DISASTER COMMUNICATIONS IN VANUATU

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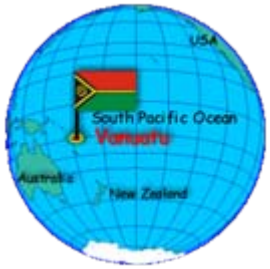


CLIMATE OF VANUATU

- **Tropical Climate – warm & humid**
- **2 seasons WET and DRY**

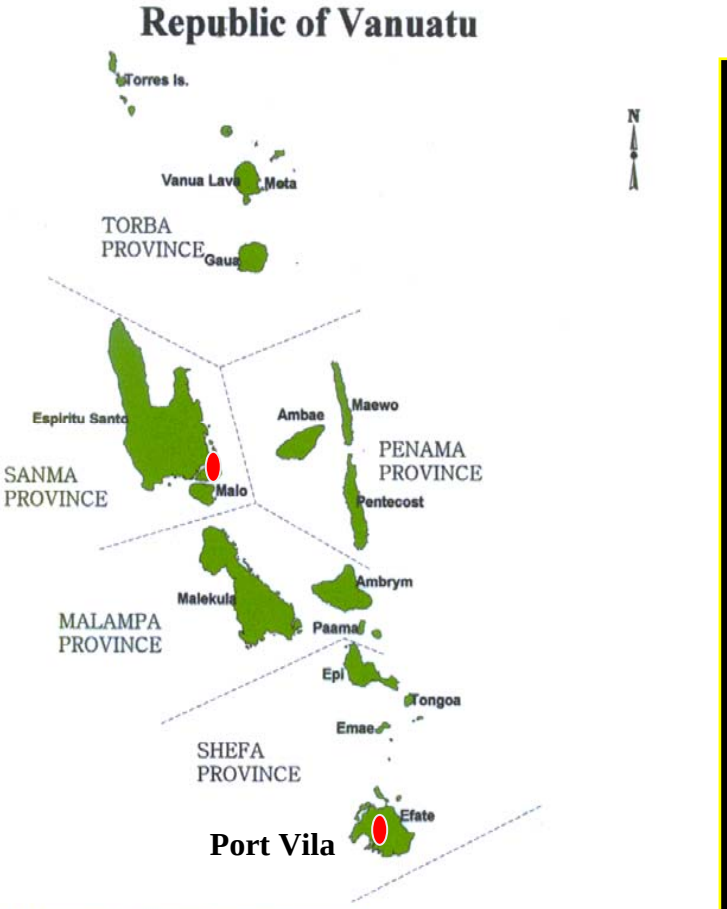
*** Wet/Hot/Cyclone season: Nov – April**

- **Air Temp: 24 - 31°C**
- **Sea Temp: 28 °C**
- **Avg. 2.3 cyclones per year**
- **Avg. rainfall: 250mm / month**

*** Dry/Cold season: May – October**

- **Air Temp: 17 - 26 °C**
- **Avg. rainfall: 130mm / month**
- **Sea Temp: 22 °C**
- **SE trade winds prevail**

- **Avg. humidity all year around: 88%**
- **Avg. annual precipitation: 2,300mm (90 inches)**



Source: Vanuatu National Statistics Office

GENERAL FACTS

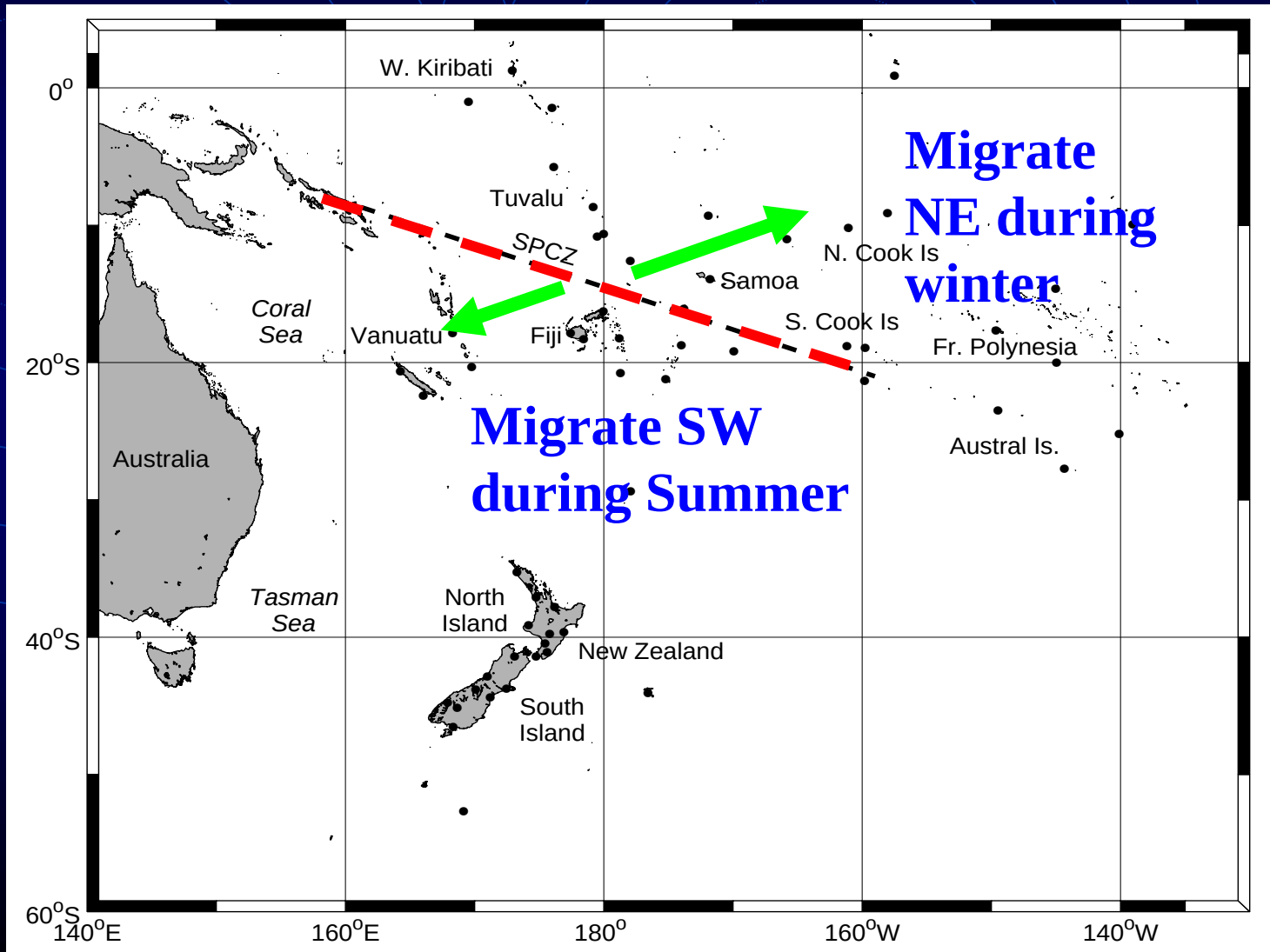
Capital: Port Vila
Population: 200,000+
Government System: Republic
Geography:
- consists of 83 islands (40 mountainous, 43 islets)
- Land area: 12,190 sq km
- most volcanic origin (10 inland – 4 active, 5 underwater volc.), rugged, mountainous, extensive tropical forest.

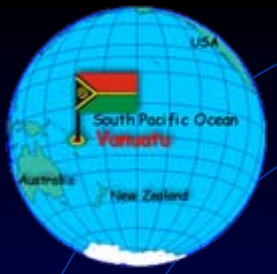
Official Languages: English, French and Bislama.
Currency: Vatu (VT)
Utilities/infrastructure - Monopoly (franchise agreement) of 1 telecommunications provider (+ISP) – TVL and 1 electricity company (Unelco)
-1 Radio Station (FM/AM/SW) with poor coverage throughout the nation
- no roads around/on every islands interconnecting communities
- Electricity only on two towns but majority of the population lives on remote areas

Two main contributing factors of disasters threats in Vanuatu

1. ITCZ & SPCZ

Directly & indirectly :
- cyclones
- flooding
- droughts
- thunderstorms
- etc .

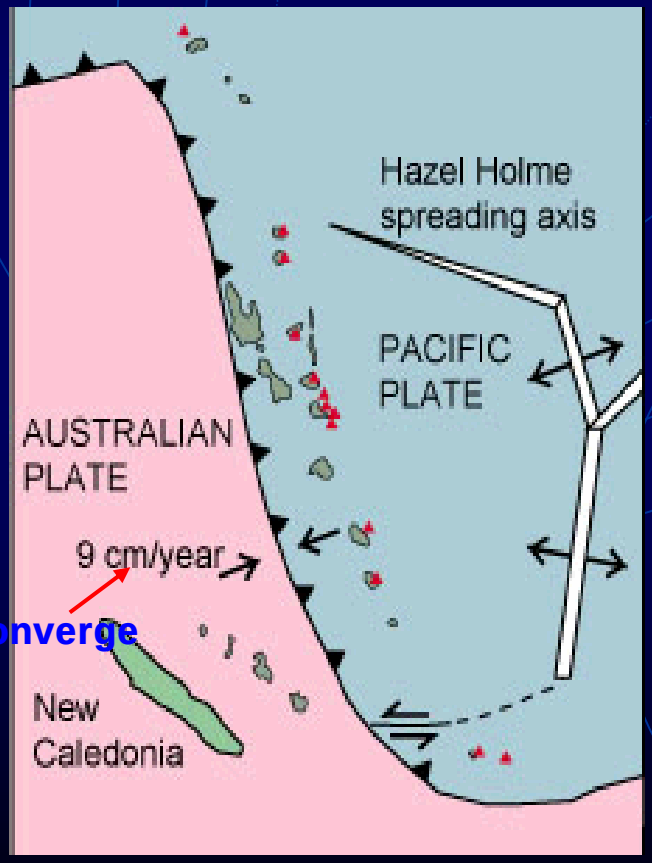




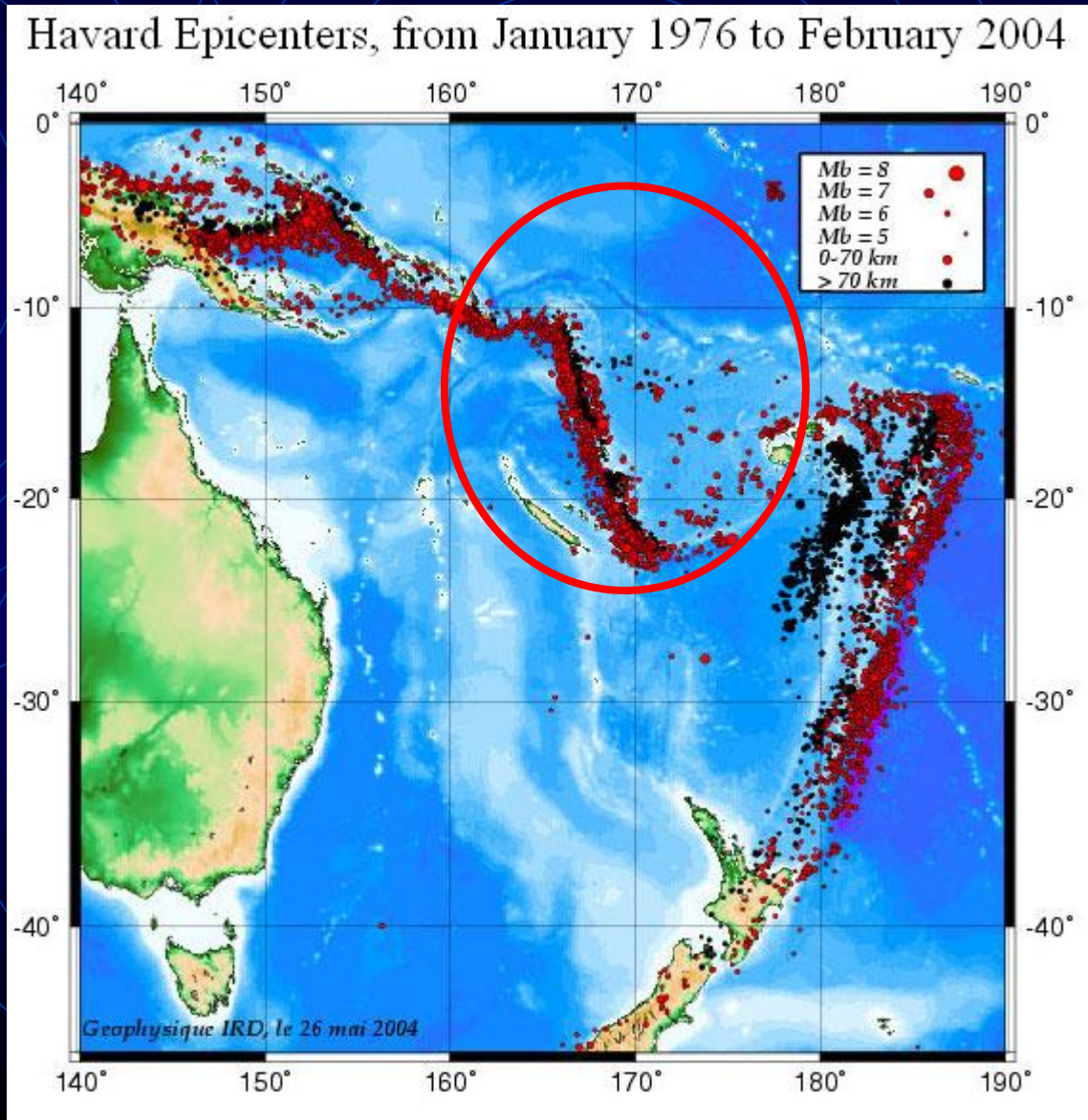
2. Subduction Zone

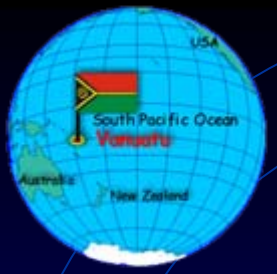
(located between Indo-Australian & Pacific plate)

- 10 inland volcanoes
- 5 submarine volcanoes



(Source: Monzier et al. 1997)





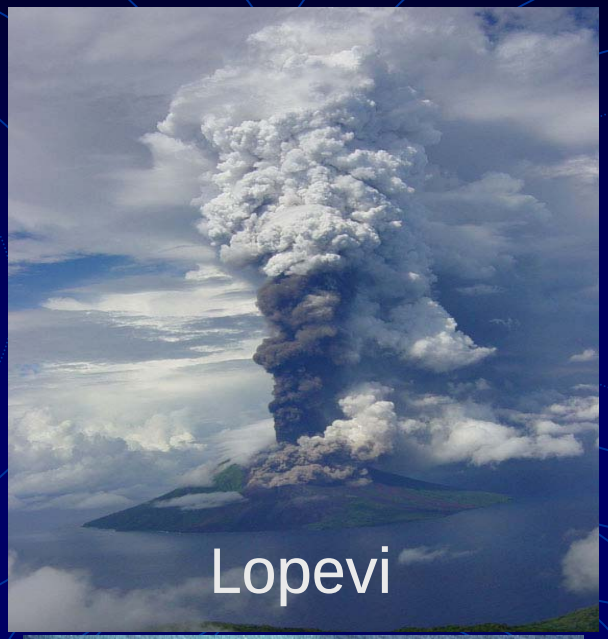
Disaster Threats in Vanuatu.

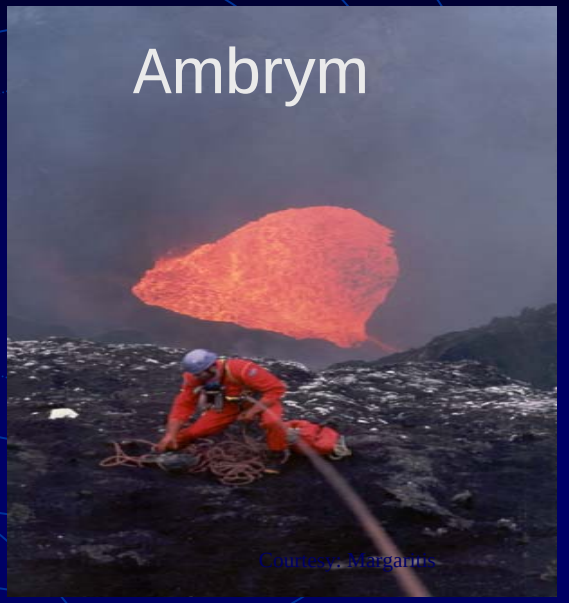
DISASTER THREATS IN VANUATU

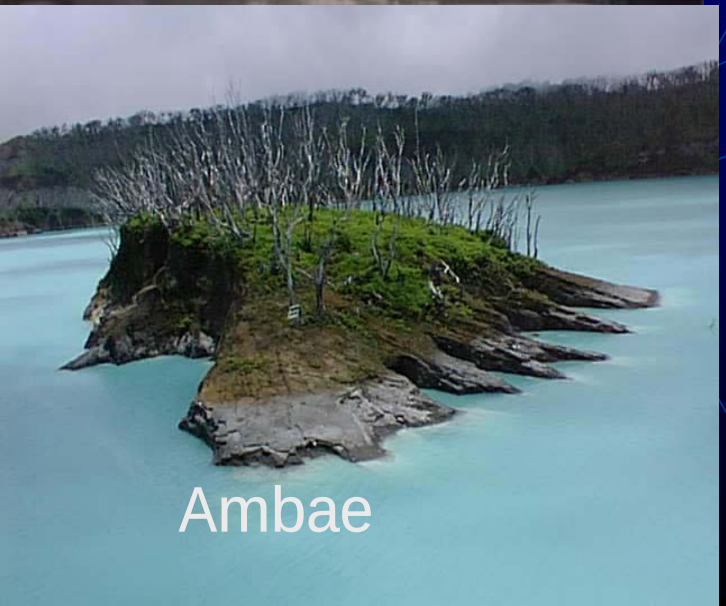
TROPICAL CYCLONES – avg. 2.3 cyclones/year

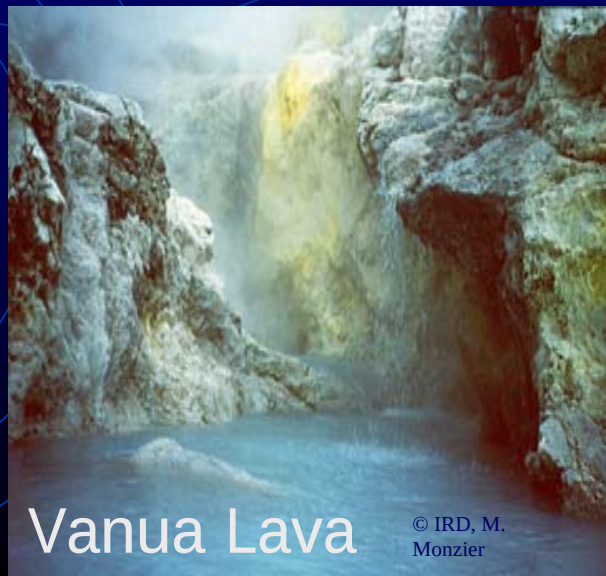
DISASTER THREATS IN VANUATU

VOLCANOES







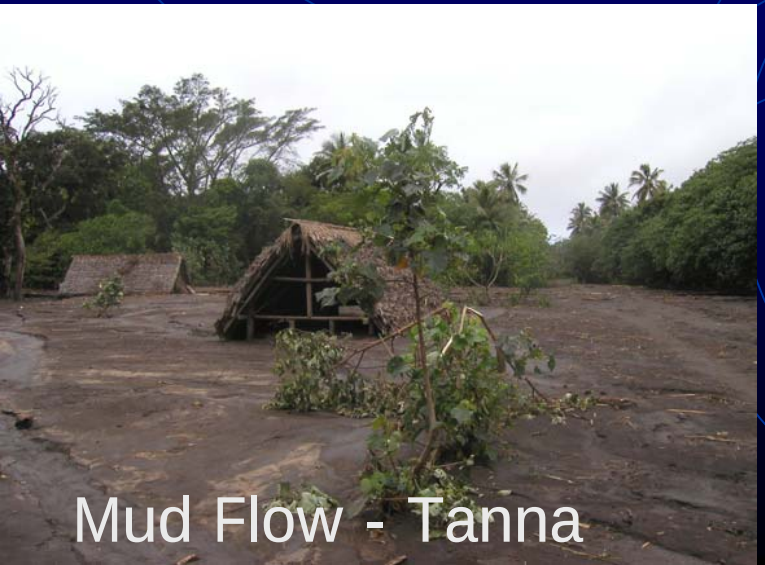


DISASTER THREATS IN VANUATU

VOLCANIC ASH FALL

HAILSTORM

MUD FLOW



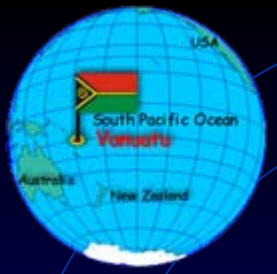
DISASTER THREATS IN VANUATU

EARTHQUAKES

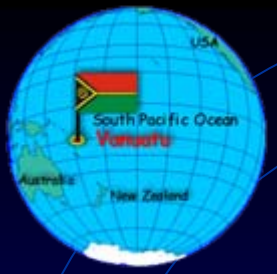
TSUNAMI

1999, Pentecost

LANDSLIDES



National Authorities involved in Disaster Management & Disaster Communications



VANUATU NATIONAL DISASTER MANAGEMENT SYSTEM

CABINET

MINISTRY OF INTERNAL AFFAIRS

NATIONAL DISASTER MANAGEMENT OFFICE

NATIONAL DISASTER COMMITTEE

NATIONAL EMERGENCY OPS CENTRE

NATIONAL DISASTER RECOVERY COMMITTEE

NATIONAL DISASTER MANAGEMENT ACT N0.31 OF 2000

NATIONAL DISASTER MANAGEMENT PLAN

PROVINCIAL DISASTER PLAN

PROVINCIAL DISASTER COMMITTEE

Source: NDMO

NATIONAL DISASTER RESPONSE COORD STRUCTURE

CABINET

MOFA

MOIA

DONORS

NDC

VANGO

NDMO

Private

CCG/NEOC

PWD

EDUCATION

HEALTH

AFF

POL/VMF

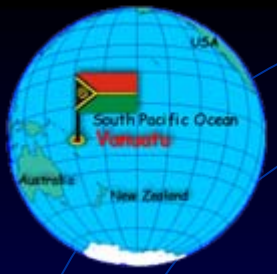
PMC

TECH DEPTS

SIX X PROVINCIAL DISCOM

COMMUNITIES DISCOM

Source: NDMO



NATIONAL AUTHORITIES FOR DISASTER COMMUNICATIONS

[Currently no Disaster Communications Authorities is in place but the National Disaster Committee plays the role]

TROPICAL CYCLONES / VOLCANOES / TSUNAMI

Technical Dept responsible: Vanuatu Meteorological Service & Seismology Section, Department of Geology & Mines

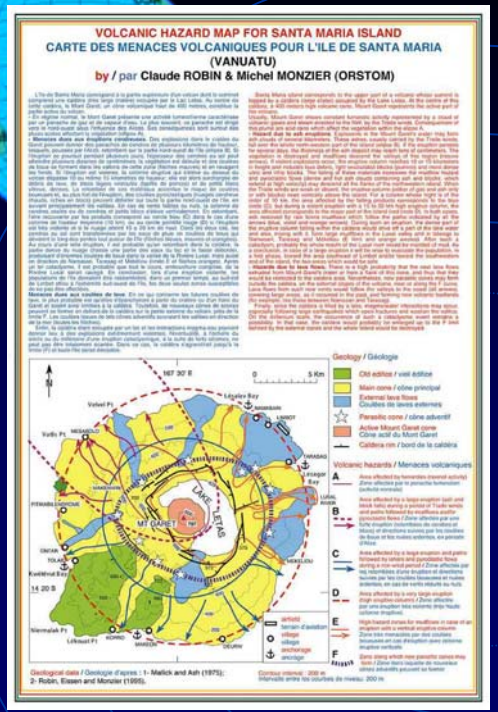
Communication Means:

- Satellite imageries (NOAA, GOES-9, MT-SAT)
- real time monitoring through ARGOS for 1 active volcano (1992-current)
- GTS communication system (to/from Meteorological community)
- HF Radio communication with remote Met Observation sites
- Emwin, WAFS, Ranet, HFemail (on its implementation stage)

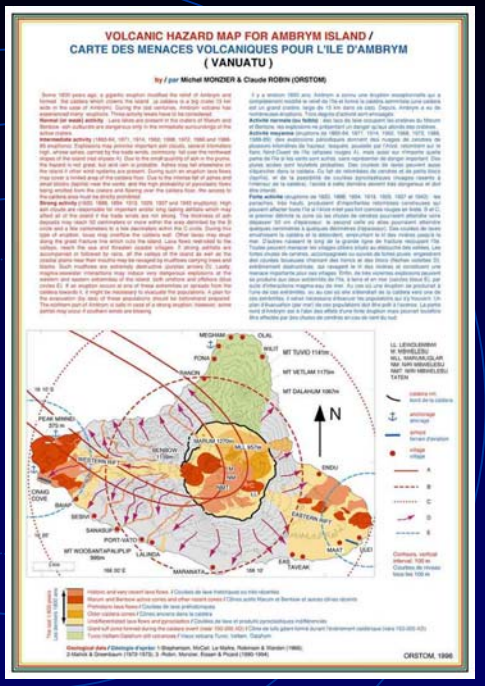
Information dissemination for the nation via:

- Fax to Media, esp. Radio Vanuatu (for first hand info.) and advises NDMO on alerts for communities
- Fax/emails to respectvce Donor Agencies and Provincial Government
- through HFRadios to Ships around Vanuatu
- Email/fax to subscribers (particularly to those with internet/fax access – targeting mainly 2 towns with electricity access)
- Relay information through telephones when a caller calls in .... too expensive to make calls
- Hazard maps are produced (again translated in 3 languages) and distributed

[Currently NDMO is responsible in making sure nationwide is alerted for various Disaster with advice from Technical Departments]



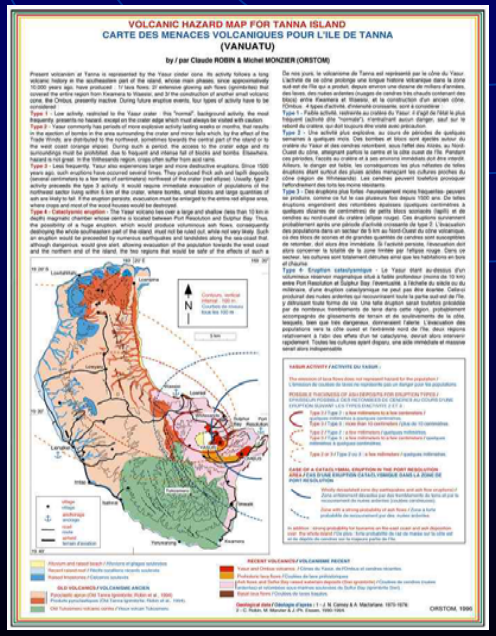
GAUA



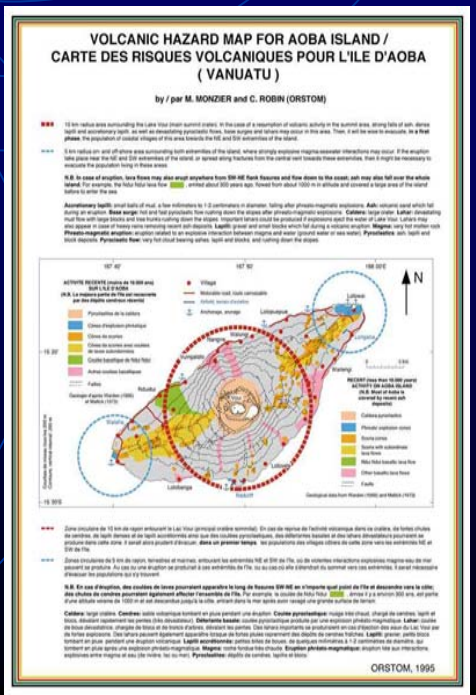
AMBRYM

Cartes des aléas volcaniques

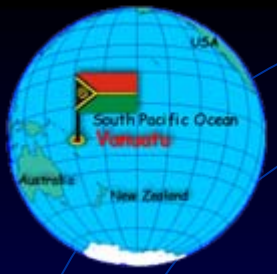
Volcano hazard maps



TANNA



AMBAE



Work Progress so far

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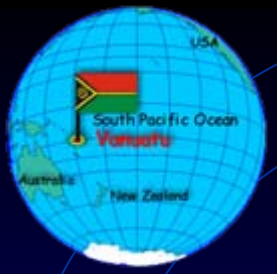
- Implementation of Pacific Tsunami Early Warning System – currently (Dec 06) other sites are surveyed for installation of other sea level gauges
- Aust. Gov through EMA (Emergency Management Aust) to establish a pilot project on erecting HF Radios for certain remote communities as part of early warning
- Ranet + HFemail system currently on the first phase of installation (Dec 06) and be completed for 7 Met sites throughout the country from North to South targeting dissemination of warnings to communities with no coverage of Radio Vanuatu
- Vanuatu Government are currently working around removing TVL's franchise agreement for other ISPs to provide services that TVL currently doesn't offer. This will target mainly remote communities.



Challenges and areas of assistance in Disaster Management

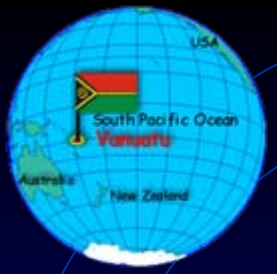
Challenges

- Due to the geography of the country and the remoteness of communities, lack of telecommunication and electricity is a major problem for the communities at large. Only the two main towns have access to phones, mobiles, electricity, internet, emails ..etc in obtaining vital information. More emphasis should be put more into that need by the responsible bodies.

- Radio Vanuatu SW (short wave) coverage and reception is very poor. Again only the two main towns have good coverage.

- Language barrier between communities is also a challenge. With English, French & Bislama as official languages, the first-hand warnings received by the media from Technical Departments, must be translated to the 3 languages before relaying. Critical time in disseminating vital information is therefore lost.

- Volcanic activity monitoring systems are limited in relation to the number of active volcanoes in the country. Currently one working monitoring systems is in place but data retrieved is accessed by IRD (Noumea) interpreted then later relayed back to the Seismology Dept. Lack of technology and knowledge for local expertise.



Areas of Assistance

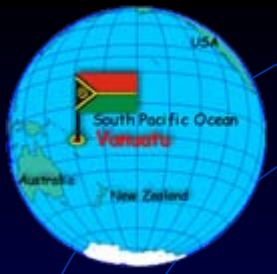
- Wider coverage of SW for Radio Vanuatu – the only means of communication for remote areas with outside world

- Establish/retrieve other volcanic monitoring systems on other active volcanoes and enhance its communication means.

- Introduction and establishment of new telecommunication systems

- training assistance for local experts

- last but not least, Vanuatu needs to extensively adopt its Disaster Risk Management Plan together with its Disaster Management Plan



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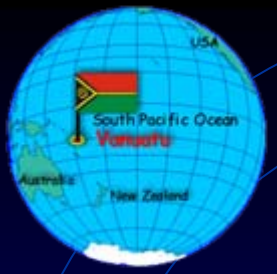

Acknowledgements

I would like to thank the following people for enabling my data collection:

- NDMO Director, Mr Job Esau, for information regarding National Disaster Committee structure. The structures were being obtained from his previous presentation

- The Seismology team, Esline Garae, Harrison Morris and Douglas Charlie for all information + pics regarding Volcanoes, Tsunami and Earthquakes.