



**DEVELOPMENT ON  
MODERNISATION OF FIJI'S  
GEODETIC DATUM**



# Fiji



Fiji is in the Oceania continent with the Latitude of  $18.1667^{\circ}$  S, and Longitude of  $178.4500^{\circ}$  E

Population : over 850,000

Consists of over 300 islands



# LOCATION OF FIJI



Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat  
Image U.S. Geological Survey  
Image PGC/NASA

Google earth

32°41'56.06" S 168°47'41.32" E elev -6468 ft eye alt 5533.49 mi



# Map Projection

- \* Hemisphere South
- \* Central Scale Factor 0.9998500000
- \* Central Meridian 178.45000000
- \* Zone Width 6.0
- \* False Latitude 17.0000000000
- \* False Easting 2000000.00
- \* False Northing 4000000.00
- \* Minimum Latitude -22.00
- \* Maximum Latitude -13.00
- \* Projection - Transverse Mercator



# FIJI GEODETIC DATUM

## BACKGROUND

**In 1978, the New Zealand Government undertook a review of survey and mapping activities in Fiji and recommended for the establishment of a Datum for Fiji.**

**Among the many recommendations in their subsequent report was one of enhancing and updating the existing control networks and the establishment of a datum capable of not only, meeting existing requirements but also those of any future land information system.**

# FIJI GEODETIC DATUM

- \* Having established this need, the areas of greatest development or greatest development potential were identified and given priority attention in the planning for the establishment of a new network.
- \* In 1983, New Zealand established a local reference datum for Fiji called the **Fiji Geodetic Datum 1986 (FGD86)** which is base on the **World Geodetic Systems 1972 (WGS72)**.



# FIJI GEODETIC DATUM

- ❖ Fiji Geodetic Datum 1986 is outdated compare to international standard.
- ❖ Has poor accuracy with a significant difference of over 20 meters.
- ❖ Recent advances in satellite positioning technology and its widespread societal adoption in both developing and developed countries, reinforces the need for Fiji to adopt an International Recognized Geodetic Datum.
- ❖ This will ensure Fiji's compatibility across various geographic information systems at
  - ❖ national
  - ❖ regional and
  - ❖ global level.

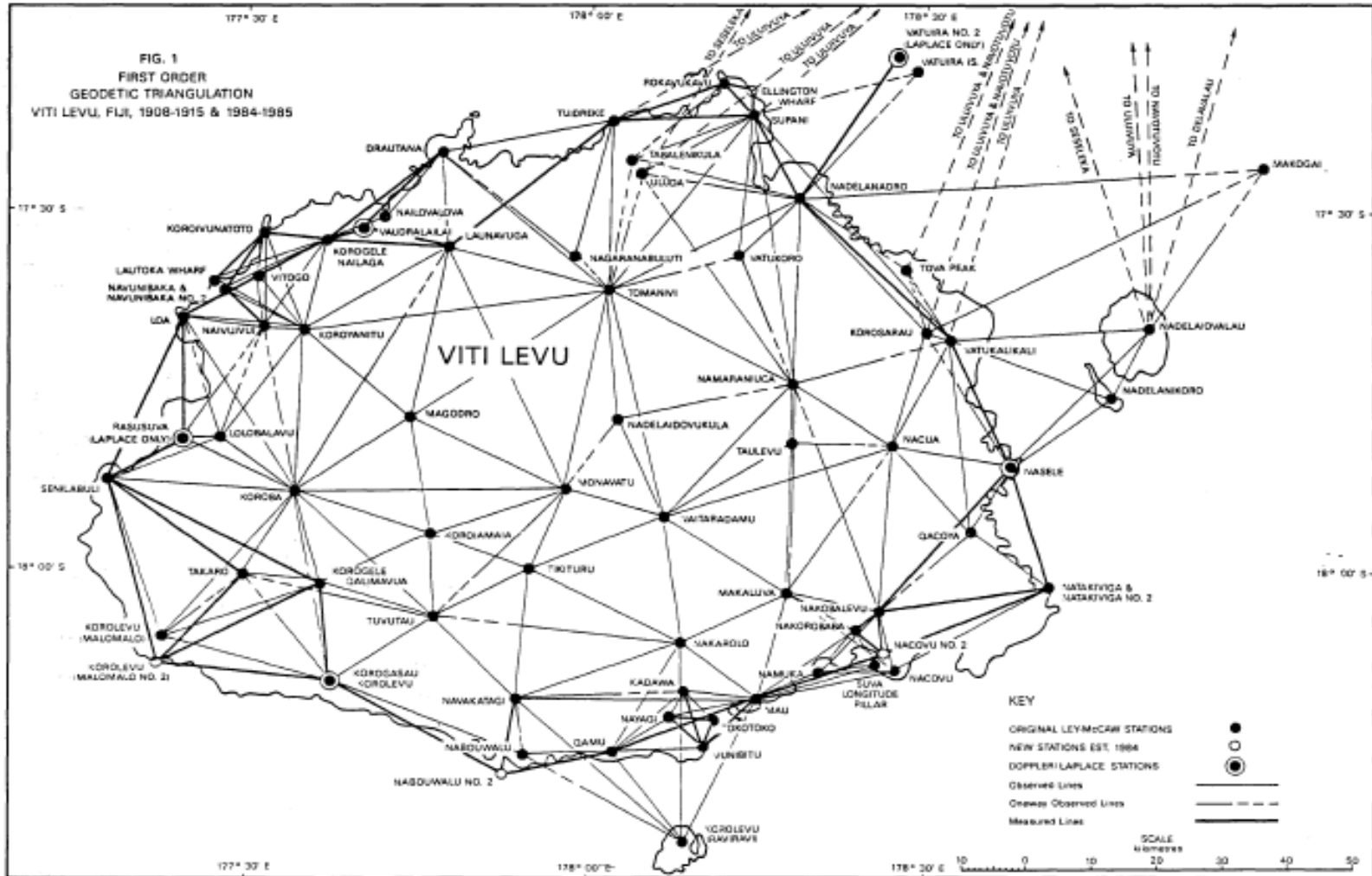


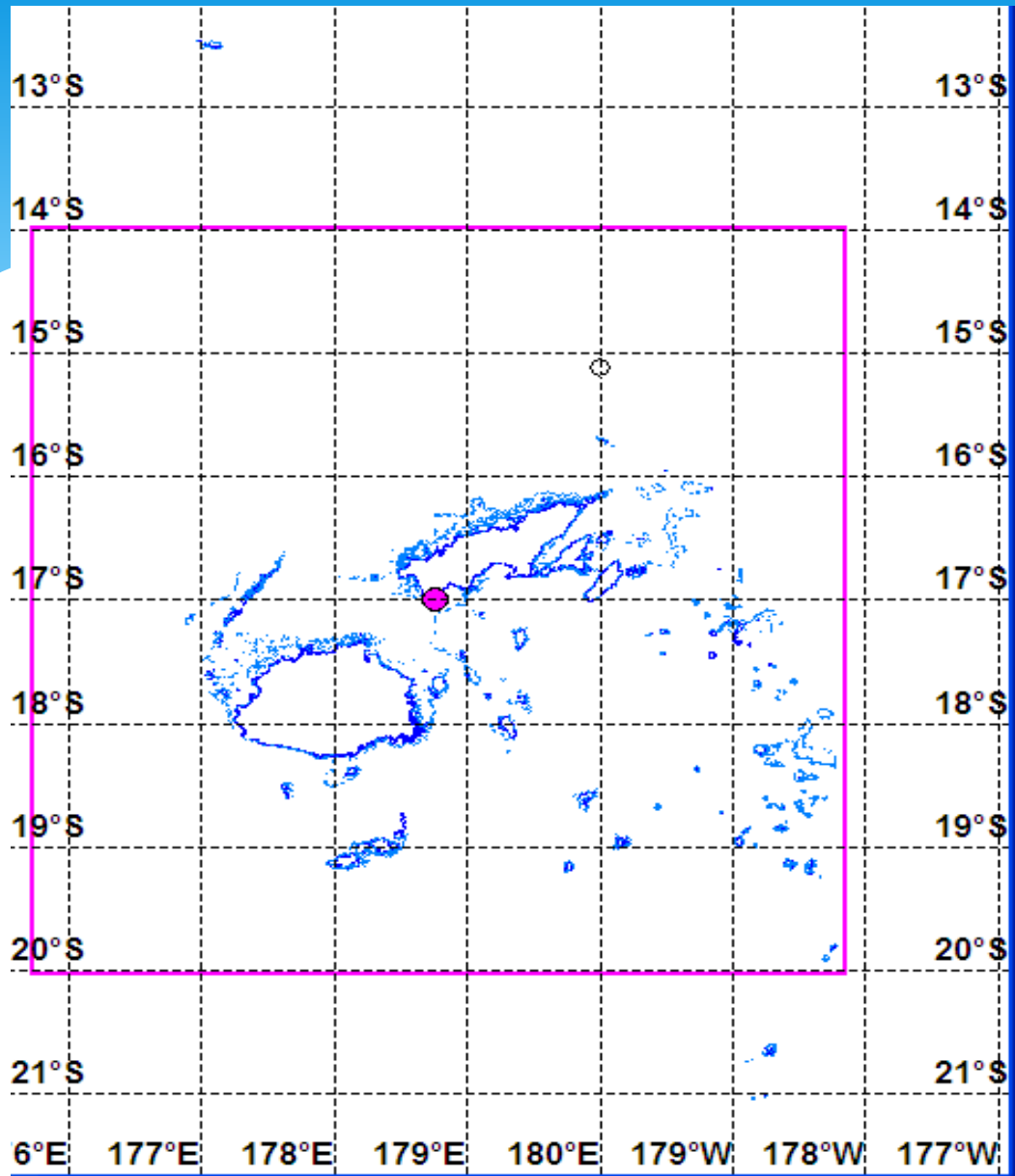


# THE DEFINITION AND ADJUSTMENT OF THE FIJI GEODETC DATUM -1986

## J. Hannah and J. Maseyk

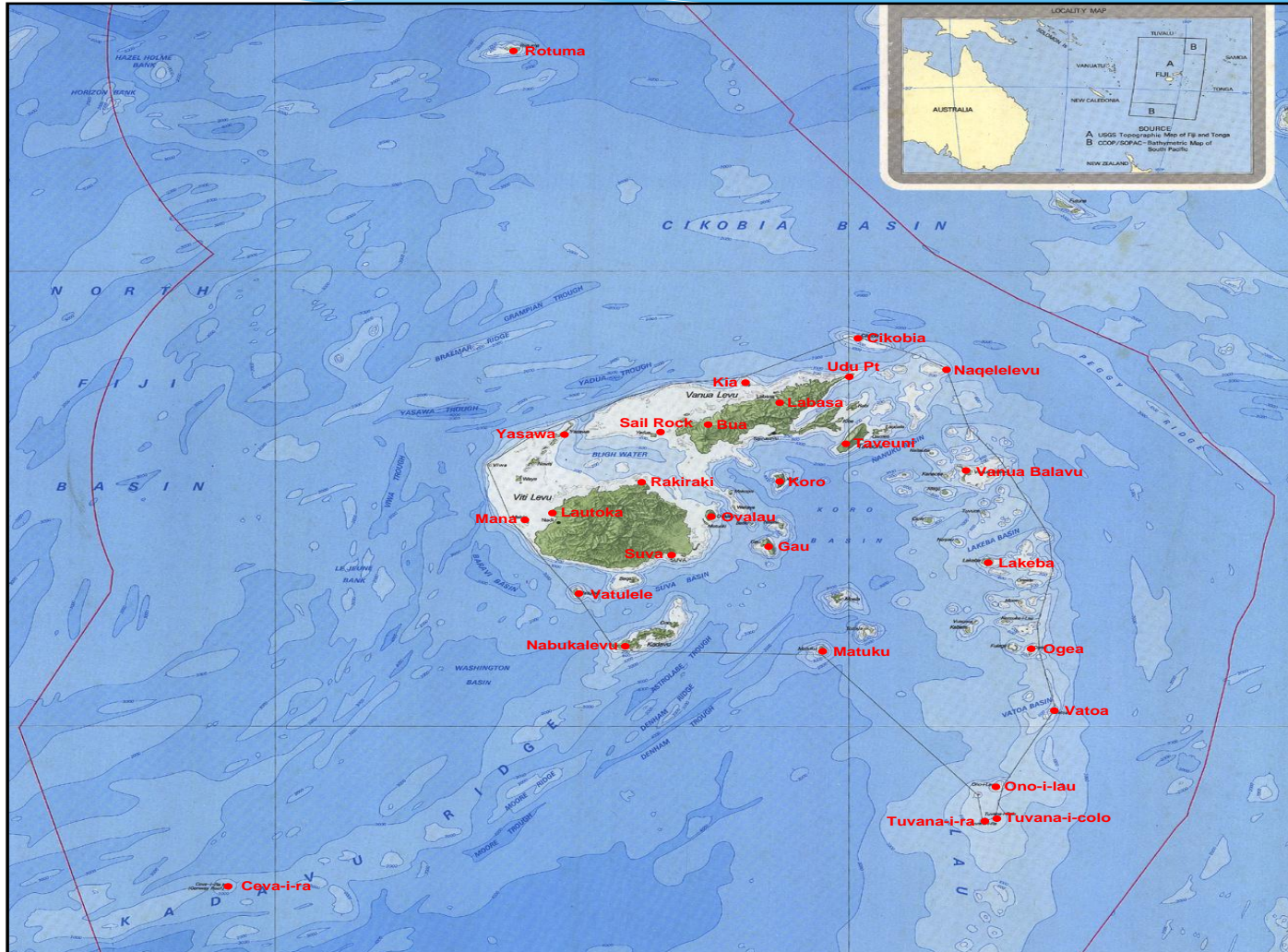
Department of Survey and Land Information, Wellington, New Zealand





- \* Fiji Islands
- \* Geodetic Datum
- \* GRID
- \* ~ Fiji Group ~

# Fiji Islands GPS Survey Control Network Sta





# FIJI GEODETIC DATUM

- ❖ **During the General Assembly in 2015, Fiji through the office of the Permanent Representative to the United Nation with the support of member states, table a resolution on Geodetic Reference Frame for Sustainable Development.**
- ❖ **This Resolution was adopted by the General Assembly on February 2015**
- ❖ **This has put a platform for Fiji to recognized the importance of adopting the international reference systems.**



# FIJI GEODETIC DATUM

- \* **Fiji's move to a recognized international standard would enable our full commitment to address issues such as :**
  - \* **Sea level rise and climate change monitoring;**
  - \* **Natural hazard and disaster management;**
  - \* **Sustainable management and development of earth resources;**
  - \* **Safer air, land and sea navigation;**
  - \* **Spatial data interoperability; and**
  - \* **Land management**



# Development on Modernizing Fiji Geodetic Datum

## - NEGOTIATION

**Fiji has started negotiation with potential developed countries and expert in Geodesy on the way forward to make this project a real.**

- \* Attending Overseas Conference – Capacity Building**
- \* Government Commitment**
- \* Cabinet Endorsement**
- \* Provision of Budget**



# Location based service - GPS in vehicles





# Location based service - GPS in vehicles... cont'd







**THANK YOU**