to be in 1980 affecting 40,000 people. The frost also hit the highlands provinces during the long drought in 1997-98

FLOOD

- Causes: increase in the volume of water produced by rain in catchment areas, rivers & lakes over a period of time
- Most vulnerable areas: Morobe, Gulf, Western & East Sepik
- Problem areas, Western & E/Sepik have vast flat areas, difficult to relocate to other higher ground
- Vunerable elements: those at riverbanks, below maincatchment & low flat land plains
- High risk for residents near rivers or lowland areas due to no traditional land to go to.

PERCEPTION OF GOVT. & PEOPLE OF PNG

- Regarded as only a response activity.
- Disaster Management only becomes a concern after disaster impacts community
- Disaster Management only NDMO problem
- NDMO seen as an office for lodging requests for communities and individuals
- Disasters regarded as punishments from God or gods/ancestral spirits.

DIAGNOSIS

- LACK OF KNOWLEDGE RESULTING FROM LACK OF EFFECTIVE AWARENESS, EDUCATION & TRAINING

POLICY STATEMENT

PROTECTION OF LIVES OF PAPUA NEW GUINEANS LIES PREDOMINANTLY ON THE GOVERNMENT OF PAPUA NEW GUINEA THROUGH THE NATIONAL CONSTITUTION.

DISASTER COUNTERMEASURES IN PNG

- Legislations or Countermeasure Laws
- Policy
- Institutions
- Programmes & Activities

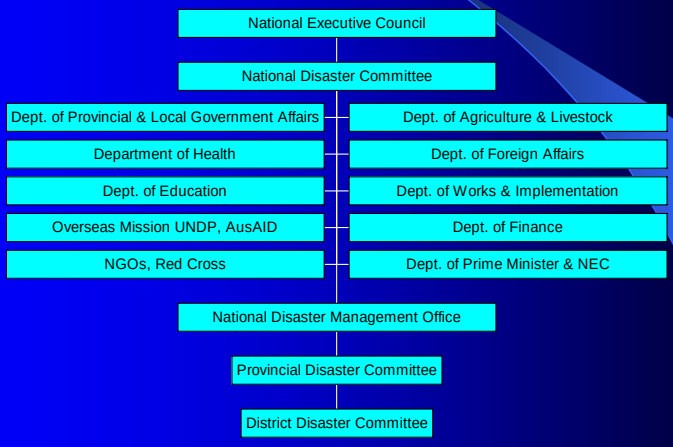
LEGISLATION

- National Constitution: Part x
- National Disaster Management Act
- Other Acts like:
- Public Health Act
- PNGDF Act
- Internal Revenue Act
- Insurance Act
- Public Finance Management Act
- PNG Fire Services Act
- Transport & Marine Act

PLANS

- National Disaster Management Plan (under review)
- National Response Action Plan
- Provincial Emergency & Disaster Plans
- Contingency Plan

ORGANIZATIONAL STRUCTURE



NATIONAL EXECUTIVE COUNCIL

- Has ultimate responsibility in disaster management, through NDC, develops and implements disaster management policy

MINISTRY RESPONSIBLE FOR DISASTER MANAGEMENT

PROVINCIAL
& LOCAL
GOVERNMENT AFFAIRS

NATIONAL DISASTER COMMITTEE

- Chairman – Secretary Dept. Prov. & Local Govt. Affairs.
- Established under Disaster Management Act & responsible to NEC for disaster matters
- Decision making body of any emergency or disaster matters.
- Membership: identified line departments with responsibilities related to Disaster Management
- Can form sub – committees to or working groups to deal with specific issues.

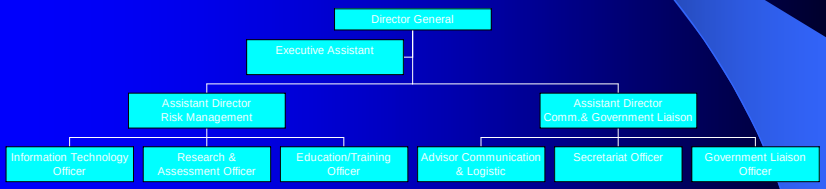
ROLES & RESPONSIBILITIES OF NDC

- Provide and render advice to the NEC through the Minister on all disaster matters
- Approve and coordinate all activities necessary in regard to preparedness, response & recovery phases of disaster mgt.
- Assume full & complete control in operations related to disasters,
- Provide & render financial assistance to Provincial Disaster Committees.

ROLES & RESPONSIBILITIES OF STAKEHOLDERS

- Dept. of Health – all health related matters
- Dept. of Agri. & Livestock – all matters relating to agri. & livestock including food
- Dept. of Works & Transport – engineering & structural matters, airstrips, roads, bridge
- Telecommunication – communication matters
- Dept. Police – law & order
- Dept. of Defence – assist where required on called out orders by the government
- Red Cross/NGOs/Overseas Missions – responsible in needy areas like food, shelter, health services and water when responding to emergencies.

NDMO STRUCTURE



MY DUTIES & RESPONSIBILITIES

- Coordinate and conduct training, education /awareness programs ie: inhouse & in country.
- Produce training, education and awareness materials relevant for disaster management
- Assist other officers where necessary
- Liaise with institutions/organisations for disaster management courses
- Provide advice to Provincial Disaster Cordinators on training, education and awareness matters

NATIONAL DISASTER MANAGEMENT OFFICE

- NDMO housed under Dept. Prov. Local Government Affairs & responsible for managing disasters in PNG.
- NDMO headed by Director General who is appointed by NEC
- Two branches: Reactive – deals with rapid response & operations, & Proactive deals with long term matters through research & analysis.
- Overall role is to coordinate the management of disasters & emergencies in PNG
- NDMO & Provincial Disaster Committee have primary responsibility for implementing & coordinating disaster countermeasure activities,before, during & after disaster or emergency situations.
- NDMO also acts as the Secretariate to NDC

ROLES & RESPONSIBILITIES OF NDMO

- Implementing policies & decisions of NDC
- Advising the NDC on all disaster management matters
- Coordinating national relief efforts, including those of other depts./agencies on behalf of & as directed by the NDC
- Acting as secretariat to NDC & its subcommittees
- Assist with disaster management training for all levels and sectors when appropriate
- Maintain a disaster managmement information database.

PROVINCIAL DISASTER COMMITTEE

- Chairman – Provincial Administrator
- Established under disaster management Act
- Responsible to Provincial Government for all disaster matters

DISTRICT DISASTER COMMITTEE

- Responsible for disasters in the district.
- Chairman – district administrator
- Composition of members is similar to NDC members

PROGRAMS & ACTIVITIES

- Awareness Programs
- Education & Training Program
- Public information Program
- Food Security Policy & Program
- Health Issues Education & Awareness Program
- Geohazard Mapping Program
- Environment & Conservation Research & Awareness Program
- Fire Safety Awareness

RESOURCE PEOPLE & ORGANIZATIONS

- Rabaul Volcano Observatory – Volcano activities
- Geophysical Observatory – Seismic Activities
- Geological Surveys – Landslides & other geohazards
- National Weather Service – Drought, Rain, Wind, Frost etc.
- Environment & Conservation – Environment Management.
- University of Papua New Guinea
- University of Technology
- Other Regional Offices (Pacific & Asia)

REDUCTION COUNTERMEASURES ON RECENT DISASTERS

- Rabaul Volcanic Eruption (1994)
- Umi Bridge (1994)
- Manam Volcano eruption (1996)
- Drought Effects (1997-98)
- Aitape Tsunami (1998)
- Mumeng Flood (1999)
- Sea Level Rise Countermeasure (1999)

RABAUL VOLCANIC ERUPTION

Government & business centres have been relocated away from the volcano sites including the airport and the Radio Broadcasting Commission.

Through the generous assistance from AusAID, Japanese Govt., USA, World Bank and PNG Government post disaster reconstruction phase is progressing well.

UMI BRIDGE

- The main bridge that connects the 5 highlands provinces and the rest of the worls through the second largest city – Lae was destroyed by flooding.
- Great loss to PNG economy approx. $40 million lost through coffee export & other exportable commodities.
- Through assistance of Japanese Govt.a better & stronger bridge was constructed

MANAM VOLCANIC ERUPTION

- Budua people of Manam Island have been relocated to a secured land near Bogia station.
- Basic social services facilities are been planned for by the Madang Provincial Governement

DROUGHT 1997-98

- For drought mitigation in relation to water NDMO spent money on water problematic areas.
- World Bank & PNG Govt. funded mitigation effects of El Nino on water , civil works and agriculture in two Provinces Manus & Simbu
- Setting up of water projects
- Agriclture & Food security research for better planning and finding out suitable drought resistant crops to withstand the long droughts like the 1997 –98 El Nino effects

AITAPE TSUNAMI

- Affected communities have been relocated and resettled at their new villages away from the coast.
- New road has been constructed linking the new villages and the District headquarters.
- More schools and health facilities now built than before, preparation for future population
- Responsibility of administration by the National Government given back to Sandaun Provincial Government
- Establishment of Trauma counseling sevices

LONG TERM DISASTER REDUCTION COUNTERMEASURES

- Responsibility of administration by the National Government given back to Sandaun Provincial Government
- Tsunami awareness project through posters and booklets to all coastal areas. Funded by Japanese Government through ADRC.

SEA LEVEL RISE COUNTERMEASURE

- The Duke of Yoke Island in East New Britian has come to a stage that the sea level rise is threatening the future existence of the islands.
- Though it is not a national or provincial declared disaster, but the ENB Provincial Disaster Committee through the Provincial Administrator has responsibly gone ahead in planning & implementing the relocation of the islanders to the main island of New Britian as a long term countermeasure.

REGIONALISATION OF DISASTER MANAGEMENT

- Since 1998, PNGNDMO ventured out to be involved with the SOPAC Office in Fiji, ADRC concerning matters relating to training, awareness, researches and sharing of disaster scientific information.
- JICA, AusAID and SOPAC are three most consistent international organisations which support PNG disaster matters through rapid response and preparedness through training.

CONCLUSION

- Reporting on the disasters in PNG through this report, it can be concluded that PNG is a hazard prone area. Therefore, the arrangement now taken for Disaster Management is:
- Emphasis on pro-active approaches through the concept of Disaster Management Cycle: Prevention, Mitigation, Preparedness, Response, Rehabilitation and Reconstruction
- Institutional capacity building starting from national to community level involving public sector, private sector including NGO's as partners in Disaster Management.In line with Govt.Reforms.
- The scientifc information within PNG, Pacific & Asian Regions through bilateral arrangements will be utilized as much as possible for planning & preparedness measures.
- With the above mentioned approach to disaster

WHAT DO I WANT TO DO IN ADRC?

- Master skills in VENTEN/GIS?
- Master knowledge & skills in database?
- Produce education/awareness materials such as posters, training manuals & pamphlets etc.
- Know how disaster management information is incorporated into the curriculum in Japan
- I would like to know more about disaster preparedness planning and the disaster reduction countermeasures in Japan and other Asian Countries.
- Participate in any ADRC project or activity.

SUGGESTIONS FOR VISITING RESEARCHER PROGRAM

- Create a visiting researcher guide or booklet
- 3 months is adequate for information sharing and working on areas of interest
- 6 months or more the program should be based on a project.
- ADRC to prepare a tentative program using the application which was submitted for nominations to the Visiting Researcher Program & changes can take place during orientation.
- Apart from Visiting Researchers interests, ADRC should assign V.R.'s with some project or activity