Geodetic Datum and Land Information
Fiji Islands

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Pacific Community (SPC)

UN-GGIM International Seminar on Effective Land Administration

Session 5 - Availability and accessibility of reliable, timely and quality land information

19 May 2022, Suntec Convention Centre, Singapore.
Geodetic Datum of Fiji

Fiji Map Grid 1986

FMG1986 (Gauss-Krüger Transverse Mercator):
- Latitude of Origin = 17° 00’ South
- Central Meridian = 178° 45’ East
- Scale Factor at Origin = 0.999854
- False Northing = 4 000 000m
- False Easting = 2 000 000m
- Ellipsoid of reference = WGS 72
  where  \( a = 6378135 \text{m} \)
  \( 1/f = 298.26 \)
Geodetic Datum of Fiji

The Definition and Adjustment of the Fiji Geodetic Datum - 1986
• J. Hannah and J. Maseyk
• Department of Survey and Land Information, Wellington, New Zealand
Land Tenure – Fiji Islands

Native (I’Taukei) Land – 89.1%
Freehold Land – 7.0%
State Land – 3.9%
Land Management Authorities - Fiji

Corporate Profile

The Taku’i Land Trust Board (formerly known as the Native Land Trust Board) is a statutory body established in 1989 to control and administer native land on behalf of its indigenous owners whether it is a Tusiana, Hausa and Tabubil.

It is a statutory trust that deals with title deeds by way of leases and freehold issued over such lands. It is the largest and most landowner and land management services and corporate entity in Fiji. It facilitates access to lands and land-based resources for social and economic development and growth.

Its purpose is to secure, protect and manage land use rights assigned to the Tuku'i landowners and to facilitate the commercial transactions that revolve around its use. It is acting all this for the national goal and public interests but in particular for the benefit of the Tuku’i landowners.

Back then, Tuku’i land comprises 75 percent of all the land in Fiji and was permanently desecrated by the British Crown in this allotment. The other land types are Sales Land, Prisons and Return Land and they share the rest of the one percent that make up Fiji’s land.

https://www.tltb.com.fj/Home

Ministry of Lands & Mineral Resources

https://www.lands.gov.fj/
Land Management Authorities - Fiji

The easiest way to finance your property with our home loan.

https://www.housing.com.fj/

The Office of the Registrar of Titles deals with land, titles and deeds registration for Fiji. The Registrar of Titles is the sole custodian of all the land titles and deeds documents.
Land Information Fiji - Vanua GIS
Land Information Fiji - Products
• United Nations General Assembly 2015
  ➢ Resolution 69/266 – “A global geodetic reference frame for sustainable development”; adopted in its 80th plenary meeting held 26th February 2015
• Pacific Geospatial and Surveying Council Strategy Goal 2 (GGRF)
• Cabinet Paper - CP(15) 169; 29th August 2015
• Cabinet Decision 207 – Modernising Fiji’s Geodetic Datum; 29th August 2015
• National Development Plan (November 2017)
• 2018-2022 Ministry of Lands & Mineral Resources Strategic Plan
Geodetic Reference Frame of Fiji Islands

Control Section
Ministry of Lands & Mineral Resources
Government of Fiji

Fiji Hydrographic Office
Fiji Navy
Government of Fiji

Oceans & Maritime Programme
Geoscience Energy Maritime Division
Pacific Community
The Geodetic Infrastructure
Geodetic Survey Operations
Geodetic Survey Activities

• Three Phases
  • 10-16 November 2019
  • 7-15 December 2019
  • 26 January – 2 February 2020

• GNSS Static Occupations
  • 51 Stations – 7 days
  • 104 Stations – 6 hours
  • 43 Stations – 1 hour

• Survey Personnel
  • 65 (Surveyors/ Technicians/ Survey Assistant/ Casuals)

• Survey Equipment
  • Trimble (16) and Leica (11)

• Transportation
  • Naval Vessels/ Local Ferries/ Vehicles
Geodetic Survey Data Handling

- Data Storage
- Data Downloading
- Data Conversion
- Data format
- GNSS Occupation Summary
- Locality Diagrams
- Field Survey Sheets
- Data Source
- Check and verify meta data
## Geodetic Survey Data Handling

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<th>Station ID</th>
<th>Start Date</th>
<th>Time</th>
<th>Duration</th>
<th>Campaign</th>
<th>File Name</th>
<th>RINEX Version</th>
<th>Ant Height</th>
<th>Ant Method</th>
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Data Release Report
Way Forward

• Geospatial Data Management & Policy
• Datum Definitions
  • Horizontal Reference Frame
  • Vertical Reference Frame
• Datum Transformation & Tools
• GNSS CORS infrastructure maintenance plan
• Monitoring GNSS CORS
• Capacity Building
Positioning – WGS72 vs WGS84 Datum
Vinaka and Thank You