



Papua New Guinea

---

# PBN IMPLEMENTATION UPDATE PAPUA NEW GUINEA

PBN WORKSHOP PRESENTATION – NEW DELHI

9<sup>th</sup> to 13<sup>th</sup> May 2011



Papua New Guinea

## OUTLINE

---

1. INTRODUCTION
2. CURRENT STATE
3. IMPEDIMENTS
4. REQUIRED ASSISTANCE



Papua New Guinea

## Introduction

---

Where is Papua New Guinea ?



Papua New Guinea

## Strategically located



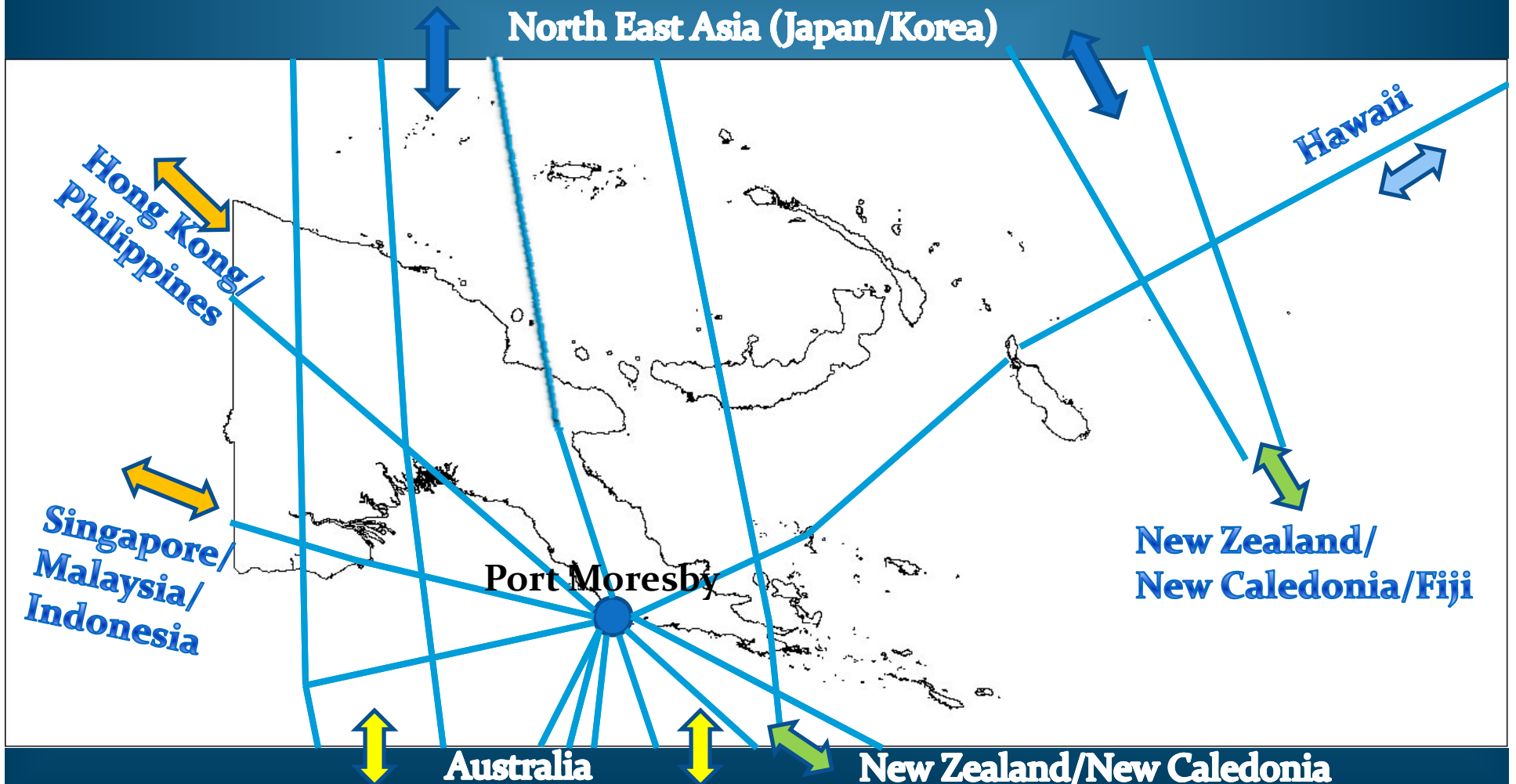
- East of Indonesia
- North of Australia





Papua New Guinea

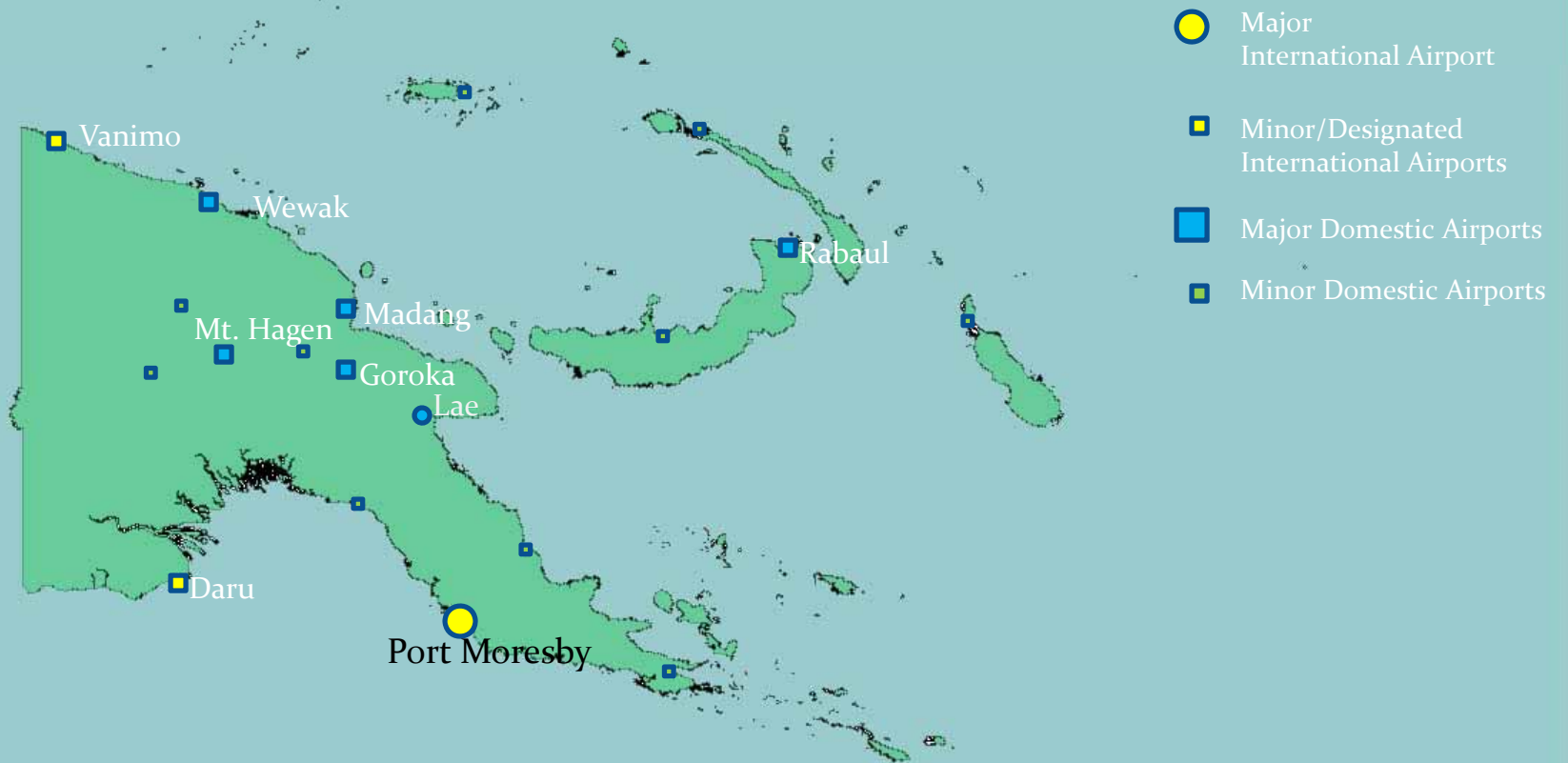
# International ATS Routes





Papua New Guinea

# Major National Airports





Papua New Guinea

# CURRENT STATE

- RNP 10 (RNAV 10) and RNP 4 in Oceanic Airspace
- 22 National Airports with GPS NPA
- RNAV (GNSS) Arrival and departure procedures at selected regional aerodromes (Basic RNAV 1 application).
- 45% Aircraft with PBN (BRANV 1) capability as of 1 January 2010
- Establishment of PBN Task Force – 2010
- Draft PBN Implementation Plan (Notified to ICAO on 21-04-11) - Finalised by July
- WGS-84 Conformance
  - Last Survey in 1997
    - Way Points – 100%
    - Aerodromes – 95%
  - New Survey – Procurement in Progress (Only for Way Points)
  - Discussion for Aerodromes in Progress
- Existing Regulations (Rules) on RNP & GNSS
- Rules Review on RNP/GNSS to be completed in December, 2011



Papua New Guinea

# PBN PLAN

## TIMELINES

### PHASE 1



2013

MIXED MODE NAVIGATION  
o Progressive implementation

### PHASE 2



2017

EXCLUSIVE PBN  
o Greater reliance by operators & infrastructure

### PHASE 3



2020  
& Beyond

MATURE PBN  
o Comprehensive fleet & Infrastructure capability





Papua New Guinea

# IMPEDIMENTS

## - Challenges -

- 1 - LATE IMPLEMENTATION
- 2 - MODEL PBN
- 3 - REGULATIONS
- 4 - AIRCRAFT CAPABILITIES/COSTS
- 5 - GROUND BASED INFRASTRUCTURE
- 6 - DESIGN & CHARTING EXPERTISE
- 7 - MIXED MODEL FLEET
- 8 - WGS-84 CONFORMANCE



Papua New Guinea

# Challenges

## 1 - LATE IMPLEMENTATION

- Management Will & Commitment
- Leadership Unclear – due Structural Reforms
- Contact Point for ICAO Not Identified due Bureaucratic Channels
- Insufficient flow-on Information from ICAO
- Lack of Awareness/Knowledge



Papua New Guinea

# Challenges

## 2 - MODEL PBN

- Where do we Start – No clear Model to Use
- No Capability to develop and trial a Model
- Waited Upon Developed and Leading Nations
- ICAO Approved Model



Papua New Guinea

# Challenges

## 3 = REGULATIONS

- Lack of Expertise to develop Regulations
- Result of unclear PBN Model



Papua New Guinea

# Challenges

## 4 - AIRCRAFT CAPABILITIES/COSTS

- Reluctance by Operators due unclear PBN Model
- Concerns for Cost effectiveness by Operators
- Cabin Capacity (space) for fittings
- No Guidance from Appropriate Legislation



Papua New Guinea

# Challenges

## 5 - GROUND BASED INFRASTRUCTURE

- Ground Based Augmentation Systems
- Automatic Weather Station for APV, Baro-VNAV
- AIS Capability
- Runway Infrastructure – WGS-84



Papua New Guinea

# Challenges

6-

## DESIGN AND CHARTING EXPERTISE

- Lack of Expertise
- Out of Date Coordinate System
- Funding Constraints

no expertise to do Cost Benefit Analysis (CBA) to justify deliverables as an example of good governance.



Papua New Guinea

# Challenges

## 7 - MIXED MODEL FLEET

- Inability to segregate fleet models due unclear PBN Model and appropriate Legislation
- Verbalisation of the project/plan to beneficiaries/stakeholders particularly those airlines with no strategic thinking
- no expertise to do Cost Benefit Analysis (CBA) to justify deliverables as part of good governance.





Papua New Guinea

# Challenges

## 8 - **WGS-84 CONFORMANCE**

- Out of Date Survey
- Lack of Expertise
- Funding Constraints

Safety Case submission to identify hazards, operational procedures, safety risks and control the risks.



Papua New Guinea

# REQUIRED ASSISTANCE

- 1 - LEGISLATION
- 2 - GROUND BASED INFRASTRUCTURE
- 3 - RAIM PREDICTION
- 4 - SAFETY CASE
- 5 - FUNDING
- 6 - EXPERTISE



Papua New Guinea

---

**That's all – Thank you**