



# Geodetic Infrastructure in Samoa.

**FIG Pacific Small Islands Developing States Symposium  
18 – 20 September 2013, Suva, FIJI.**

# Presentation Outline

1.0 Location of Samoa

2.0 Existing Geodetic Infrastructure in Samoa

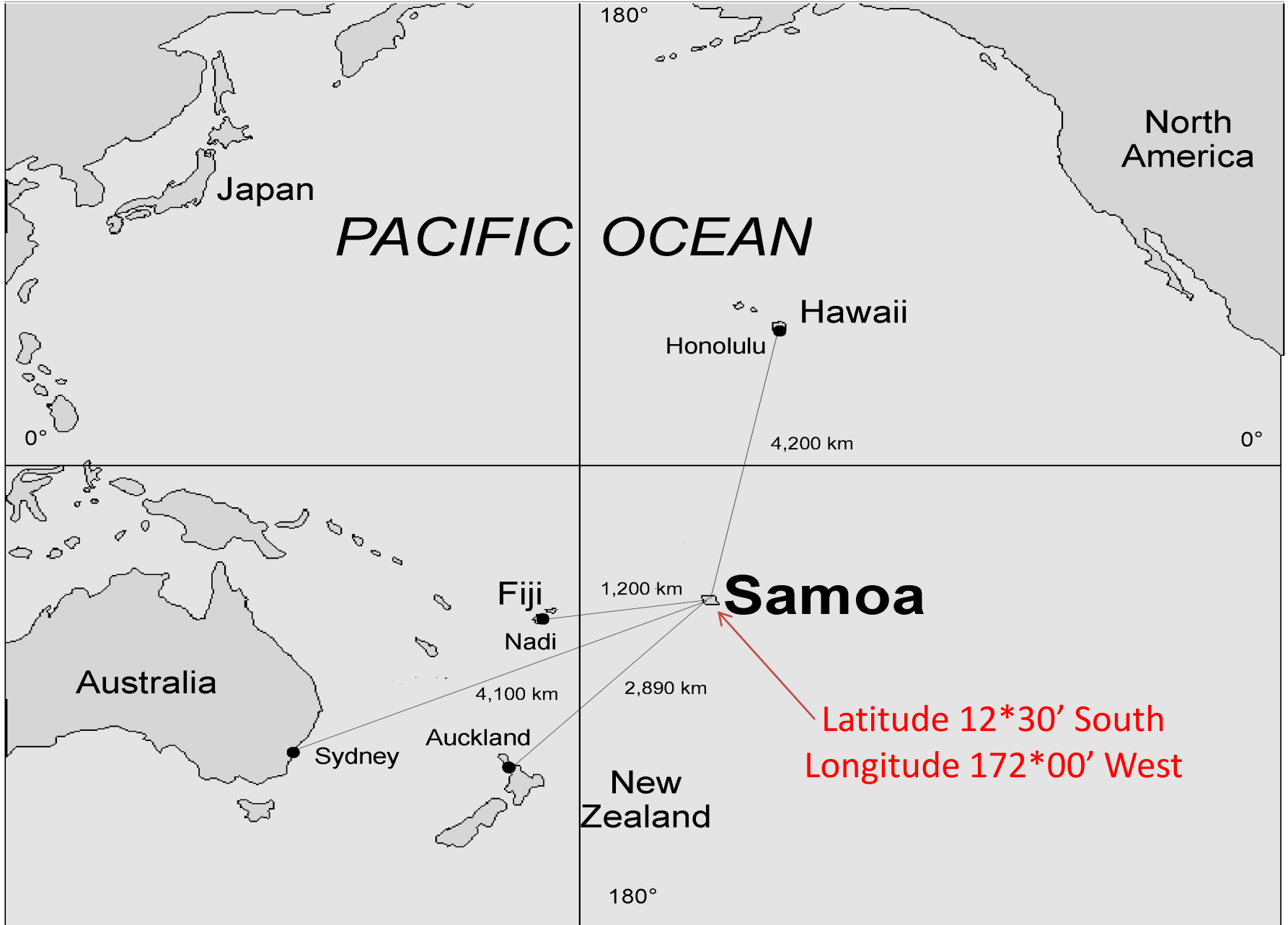
- Horizontal Network and Datum Upgrade
- Vertical Network Upgrade
- Linkage of land information to geodetic datum.

3.0 Improving land security in Samoa.

4.0 Legislations in Place.

5.0 Improving the accuracy of LIS.

# 1.0 Location Map of Samoa





National Mapping(MNRE)

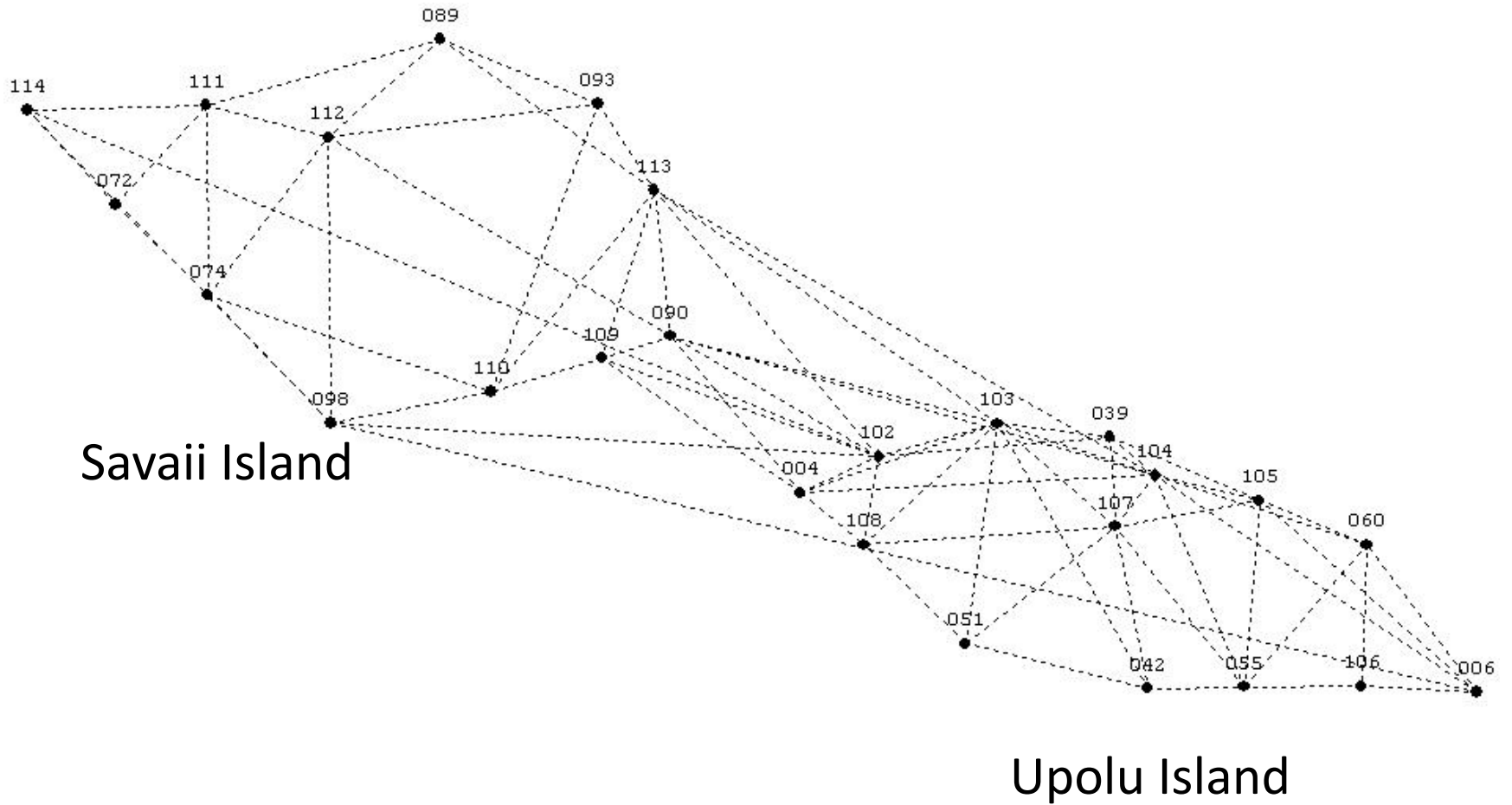
- National Capital:
  - Apia
- 2 Main Islands:
  - Upolu and Savaii.
- Land Area:
  - 1097 sq miles.
- Population:
  - 186,000
- Language:
  - Samoa and English

## 2.0 Existing Geodetic Infrastructure in Samoa

### HORIZONTAL NETWORK & DATUM UPGRADE

1. Samoa has adopted the International Terrestrial Reference Frame (ITRF) as its horizontal datum.
2. New datum is now called Samoa Geodetic Reference System 2005 (SGRS 2005)
3. A modern GPS based Primary Geodetic Network has been established.
4. Primary Geodetic Network comprises 26 stations. (includes Fagalii and Faleolo Continuous GPS stations).
5. Samoa to continue using the Universal Transverse Mercator (UTM) map projection for all surveys, mapping and land information purposes
6. A Tertiary Geodetic Network has been established in Apia with stations spaced about 250 – 300 metres.

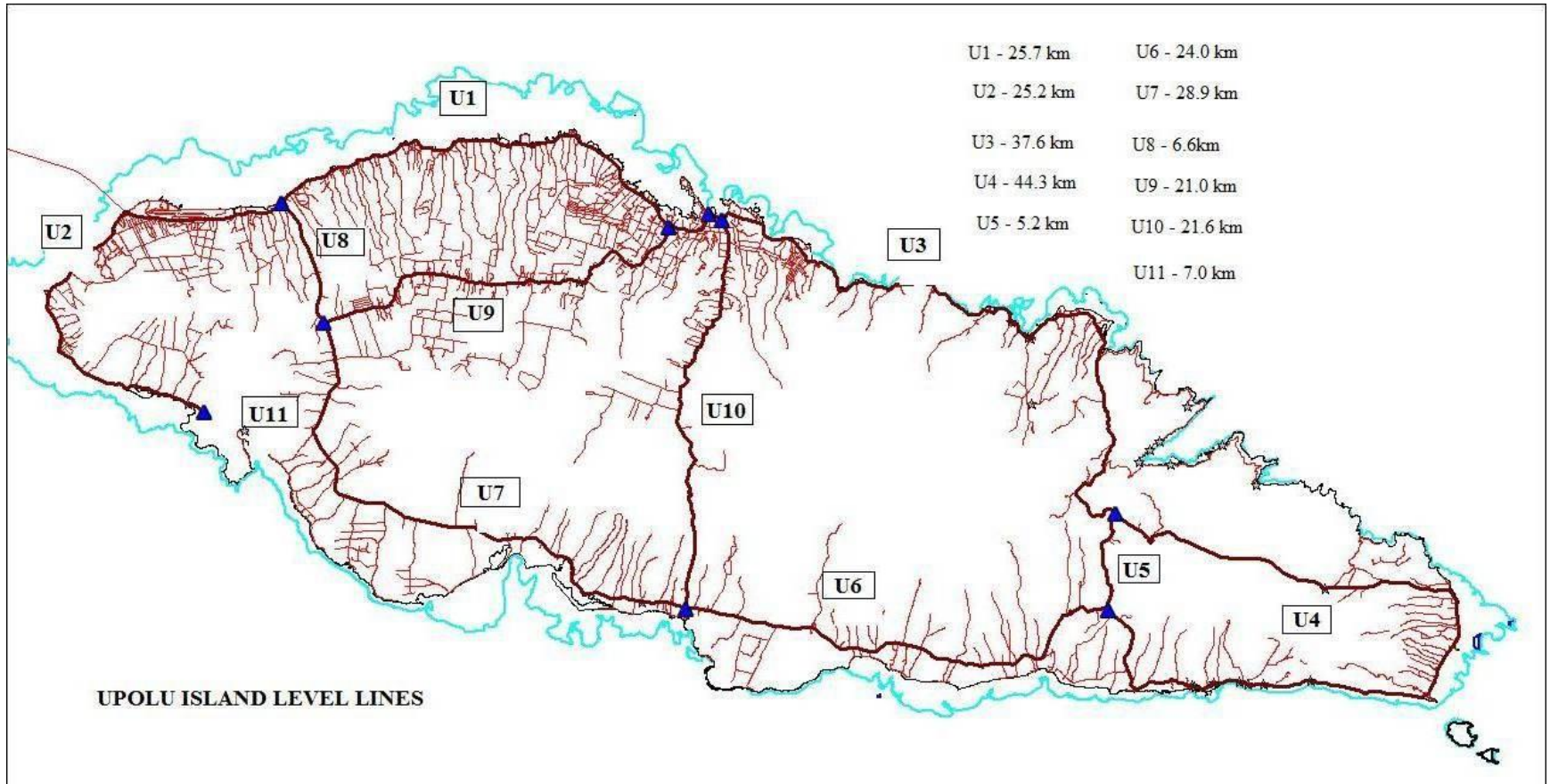
# Horizontal Primary Control Network



## VERTICAL NETWORK UPGRADE (not yet completed)

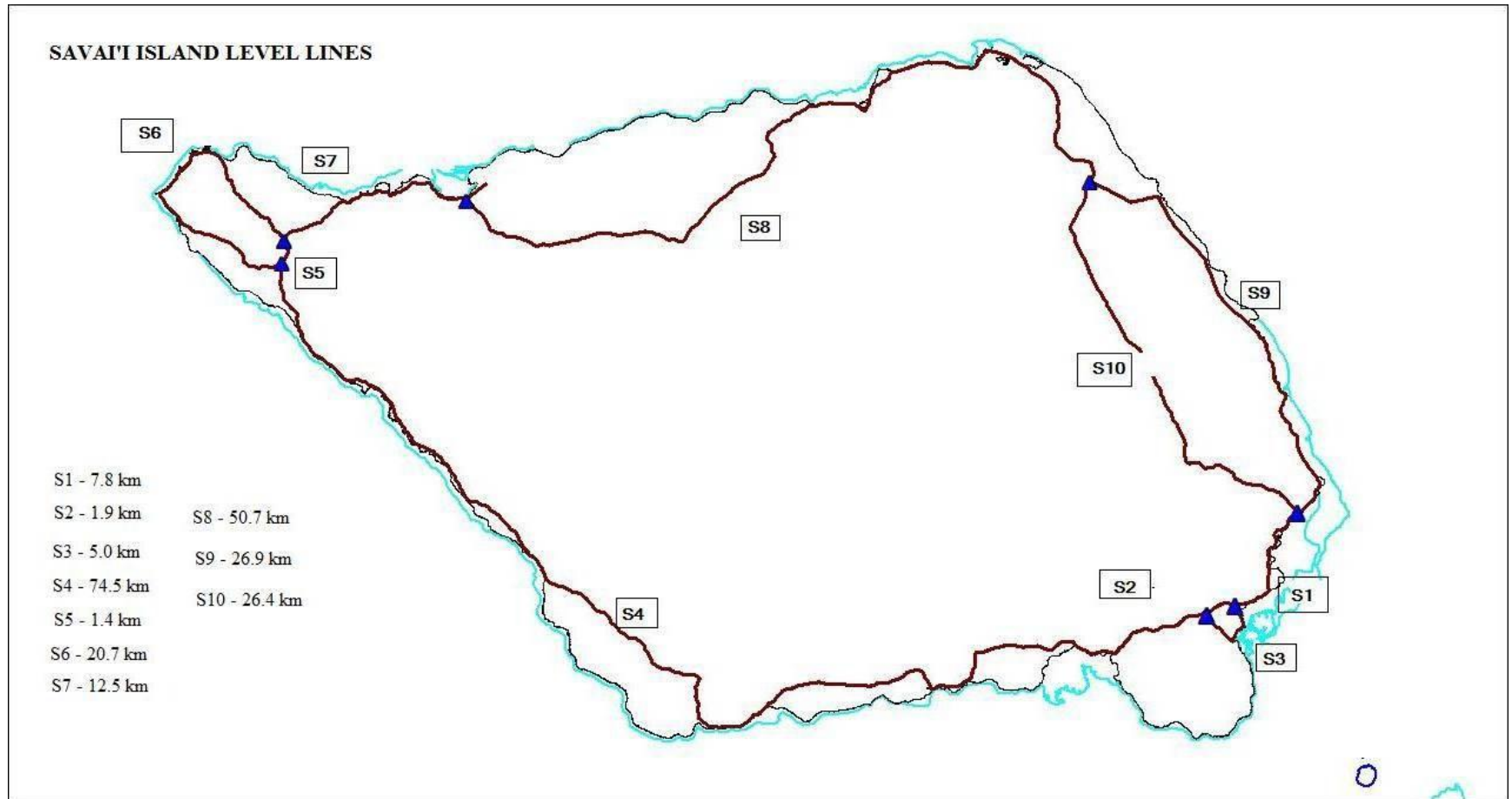
1. Vertical Datum remains as Mean Sea Level (MSL)
2. Results from the South Pacific Sea Level & Climate Monitoring Project (SPSLCMP) be used to determine and adopted a new value of MSL.
3. Upgrading existing vertical network and extend to cover all of Upolu (now 81% completed) as well as Savaii Island along coastal and cross island roads.
4. Wherever practical, stations in the Primary Network should be levelled by connection to the national levelling network.

# Vertical Control Point-Upolu Island





# Vertical Control Point – Savaii Island



### 3.0 IMPROVING LAND SECURITY IN SAMOA

- Upgrading of the Geodetic Survey Control Network (Horizontal & Vertical)
- Improving the accuracy of land administration information and improving the reliability of survey and geographic information digitally (DCDB)
- Improving the registration and titling system for public and private lands
- Preparing related legislations

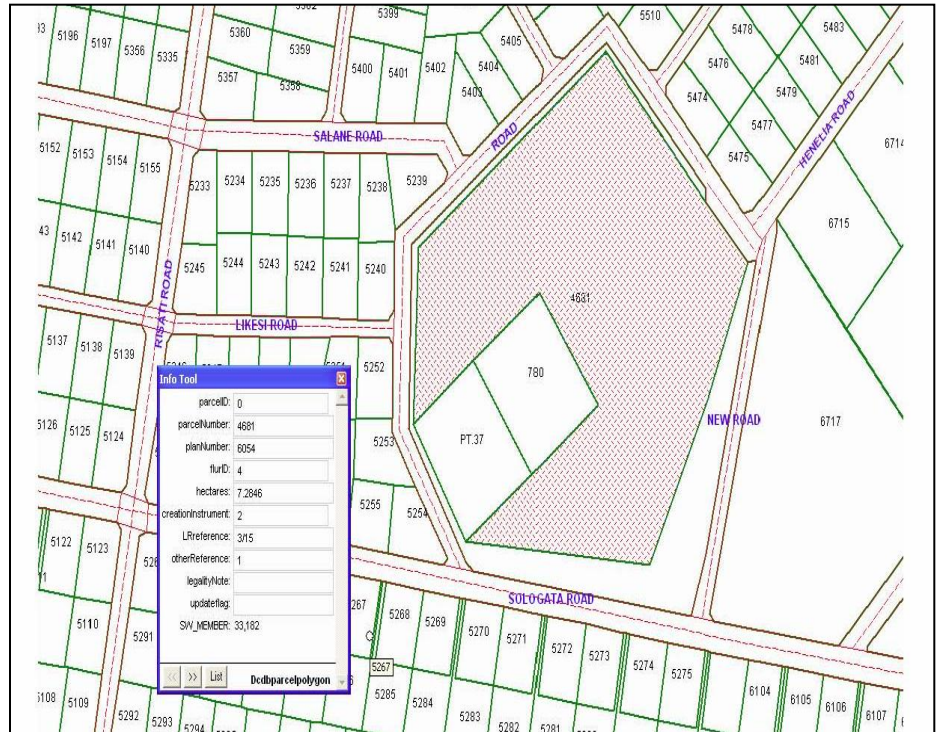
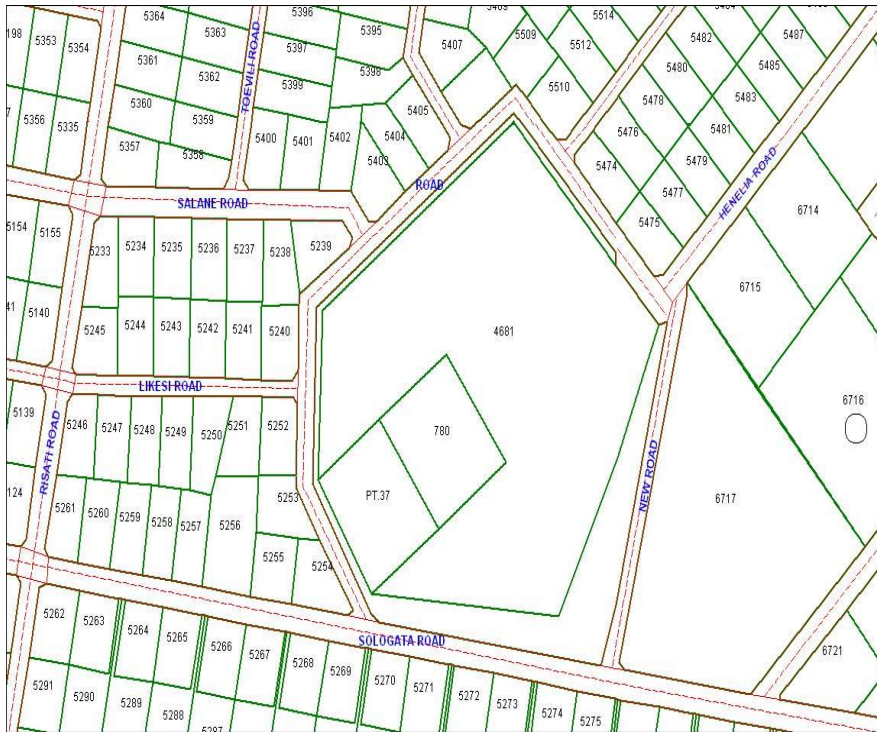
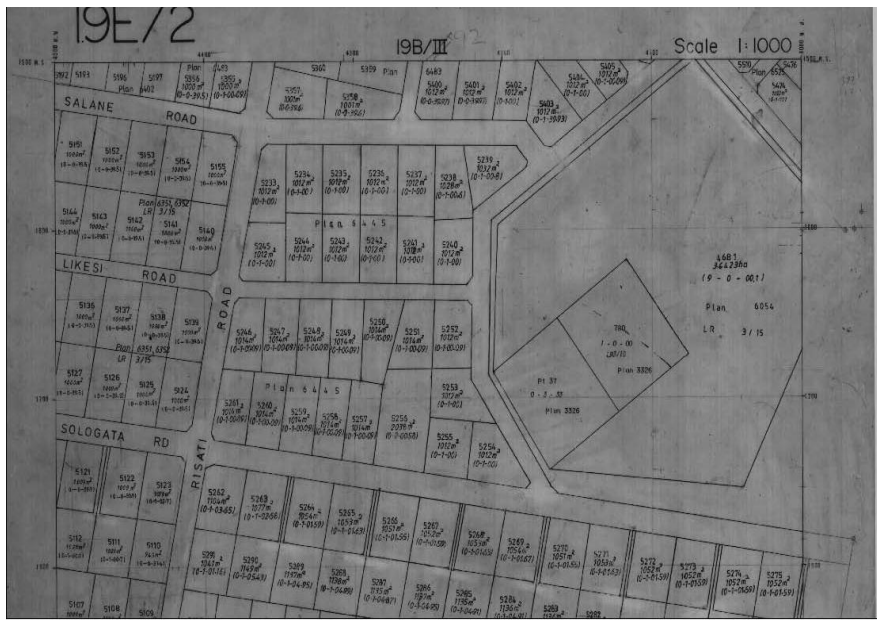
## 4.0 Legislations in Place.

- Land Titles Registration Act 2008.
- Spatial Information Act 2010.
- Survey Act 2010.
- Valuation Act 2010.
- Survey Regulation 2011.

## 5.0 Improving the accuracy of land administration information and the reliability of survey and DCDB

- Conversion of manual records digitally (record maps)





- Residue Plans

1. Important to close off the paper register
2. Issuance of new parcel number compatible with the new computer register.



**Land newly described on this plan**

Parcel	Prior Description	Area
1408	Pt 520 3828	0.0974ha
<b>Total</b>		

**Land transferred out of Land Register 33/260**

Parcel	Plan	LR	Area
520	3828	33/260	0.1026ha
<b>Less</b>			
1341	7488		0.0052ha
<b>Total</b>			0.0052ha
<b>Residual</b>			0.0974ha
<b>Rounded</b>			0.0974ha

This plan has been prepared solely to provide a unique description for the land in the Land Register referred to in the plan title (below).

This plan is not sufficient to redefine the boundaries shown on this plan without a full search of the survey records including the reference plans listed below.

**Reference Plans:**

3828 7488

Prepared by: Neil Pullar  
 Drawn by: Filipo Tui  
 Checked: Tufi Auelua

**APPROVED**

.....  
 Assistant CEO Technical

Date:...../...../.....

**8106**

**DISTRICT : Tuamasaga**  
**FLUR: VI, Upolu**  
**Record Map No.: 19F\_13C**

**Plan of Land Comprised in Land Register Volume 33, Folio 260 situated at Palisi**

**Prepared by** Ministry of Natural Resources & Environment  
**Date :** September 2008  
**Scale:** Not drawn to scale

Thank you..