

**Land Administration Workshop
Knowledge Sharing for the Future**

Computerisation in the context of Land Administration in the Pacific

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Land Administration

Computerisation has the **POTENTIAL** to support most land administration reform initiatives

Land Administration

Common LA Applications in Pacific countries:

- Cadastral Mapping
- Digital Archive of Land Records
- Land Registration
- Formalising Customary Land
- Government Land Rental System
- State Land Inventory
- Geodetic Survey Control Mark Index
- Property Valuation
- Survey Calculations

Pacific Land Administration

Computerisation Initiatives are characterised by:

- Small number of records
- Low volumes of transactions
- Includes :
 - modernisation of existing systems originally implemented during colonial administration
 - new systems (eg formalising customary land rights)
- Climate is harsh (on both paper records & computers)
- Vulnerability to natural hazards
- Local ICT specialists are in short supply & not all ICT specialities are available locally

Papua New Guinea



Papua New Guinea

Regional & Provincial Survey Offices (1980s)

- Standardised office based survey calculation software (used in quality assurance processes)
- Standardised field handheld survey calculator programmes
- Locally written software
- Piloted Survey Instruction monitoring and reporting

Fiji



Fiji

Fiji Land Information System (FLIS) Programme

- LIS Council decides policy issues for this inter-agency initiative
- 13 software applications across 5 agencies
- Cadastral mapping involved ongoing software costs
- Transitioned from paper based cadastral maps using low cost GIS viewer (VanuaView)
- Took advantage of regional organisations (University of South Pacific & SOPAC)
- Now excellent local software & GIS developers

Marshall Islands



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Marshall Islands

Establishment of Land Registration Authority

- New legislation
- Primary functions:
 - voluntary formalisation of customary land and the issue of “registration certificates”
 - recording of land transactions (eg leases)
- Legislation specified the need for a database & backups
- Very low volumes of applications & transactions
- Very limited number of local software developers
- Initially commercial elite appear main beneficiaries

Samoa



Samoa

Land Administration component of SIAM2 Project

1. Land Registration System

- must meet existing & future legal requirements
- provides easy access to all records (including scanned documents)
- comprehensive searching
- appropriate security
- need to convert existing paper register volumes into the LRS database
- Implementation of new title registration legislation has been delayed

Samoa

2. Digital Cadastral Database (DCDB)
 - data capture of paper based cadastral maps almost complete
 - staff retention has been major problem
 - limited local support
 - SOPAC GIS support has been useful
3. Conversion of microfilm records to scanned images
4. Geodetic Database

Sustainable Land Administration

Key Computerisation Issues:

1. Minimise support dependency beyond period of development assistance
 - use main stream approaches for system requirements & system design
 - maximise use of security measures to minimise intentional and unintentional record changes
 - select simple programming language
 - establish coding & naming standards
 - consider use of code generation tools using templates
 - consider use of 3rd party software modules (eg scanning)

Sustainable Land Administration

Key Computerisation Issues:

2. Minimise Ongoing Software License & Support Costs

- consider use of “Express” versions of Database
- consider Open Source options for DBMS & GIS functionality
- System Design should identify ongoing costs for any software recommended in the design solution

Sustainable Land Administration

Key Computerisation Issues:

3. Maximise User Confidence & Competence

- user training
- appropriate user documentation (including Online Help)
- establish local user support mechanisms
- minimise time when both computerised & paper based processes are run in parallel

Sustainable Land Administration

Key Computerisation Issues:

4. Ensure Reliability of System Backup Processes

- backups must include ALL data required to restore system and the land administration application software (including source code)
- automated & pre-scheduled backup processes wherever possible
- offsite storage of key backups
- make sure backup processes are “main streamed” during the period of development assistance

Sustainable Land Administration

Key Computerisation Issues:

5. Ensure redundancy in the procurement of critical hardware items
 - scanners and printers
 - minimise use of high cost hardware items wherever possible particularly after data conversion (eg. Wide format scanners and plotters)
 - encourage A4 and A3 format standard outputs from computerised systems