

mHEALTH



PAPUA NEW GUINEA



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PAPUA NEW GUINEA IN BRIEF



PROFILE ON PAPUA NEW GUINEA (PNG)

- ▶ Country that occupies the eastern half of the island of New Guinea,
- ▶ The western portion of the island is Irian Jaya a province of the Republic of Indonesia.
- ▶ Located in the south–western Pacific Ocean.
- ▶ Capital – PORT MORESBY.
- ▶ Part of the Pacific Island region known as Melanesian people
- ▶ Among the countries that is least explored culturally and geographically.

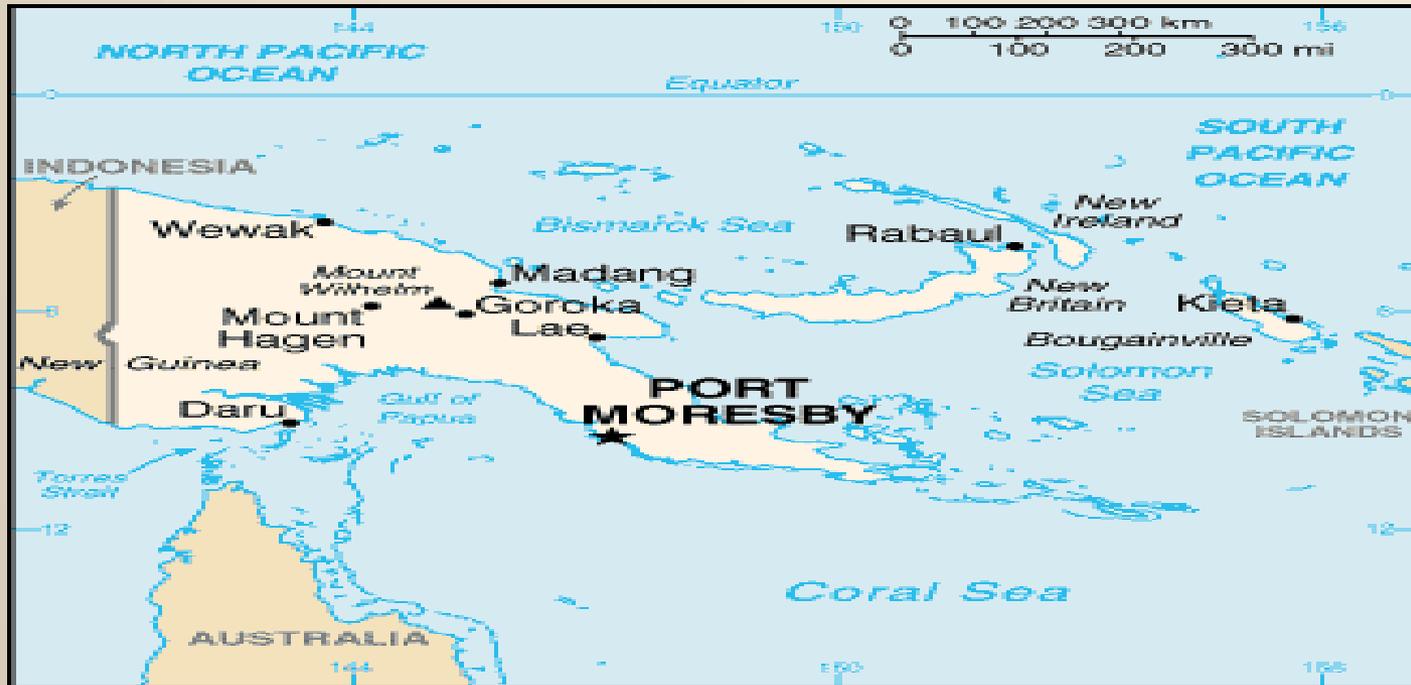
LANGUAGE

- ▶ More than 860 different languages spoken.
- ▶ Three (3) official languages spoken;
 - (English
 - Pidgin
 - Motu.

POPULATION

- ▶ About 7.0 million;
- ▶ 85% live in rural areas;
- ▶ 15% live in urban centres.

GEOGRAPHY



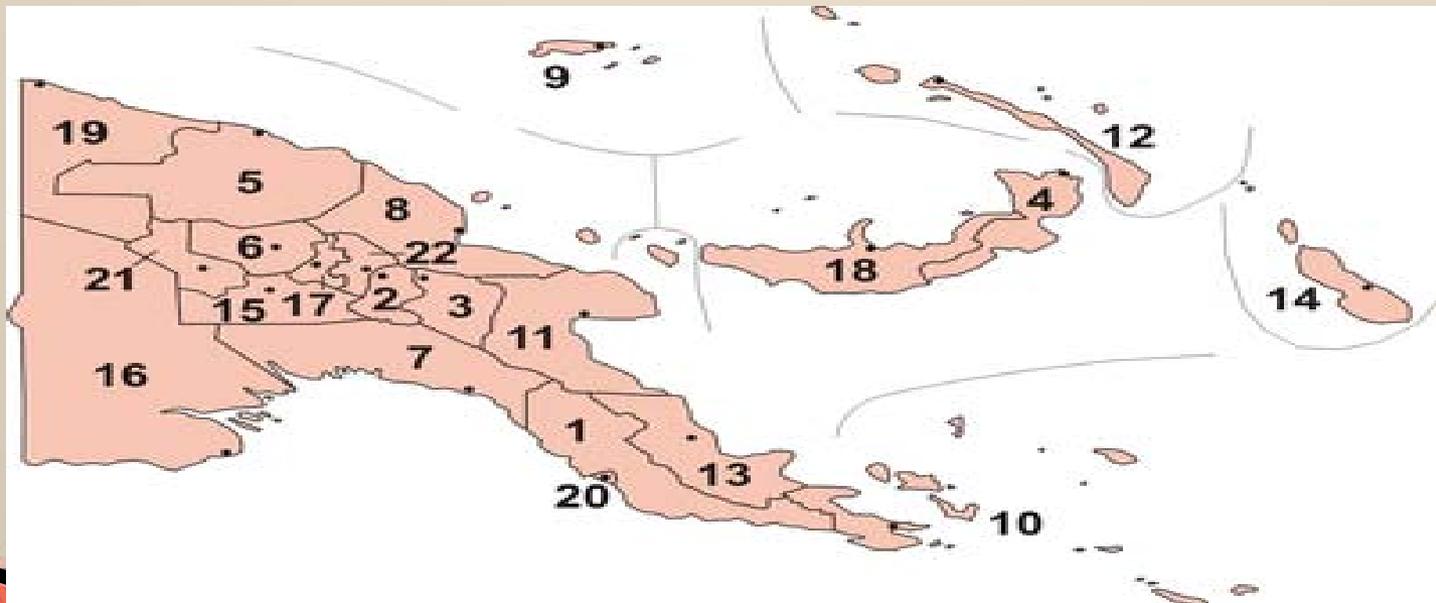
- ▶ PNG total area – 462, 840 square kilometres (178,704 sq miles).
- ▶ Geographically is diverse, other places extremely rugged.
- ▶ Thick rainforest found in lowland of coastal areas.
- ▶ Large wetland areas surrounding rivers like Fly & Sepik River.
- ▶ Mainland with massive mountain range, some with highest peak.
- ▶ Highest mountain – Mt Wilhem 4,509 meters (14,793 ft).

- ▶ Surrounded by coral reefs – close watch for preservation.
- ▶ Situated on the Pacific Ring of Fire.
- ▶ Active volcanoes, earthquakes are common, sometimes accompanied by tsunamis.

- ▶ Two distinct seasons:
- ▶ Wet season (December – March);
- ▶ Dry season (May – October).
- ▶ Temperature as low as 14°C in Highlands region, 36°C in northern coastal areas.

Three Levels of Government

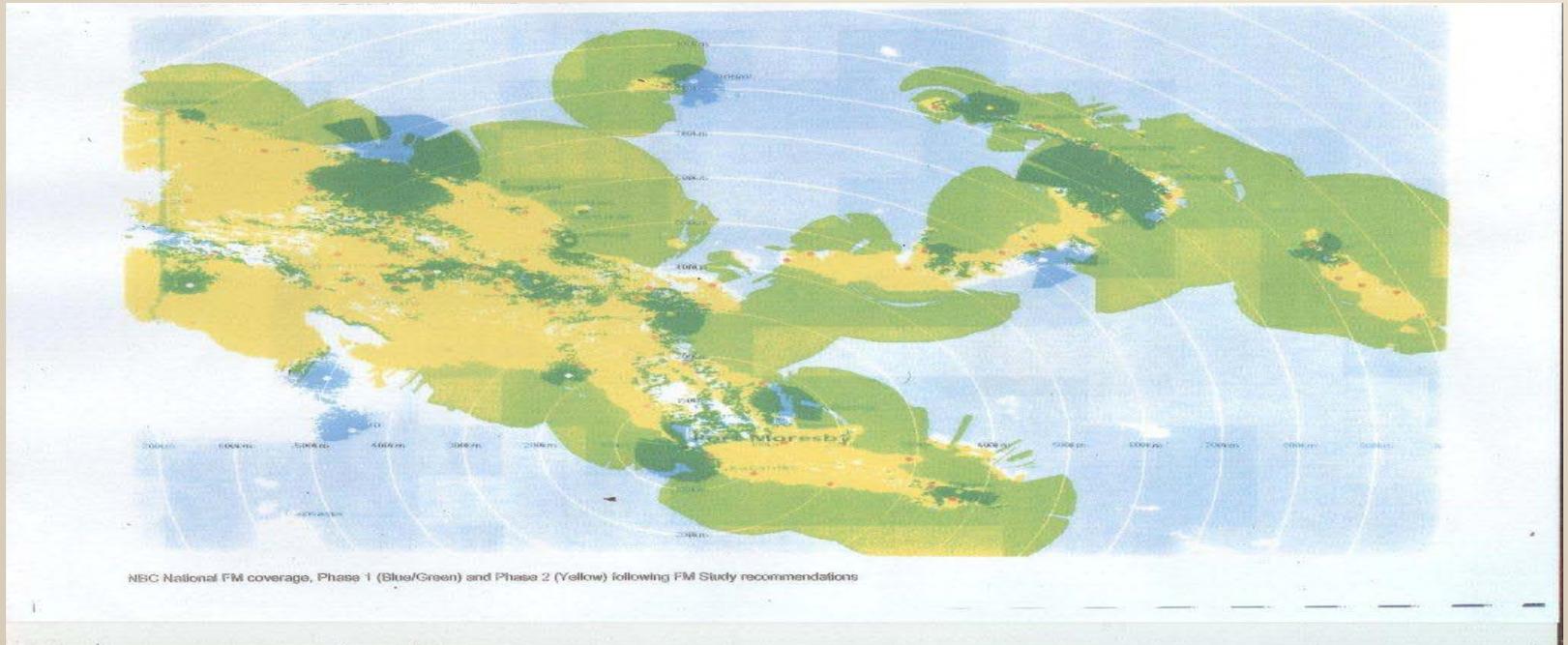
- National (National Parliament, NEC & Ministers)
 - Provincial (Provincial Assembly, PEC, PC & JPP&BPC)
 - Local Level (Ward councillors & Presidents)
-
- Provincial is represented by 22 provinces
 - ▶ 22 provinces
 - ▶ 89 Districts
 - ▶ Over 300 LLGs



Media & ICT Infrastructure In PNG

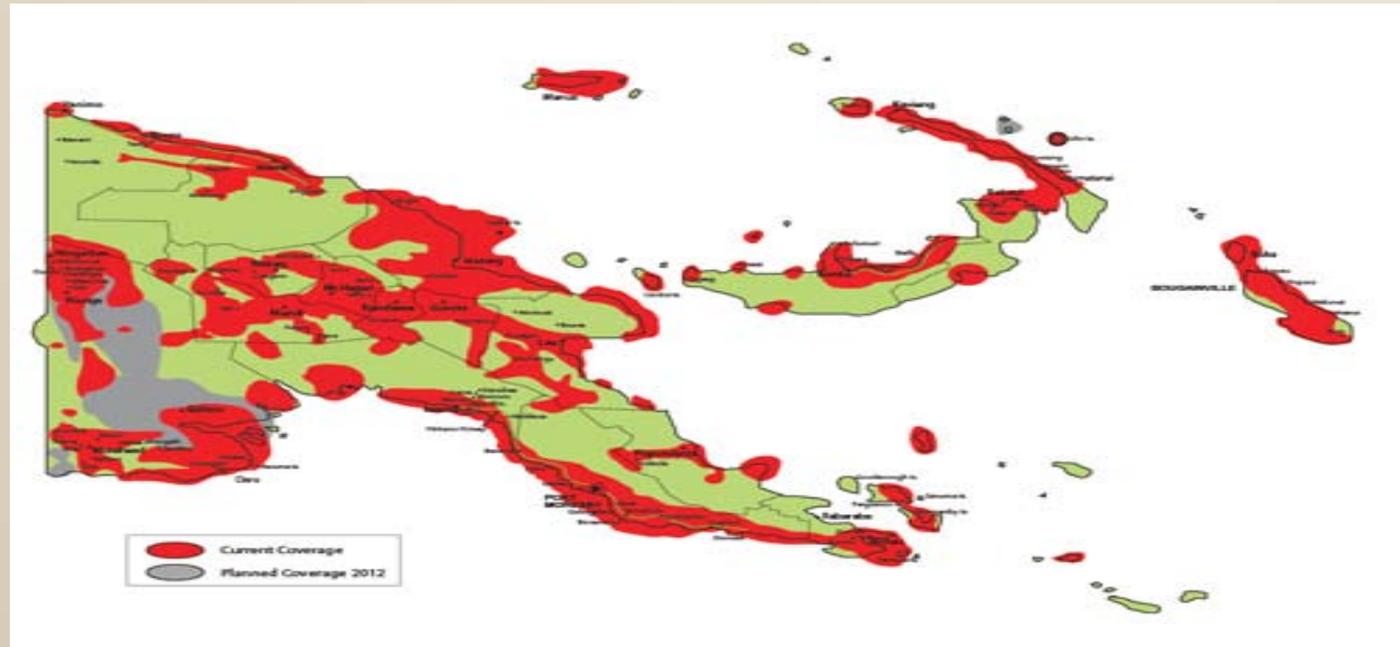
- ▶ The media infrastructure in PNG is still growing, but even the largest radio network in PNG, the government-owned National Broadcast Company (NBC), covers only part of the country (See Figure 1, current coverage in dark blue).

Figure 1: National Broadcast Company (NBC) Current and Planned coverage in PNG



Key: Areas in dark blue= Phase 1 (Current) Coverage, Areas in Yellow: Phase 2 Coverage (Long-term Plan)

Figure 2: Digicel Current and Planned coverage in PNG



Current Integrated Government Information System (IGIS)

Item	Achieved Rate(%)
Data Centre Implementation	100%
Area Data Center Implementation	100%
Offices Sites ISP (47 sites in POM)	100%
ISP 5 Province Offices Sites	100%
OSP Access Fiber in NCD	100%
TPNG IP MPLS Core	100%
Applications (ERS2 and NCRS2)	100%
Government Help Desk	100%
Managed Service	100%
Email system + Anti-virus System	100%
OSP District Fiber	75%
Microwave	95%
End to End Integration NCD sites	96%
End to End Integration Province sites	50%
Overall Project Progress	98%

mHealth

- ▶ mHealth is defined as the use of mobile communications devices, such as mobile phones, for health services and information (Vital Wave Consulting, 2009).

mHealth in PNG

- ▶ According to World Bank data, in 2009 there were only 0.9 fixed telephone lines per 100 people in PNG,
- ▶ In 2007 there were 1.9 internet users per 100 people (World Bank, 2011).
- ▶ A rapid increase in cell phone towers has occurred in PNG over recent years, meaning that although much of the country is still inaccessible by road, towers are being erected.
- ▶ About 3 million people in PNG now have mobile phone reception. To date, the use of eHealth technology has been extremely limited in PNG due to almost non-existent communication infrastructure.
- ▶ The advent of mobile phone technology thus offers exciting potential to utilise mHealth technology to benefit communities in PNG.
- ▶ Licensing requirements for cell-phone providers have been used as an instrument to improve equity in access, by insisting that new providers provide coverage to not just densely populated areas but also provide service to the rural communities (Rural Communication Requirement).

PNG Health Indicators

The country continues to have, some of the worst health indicators in the Asia–Pacific region;

- ▶ maternal mortality is around 733 per 100,000
- ▶ live births with only about 39% of births attended by skilled health personnel
- ▶ Severe limited road network
- ▶ Air and sea transportation is expensive and can be dangerous.

- ▶ With 20 provinces, 89 districts, 313 local-level governments and 6131 wards, the challenges for policy makers and health service delivery agencies are substantial (The National Research Institute, 2010).
- ▶ In 2005, birth registration coverage was reported to be approximately 3% nationally (Bauze et al., 2009)
- ▶ To meet the needs of these geographically dispersed communities, PNG's health system is based on a network of 2672 aid posts (approximately 30% of which have closed due to lack of staff and supplies), 702 health centres, 18 provincial hospitals, and one national hospital (National Department of Health, 2009).

Papua New Guinea SMS Program Running 10,000 Strong

- ▶ More than 10,000 people in PNG have subscribed to PSI's Haus Lain (house line), the first free, national health SMS group in the country.
- ▶ Mobile phone ownership is rapidly growing in PNG. In PSI's 2009 national survey among care givers of children younger than age 5, (24.6%) report using a mobile phone.
- ▶ Among those who use mobile phones, 60.1% report sending texts and 57.3% report receiving texts.
- ▶ In a 2010 study by Population Media Center, among a sample equally comprised of rural and urban men and women aged between 16 and 49, mobile phone ownership was much higher at 75%, of which 71% use daily.

- ▶ PSI opted to use SMS to reach target group members that had limited access to other forms of media such as television, internet, radio, newspaper, or are too remotely located to be easily reached through events and interpersonal communications.
- ▶ With support of the Australian Agency for International Development (Australian AID) and in partnership with the mobile technology agency MobiMedia, PSI PNG established the Haus Lain, an SMS subscriber group that provides weekly tips to members on how they can keep their family healthy.
- ▶ Health tips have addressed a wide range of health issues from maternal health, preventing child and infant death from diarrheal disease and malaria, prevention of the transmission of HIV and sexually transmitted infections, and helping married couples better communicate to maintain strong, healthy relationships.

- ▶ Any Digicel mobile service user in PNG can text the words, “Join OK” to the designated phone number to join the Haus Lain and receive free, weekly health tips. Since its August 3 launch, 10,230 people have subscribed to the Haus Lain.
- ▶ PSI/PNG Country Representative Cynde Robinson has said, “The Haus Lain builds on the positive role that mobile phones play in the country. Papua New Guineans can use the health tips in order to take action to protect the health of their families. We’re very excited to see that so many Papua New Guineans have joined the Haus Lain and look forward to developing more ways to use mobile technology to support them.”

- ▶ World Health Organization and Government of PNG are testing the use of mHealth in disease surveillance, the Papua New Guinea Sustainable Development Program (PNGSDP) is using mHealth for community surveys in the remote Western Province,
- ▶ Asian Development Bank and National Department of Health are testing the use of mHealth for rural health facility audits
- ▶ Clinton Foundation are using mHealth for rapid transfer of laboratory results from HIV testing

Summary

- ▶ mHealth is being introduced to PNG because it is anticipated that there will be positive benefits to the health of people in PNG
- ▶ The new technology has the potential to rapidly and cheaply improve the amount, quality and speed of health data that are sent from health facilities to provincial and central government agencies/donors
- ▶ This in turn should enable health decision-making to be based on more accurate and up-to-date-information, and, in theory, reduce the time that scarce front-line health workers spend on administrative reporting
- ▶ Increased health worker availability should improve access to quality health care, thereby improving health outcomes and reducing health inequalities in PNG. In addition, it may enable timely data to flow in the context of extreme human resource challenges
- ▶ For mHealth to have a positive effect on health, it first needs to be a quality technology that works, and it needs to be implemented properly.

END OF PRESENTATION

THANK YOU, TENKIU, TANIKU