Geospatial & Surveying Infrastructure

Ministry of Lands & Natural Resources, Tonga
PGSC 2018
Land Information
Geographical Information Services
Cadastral Survey
GNSS for Cadastral Survey
Geodetic Infrastructure

- Tonga Geodetic Datum (TGD2005),
  - Geocentric origin
  - GRS80 ellipsoid (= WGS84)
  - Static datum based on ITRF2000 as at 1 Jan 2005

- Tonga Map Grid (TMG),
  - Transverse Mercator
  - Reference spheroid = GRS80
  - Meridian of origin = 177W
  - Latitude of origin = The Equator
  - Central meridian scale factor = 0.9996
  - False origin = 1,500,000E 5,000,000N
Legal & Policy Framework

- Tonga’s Land Act
- Draft Survey Act nearly complete
- No survey Standards
- Legal and policy for surveying and mapping not yet there

Capacity Development

- Three scholarship this year to the University of Otago
- Procured 4 sets of Trimble M3 Total Stations for Cadastral Survey
- In-house workshop for surveyors on shifting from manual to digital
- Funding from government of India for fund new sets GNSS and a digital level
- Attending FIG Reference Frame in Practice Seminar Kobe and UN GGIM AP in Kumamoto
- Next budget reflects the importance of a modern land information systems
Impact of Cyclone GITA
Way Forward

• Survey Act
• Standards and specification
• Data sharing policy
• Modern and complete Land Information System for the whole kingdom
• Professional development for graduates and mid-senior staff
• Build capacity on UAV technologies
• Geodetic survey equipment

Malo ‘Aupito