



Reference Frame in Practice



Status of Geodetic Infrastructure in the Pacific Region – Cook Islands

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Geography

Location Map

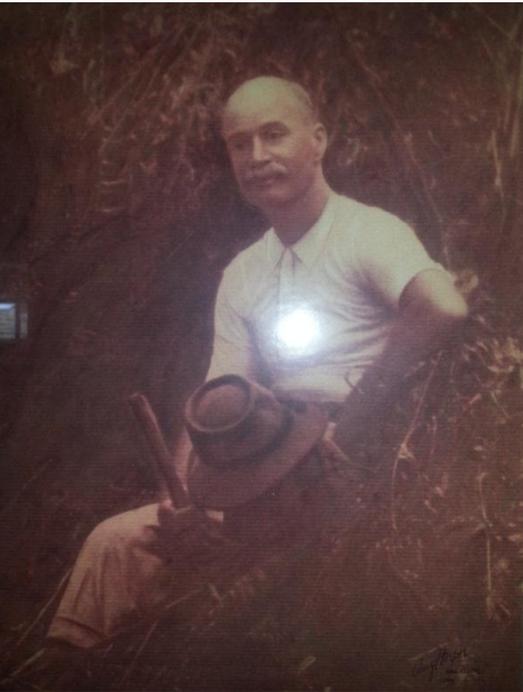


Map of the Cook Islands





Background



Hugh Mcrone Connal

- land surveying was introduced in the Cook Islands in October 1899.
- Survey office was responsible for the survey of all land on most of the Islands.
- (1930's) the New Zealand land survey system was introduced into the Cook Islands
- This was with the cadastral survey of Manihiki by a New Zealand

Government Surveyor seconded from New Zealand for several months to undertake this survey.



Background

- By the late thirties, before the outbreak of World War II, a New Zealand Government registered Surveyor, Mr A.A Bailey was seconded permanently to the Cook Islands

Cook Islands Existing Geodetic Infrastructure

- OCB1 reference point located in front of the Ministry of Justice
- Bench Marks around the Main Island Rarotonga



GNSS Base Station



- The Cook Islands GNSS base station (ITRF) is located at the Cook Islands International Airport
- Installed by Geoscience Australia for the Sea Level Rise Project in 2002
- Providing geodetic activities to other pacific island countries in the region.
- It has broadband internet which uploads every 30 seconds and send information to Geoscience Australia.
- The project has been extended for another 5 years.

Status of Surveying Capacity



- The remaining Land Surveyors technician from the former Department of Survey are still practicing in the Cook Islands in the private sector.
- Chief Surveyor and he is the regulator of all surveying activities in the Cook Islands
- His roles has been limited only regulatory rather than surveying due to the shortage of staff in his office.
- GPS surveying are carried out by the Ministry of Infrastructure & Planning.
- Lack of skills and knowledge of modern survey equipment's GPS
- Rely on SPC-SOPAC, Geoscience Australia, LINZ and Contractual services for technical Assistance



What land information datasets linked to your Geodetic Datum?

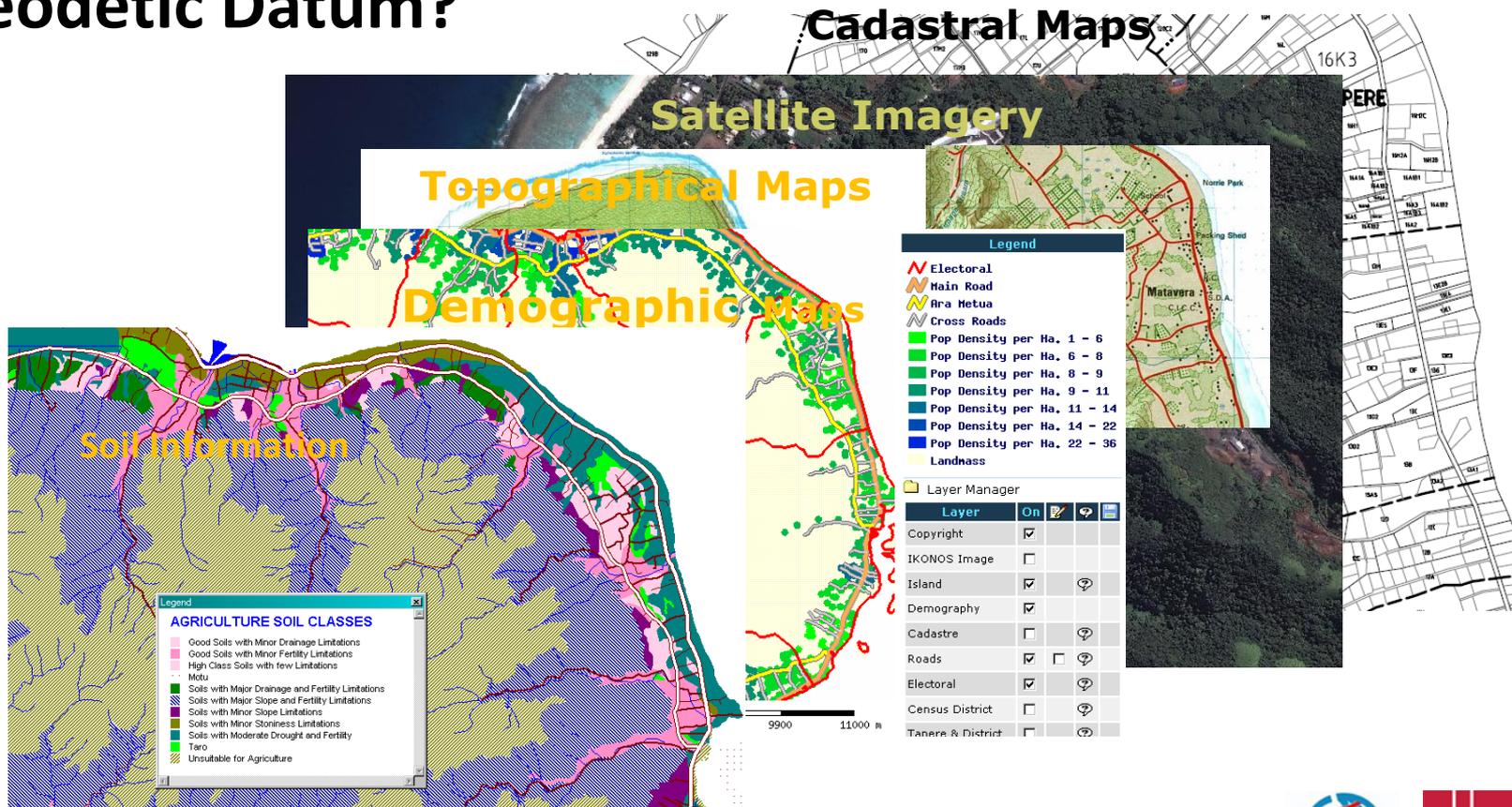


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What geodetic or positioning services you providing?



Sea Level Rise Projects



Hydrography



Cadastral



Impediments to develop geodetic or positioning infrastructure?

- Finance & Support from government
- Lack of Local Technical Surveyors in country
- Expensive modern survey equipments
- Lack of training opportunities to upskill local surveyors
- Cost of travelling to outer islands to carried such work



Way Forward

- Raise these issues at National Level
- Training opportunities (Regional & International Institutions)
- Technical Assistance (Donor Countries)
- Strengthen Local Capability and Capacity
- Develop geodetic survey network for the Cook Islands

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The End

Meitaki Ma'ata