Overview of the 1994 Volcanic Eruption: Response and Early Warning System

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OVERVIEW OF THE 1994 VOLCANIC ERUPTION:
RESPONSE AND EARLY WARNING SYSTEM
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ENB Map

EAST NEW BRITAIN

RABAUL

Lassul
Kokopo
Kamval
Torra

Pondo
Toru

Matanakuni

Nakanai Mountains

Orakwi
Sampun

Pomio
Korpun
Matong

Palmalmal

Lau

Uvol

Malmau
1.0 Introduction

- East New Britain is one of PNGs most dynamic and important socio-economic landscapes. It was the site of the Rabaul Volcanic Eruptions disaster in 1994, subsequently Gazelle Restoration Program.

- Apart from geological hazards, the province is also prone to flooding, drought, tropical cyclone, landslide and the impacts of climate change and climate variability and sea level rise.

- The Province has got significant history.
2.0 ENBP PROFILE

- **Population**: 328,369
  Male: 168,760
  Female: 159,609

- **Pop. Growth Rate**: 3.6%

- **Land Area**: 15,816 Km² - Arable Land (18%); Forest & Woodland (60%)

- **Population Density**: 21 person per Km²

- **Districts/LLGs**: 4/18

- **Domestic Roads**: 600km

- **Provincial Roads**: 3000km

- **Airports**: 1

- **Airstrips**: 10

- **Wharves/Jetties**: 23

- **Police/Popn Ratio**: 1/1,500

- **ENB Manpower**: 783 ceiling, 606 current, 133 casualties

- **Schools**:
  - Elementary: 367
  - Primary: 157
  - Secondary: 12
  - TVET: 8

- **Teachers**:
  - Elementary: 1,150
  - Primary: 1,424
  - Secondary: 320
  - TVET: 164

- **Literacy Rate**: 86 per cent

- **Adult Literacy Rate**: 90 per cent

- **Teacher Pupil Ratio Primary**: 1:45

- **Teacher Pupil Ratio Secondary**: 1:50
Evacuation and Contingency Plan.

OFFICE OF THE PREMIER

PREFACE

The East New Britain Provincial Disaster Plan has been prepared in accordance with the wishes of the Provincial Executive Council and in compliance with the national Disaster Control Act 1983.

Its aim is to mitigate the effects of any natural calamity and to ensure the coordination of quick and effective relief measures for the public benefit. In keeping with the goals and principles of our provincial Constitution it stresses the importance of public participation and self-reliance.

The preparation of this plan is not an end in itself. It must be studied, understood, practised and perfected. We must all play our part to ensure that when the time comes we shall be ready.

24 June 1983

RONALD TUPUE
O.B.E. M.P.A.
PREMIER
Risk Map.
3.0 ENB Evacuation Plan

- Establishment of the PDC
- Mobilisation of stakeholders
- Education and awareness
- Drills and Mock exercises
4.0 Rabaul Volcano Eruption

- 1984 Eruption Preparedness – Mock Exercise, Drills by Domestic Emergencies
- 1994 Twin Eruption – Traditional warning Methods
  - Care centres
  - resettlements
- Establishment of Gazelle Restoration Authority
- 2006 – impact was minimal due to the resettlement program
- 2014 – Mainstreaming of Disaster into Planning
4.1 Immediate Response

- 33,000 people affected - 12,000 from Rabaul Town (21 surrounding area)
- 56 Wards – 4 LLGs in Rabaul District
- Care Centre (17 Wards evacuated)
- 4 main Transit Centres & Others
- Resettle – 5 major estates –
- Gazelle Restoration Authority Act
4.2 Long Term Response

- 1994 - 1998 Restoration and Resettlement

- 1999 - 2003 Rehabilitation and Reconstruction

- Major Research & Studies (AUSAID)
  - ENB Disaster Hazards Assessment
  - Economic Development Study
  - Urban and Regional Studies
5.0 ENB DEVELOPMENT PLANS, POLICIES & REPORTS

✓ Guides the Provincial Path
✓ Fostering Disaster Resilient Communities

► Resettlement Policy 1997
► ENB Disaster Hazards Assessment Report
► ENB Economic Plan & Policies
► ENB Urban and Regional Plan
► ENB Strategic Development Plan
► Alternate Crop Policy & Food Security
6.0 Challenges

The management of natural hazard impacts need combined long-term and short-term mitigation strategies.

All Hazards:

- Identification of types of Hazards
- Hazard Education. (CHARM Training)
  - Intensive hazard education and public awareness programs regarding all hazards.
  - Integrate hazard awareness in school curriculum.
  - Direct educational links between communities, provincial government and the Rabaul Volcanological Observatory.
- Establish a NGI Regional Natural Hazards Research Centre”
- Legislation. Risk reduction measures should be legislated.
- Integrate hazard (volcano, earthquake, flooding, landslide, tsunami & coastal erosion)
- More land for relocation programs.
- Legislate and regulate insurance policies for natural hazard events.
- Sustainable forestry program for local forest communities.
- Promote biodiversity conservation and climate change mitigation
Community Response and Preparedness. Success of risk reduction measures rests on the support of local communities.

- Strengthen institutional links between local, provincial & domestic government organizations.
- Urban and Physical Planning
7.0 Concluding Remarks

- East New Britain Province is Vulnerable to all forms of Disasters.

- Integration hazard response and preparedness into the planning systems (localised) and sectoral development plans.

- Soil erosion in the province is a Man made disaster with flash floods destroying. Land Care Management Program.

- Need for comprehensive warning System
8.0 Recommendations

- Targeted research on geological, hydrological and meteorological features.
- Targeted research on Air Quality Study of the Volcano emissions.
- Policy on Digitise Warning System
- Building Resilient Communities
9.0 Acknowledgement

- The Government of PNG;
- World Bank
- Government of Japan - JICA
- European Union
- Government of Australia - AUSAID
- UNDP
- International Organization for Migration (IOM)
- Others
This is the day the LORD has made; we will rejoice and be glad in it.
Ps. 118:24