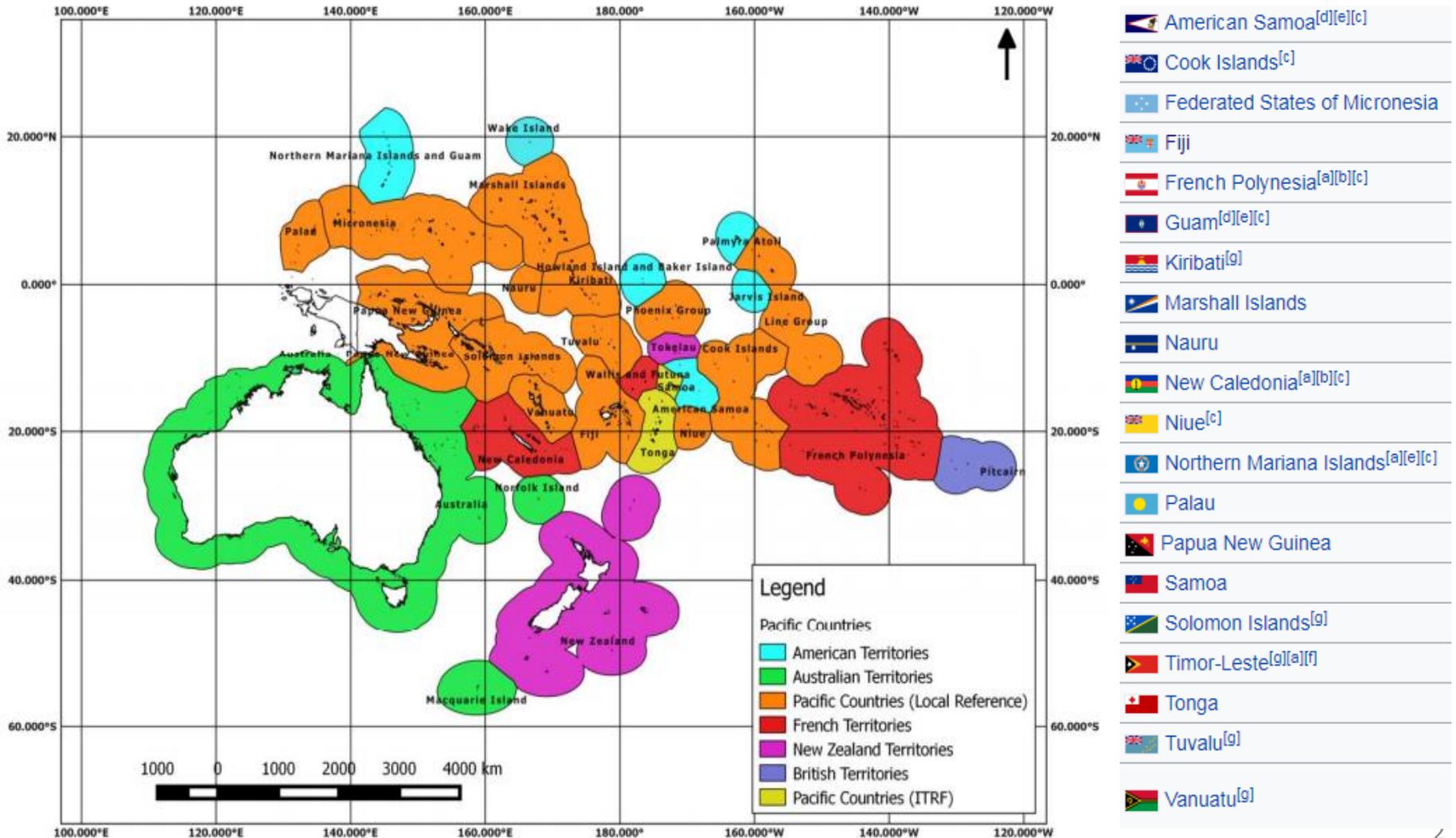


**WHERE IS THE DATA?**

# Geodetic Reference Frame

## Pacific SIDS



# Geodetic Reference Frame - Pacific

- Most Pacific Islands countries's reference frame are base on local reference frame.
- 2 SIDS Pacific adopted ITRF2000
  - Tonga Geodetic Datum (TGD2005) &
  - Samoa Geodetic Reference Frame (SGRF2005)

# Pacific Geospatial & Surveying Council (PGSC)

- Established in the margins of the 2014 GIS/RS User Conference
- Governed by the PGSC Charter endorsed by 11 Pacific Island governments
- Forum in which issues are discussed and assisted in our move towards the Datum modernisation

# Where is Fiji ?



- Lat 17°45'S, Long 175°00' E
- **Population** – 858,038
- **Land Area** – 18,270 km<sup>2</sup>
  - iTaukei land – 16,081 km<sup>2</sup> (88%)
  - Freehold – 1,462 km<sup>2</sup> (8%)
  - State land – 731 km<sup>2</sup> (4%)

# Where is the data? - Fiji

## Current Status - Data Acquisition

### Surveying

- Fiji is still using WGS (World Geodetic System) 72 (1972) datum.

### Earth Observation

- Base topographic data captured using:
  - from 1950s to 1990 – 50% coverage only
  - 1994 covered whole of Fiji – 100% coverage
  - 2009 and 2010 – 60% coverage approx.

# Where is the data? – Fiji...Cont'd

- Satellite imageries
  - Multispectral Worldview 2015 covered approx. 50% of Fiji at a cost of FD\$260,000 purchased in 2016

## **GIS Data**

- Land (incl. utilities) based sector design, develop, update and store their own data

# Pursue for Better Data

## **Surveying**

- Project team tasked for 3 years (2017 - 2019) to explore and update the Fiji Geodetic Datum (ITRF)

## **Earth Observation**

- Continue to acquire latest satellite images
  - Stereo Worldview 2016 for Viti Levu only for FD\$600,000 purchase this year

# Data Integration

In Fiji, Geospatial Data is underpinned by an internationally accepted Reference Frame:

- Land Development
- Land Administration
- Natural Disaster – e.g. Cyclone Winston
- Climate Change for monitoring and decision making
- Rise in sea level

# GIS – Fiji ?

## GIS Data

- Develop land resources (incl. utilities) web map for government called VanuaGIS
  - 13 theme operational layers with 60 sub layers on land resources (incl. utilities) integrated
- Business Continuity and data management
  - Data hosted Government data centre

# Challenges....Fiji

- **Financial Constraints**

- Expatriates consultancy cost – geodetic project, imagery analyst and Geospatial Information Engineers
- High cost of latest, high resolution multi spectral and stereo satellite imageries and software
- High cost of storage system installation

# Challenges....Fiji.... Cont'd

- **Technical Expertise**
  - Lack of expertise in Geodetic Survey
  - Lack of qualified Surveyors, Photogrammetrists, Cartographer and Geospatial Information Engineers (web map developer)
- **Data**
  - 70% converted digitally
  - 30% data in hard copies

**Thank You**  
**VINAKA**