

Tongatapu

Highlights Trail

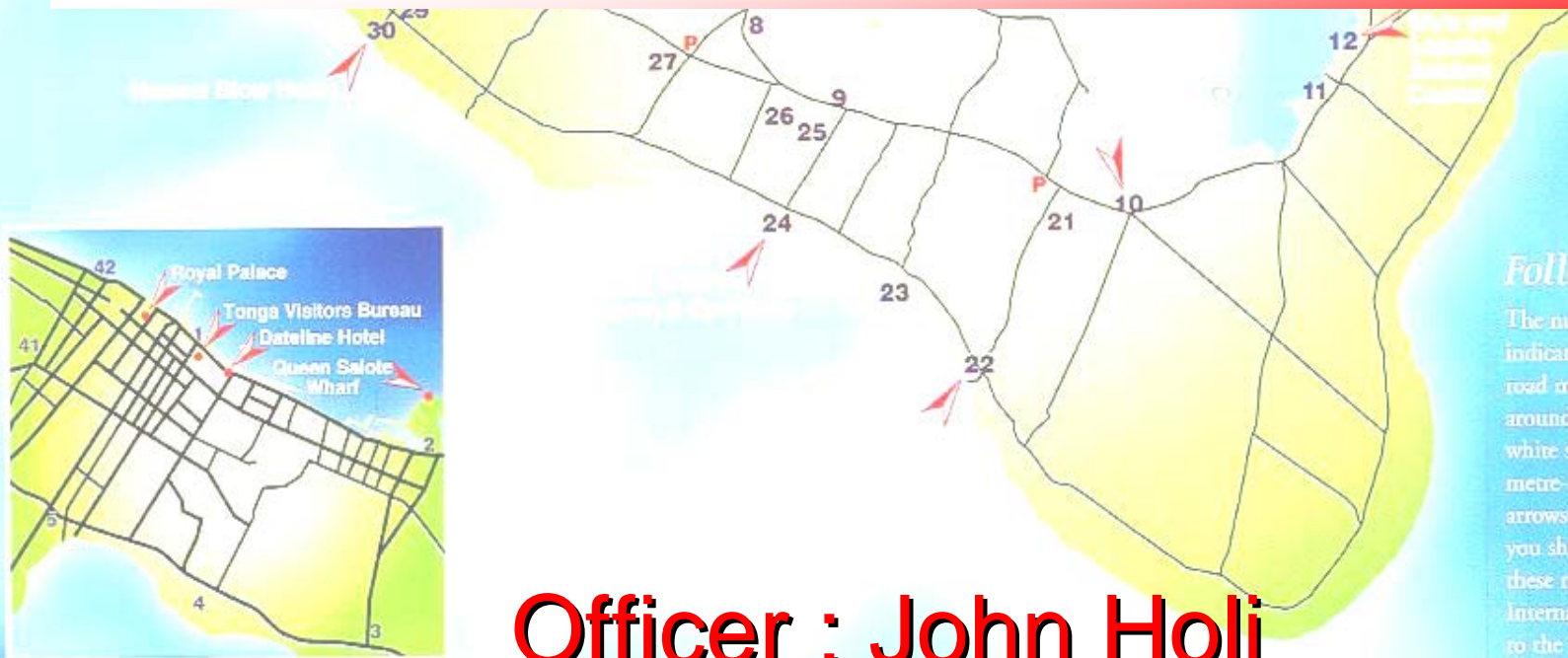


see enlargement

15

Hiremanga 'a Maul Trillithon

TONGA COUNTRY REPORT



Follow the markers

The numbers on this map indicate the locations of the road markers that will guide you around the island. The blue and white signs are positioned on metre-high concrete pillars with arrows showing you the direction you should be taking - the first of these markers is at the front of the International Dateline Hotel, next to the Tonga Visitors Bureau.

Officer : John Holi

OUTLINES

- INTRODUCTION
- BACKGROUND INFORMATION
- CLIMATE
- TONGA METEOROLOGICAL SERVICE
- PROPOSAL

INTRODUCTION

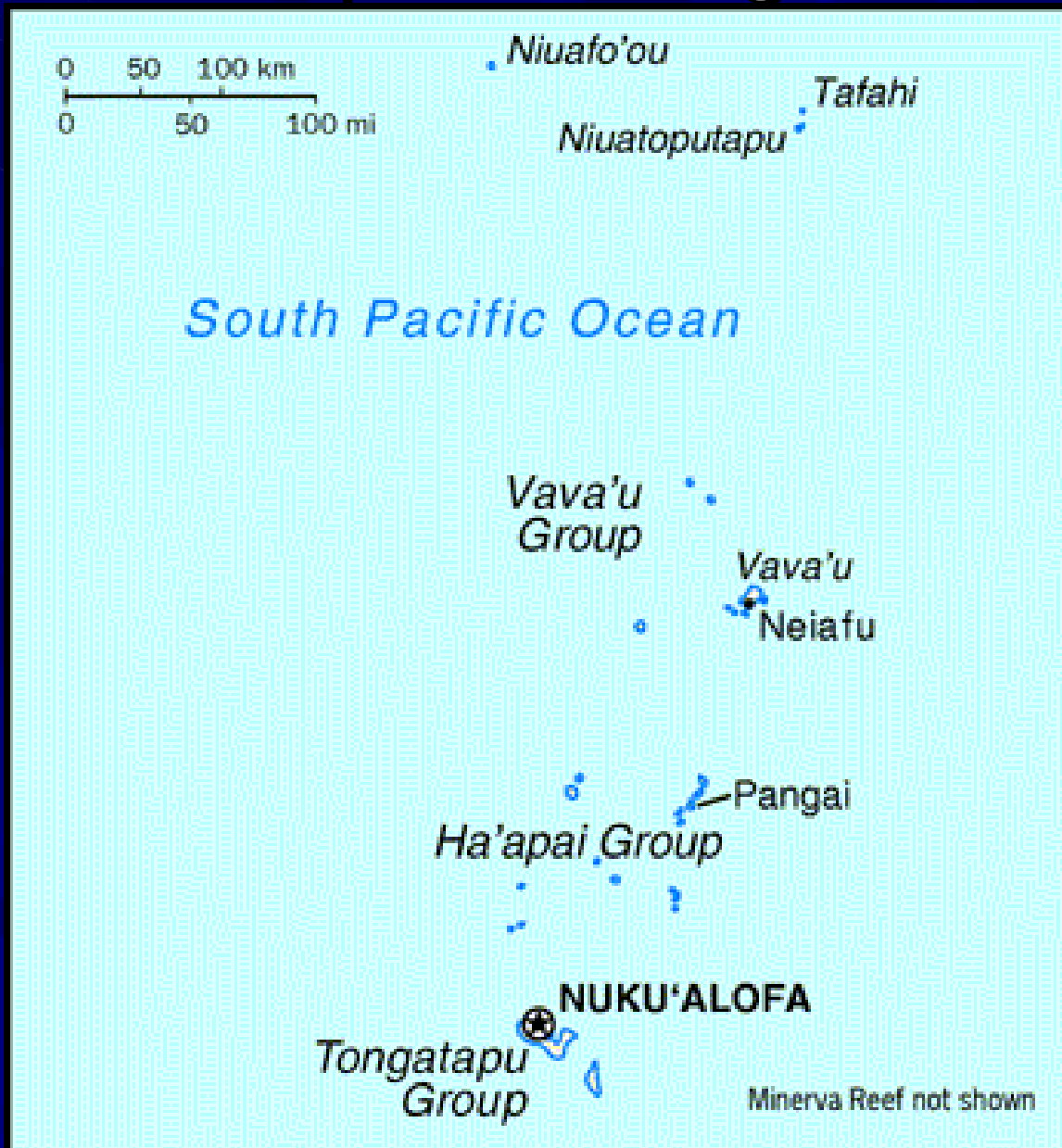
■ Location of Tonga

- Lies between 15 173 W 155 177 W
25.55 173 W
25.35 177 W

■ Three main groups

- Tongatapu group in the south
- Ha'apai group in the center
- Vava'u group to the north

Map of Tonga



BACKGROUND INFORMATION

- 171 island altogether, 38 are inhabited
- 13 hours ahead of GMT or UTC
- Also known as the “The Friendly Island” named by a British Explorer : Captain Cook in 1717
- Last remaining Polynesian Kingdom in the world
- Kingdom found in 950AD
- 1826 Christianity Established first schools
- Population 112,422 (July 2005)
- Natural Resources – Fish and Fertile Soil
- Import Goods mainly from NZ, AUST and just recently from the USA and CHINA
- Main source of income of the Tongans come from remittances
- Tourism
- Export fish, coconut, vanilla, crops and squash pumpkin

CLIMATE

■ TWO MAIN SEASON

- Wet Season (November – April)
- Dry Season (May – October)
 - 60% - 70% of rain falls during the wet season and 30% - 40% in the dry season
 - Wet season is also known as the cyclone season
- About 8 – 9 cyclone per season
- About 1 – 2 cyclone affect Tonga
- More cyclone during hot air and less rain fall
- Rainfall mainly comes from south convection zone (SPCZ)
- Temperature average range maximum of 26 – 29 Degree Celsius and minimum of 16 – 24 Degree Celsius

TONGA NATIONAL METEOROLOGICAL SERVICE

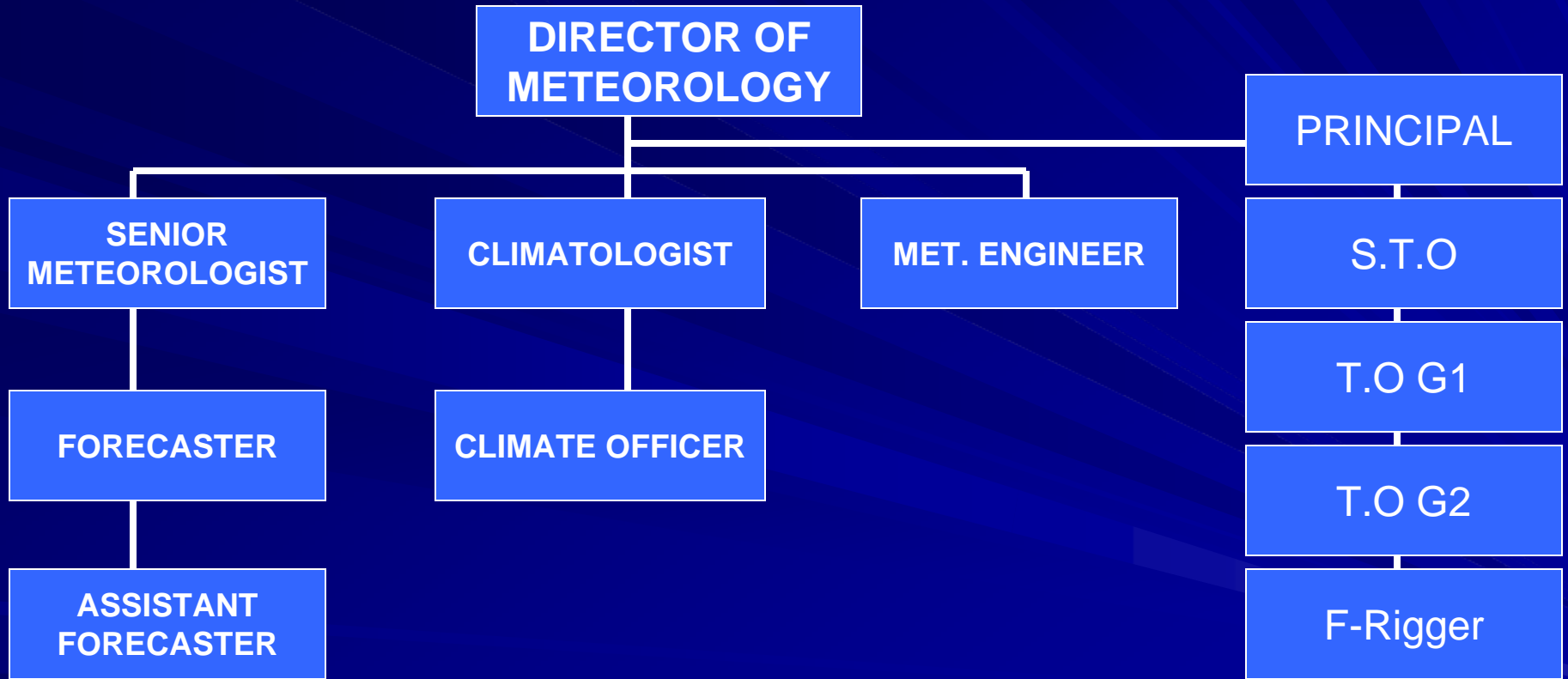
■ OBJECTIVE

- TO PROVIDE ACCURATE AND TIMELY METEOROLOGICAL AND CLIMATE ADVISE IN SUPPORT OF ECONOMIC DEVELOPMENT, SAFETY AND GENERAL WELL-BEING OF THE PEOPLE OF TONGA

■ RESPONSIBILITIES

- The taking and recording of meteorological observations required for the purpose of meteorological
- Assist authorities engaged in primary production, industry trade and commerce
- Issue of warning on severe weather conditions likely to endanger life or property
- Supply of meteorological information (forecasts)
- Conduct meteorological research
- Assist agencies directly involved in natural disaster management
- Meet the kingdom's obligations to the convention of world meteorological organization (WMO)

ORGANISATION STRUCTURE



AVIATION / SYNOPTIC OBSERVATION

IDENTIFIER	AERODROME	TYPE	UTC
NFTF	FUA'AMOTU INTERNATIONAL	METAR / SPECI / SYNOPS	24 HRS
NTFV	LUPEPAU'U INTERNATIONAL	METAR / SPECI / SYNOPS	0000 – 1900 HRS PLUS NON SCHEDULED FLIGHTS
NFTL	LIFUKA	METAR / SPECI / SYNOPS	0000 – 1900 HRS PLUS NON SCHEDULED FLIGHT
NFTE	'EUA	METAR REPORT	AS PER FLIGHT
NFTO	NIUAFO'OU	METAR REPORT	AS PER FLIGHT
NFTP	NIUATOPUTAPU	METAR REPORT	AS PER FLIGHT

ROLE IN THE ORGANIZATION

- Carry out routine SYNOP'S and metar observation
- Quality checks of observation from outer islands
- Preparation of public and marine weather forecasts and warnings
- Focal point within the service for public and marine weather services
- Forecast verifications
- Conducting internal audit report – compliance or incompliance with ICAO 3 for example
- Engage in public awareness programmers on weather (public weather services)
- Research ways to improve the capabilities and functions of the weather forecasting division
- Preparing daily weather for both TV and Newspaper

SERVICES

- Medium range forecasts (up to 5 days)
- Short range forecasts (48 hrs)
- Now casting (on special request)
- Issuance of metar, speci, met report and pilot briefings
- Rainfall forecast outlook for three months issued every month
- Public weather bulletin (TMS)
- Marine weather bulletin (TMS)
 - (Issued three times a day)

TECHNIQUES, SOFTWARE AND DATA USED IN T.M.S FOR FORECASING

- SAT AID
- QUICK CAT
- CLOUD DRIFT WINDS
- DVORAK ANALYSIS
- SCOPIC
- TC MODULES
- SATELLITE RECEIVER – EM WIN
- NWP – AVN, GASP, EU, NOGAPS, TLAPS, ECMWF, UK

COMMUNICATION AND DATA TRANSFER

- Collection of observation in country (telephone, HF radio)
- Dissemination of observation (email – auto transfer to AFTN)
- Access to high res. Satellite Imagery (4km via internet)
- Access to low res. Satellite Imagery
- Link to Air Traffic Services (dedicated telephone line, mobile)
- Back-up communication (satellite phone)

DOCUMENTATION

- ICAO annex 3 and WMO technical regulations
- Aerodrome Reports Manual (TMS)
- Forecasting Guidance Manual (TMS)
- Public Weather Services Manual (TMS)
- TMS Tropical Cyclone Emergency Plan

PRIORITY AREAS

- Professional training (Meteorologist / Technician)
- Establish a dedicated – link to the GTS
- Upgrade in-country communications
- Access to WAFS
- Upgrade of Specialized Equipment
- Coordination between centers (protocol/memorandum of understanding, agreement)
- Establish a quality managements system
- Establish legal framework
- Internal Audit
- Install more AWS (Automation Weather Station)

CONTACT

- Telephone (00 676) 35 123 / 35 355
- Fax (00 676) 35 123 / 35 009
- Email : metstaff@met.gov.to
- Website : <http://www.met.gov.to>
- Address : Tonga Meteorological Service
Ministry of Transport
PO box 845
Nuku'alofa

Any Question ???