

National Land use Development Plan Web-GIS & National Land Register Project



Ministry of Lands & Mineral Resources

Geospatial División

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Summary

- Background on National Land Use Development Plan Web-GIS
 - Key phases and themes
 - Data and custodians
 - Data Cleaning & Preparations
 - Development of “Vanua-GIS” product
- Introduction to National Land Register
 - Updates

FGIS, LMR



Background on National Land Use Development Web-GIS

- Recommended by the Committee on the Better Utilisation of Land (CEBUL)
- Cabinet submission by Ministry of Strategic Planning, National Development & Statistics (Sustainable Land Use Development)
- Building on from Land Use Master Plan
(by LMR from 2012 -2014)
- ITC Services (Server & Infrastructure establishment)
- Core-Logic Consultants, New Zealand
- Lands Department, FGIS (Project Implementation)

FGIS, LMR

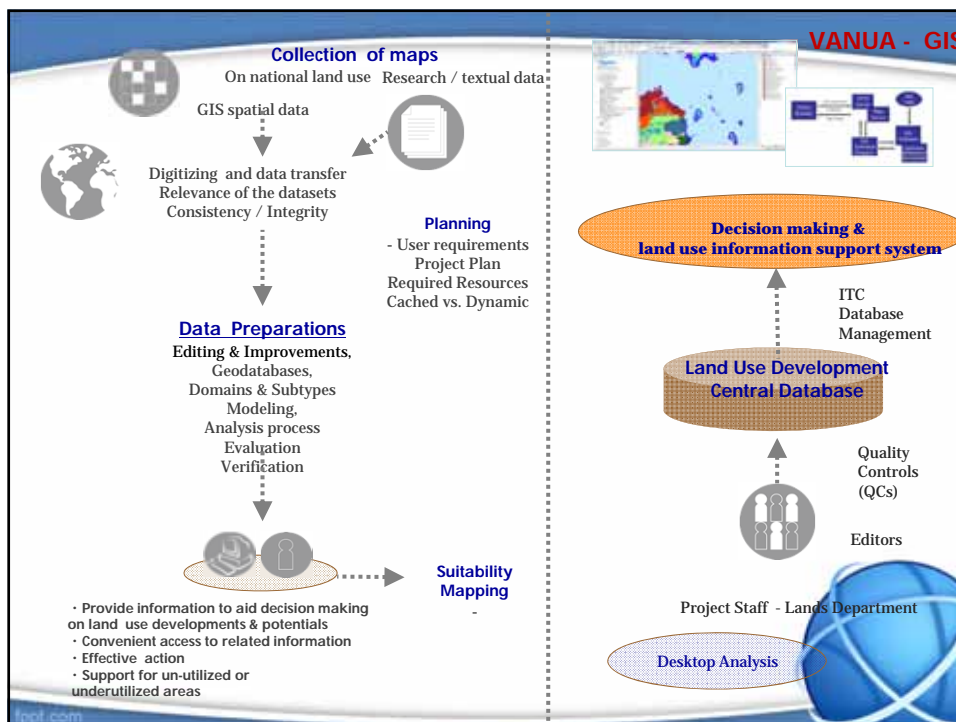
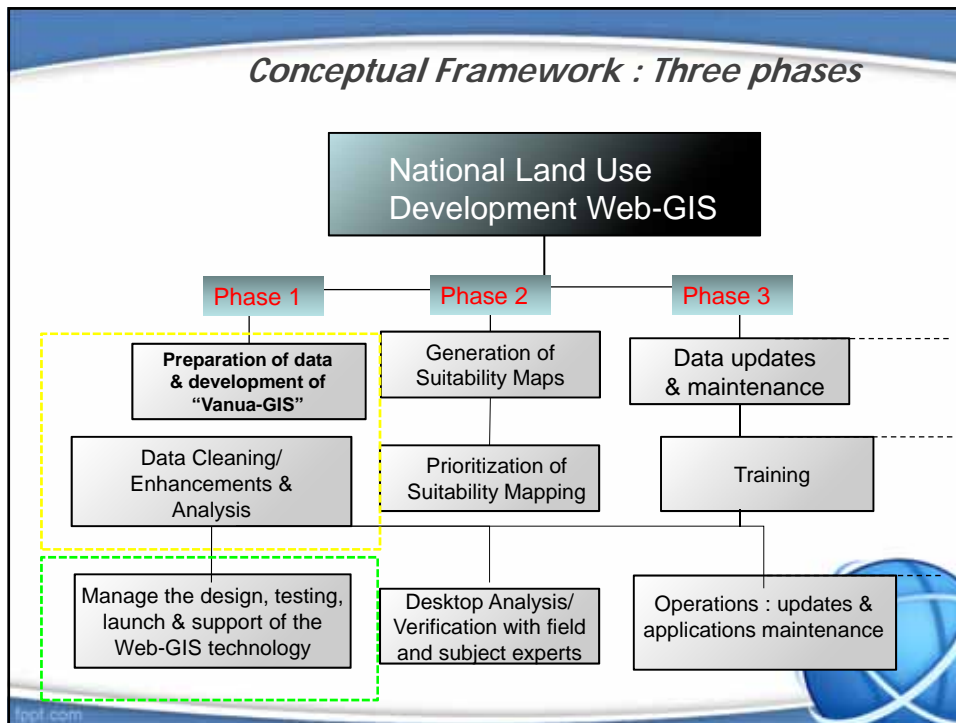


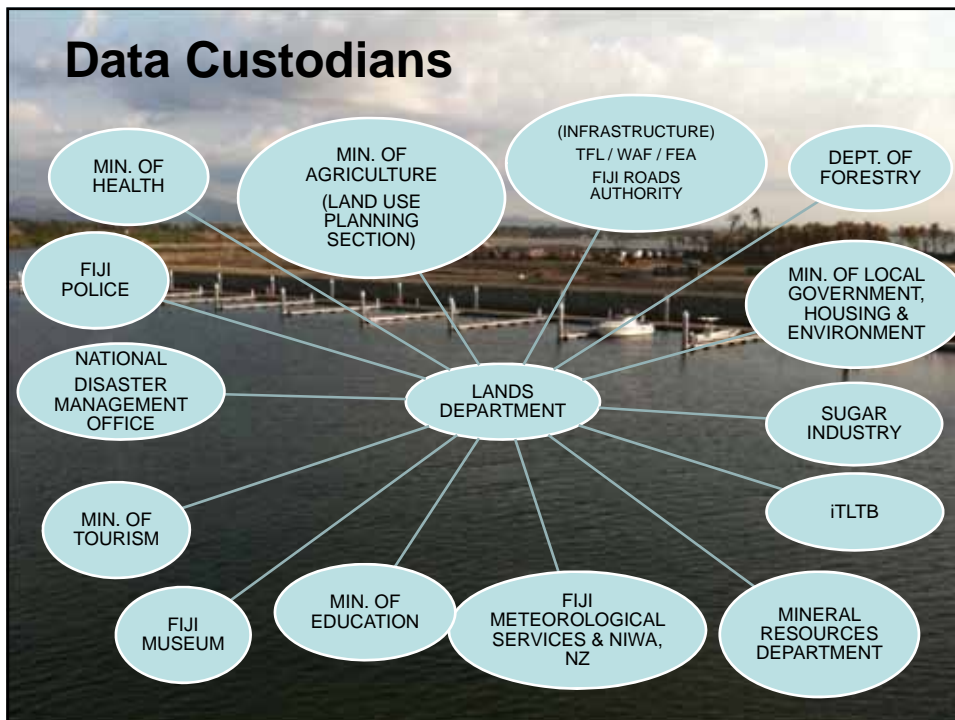
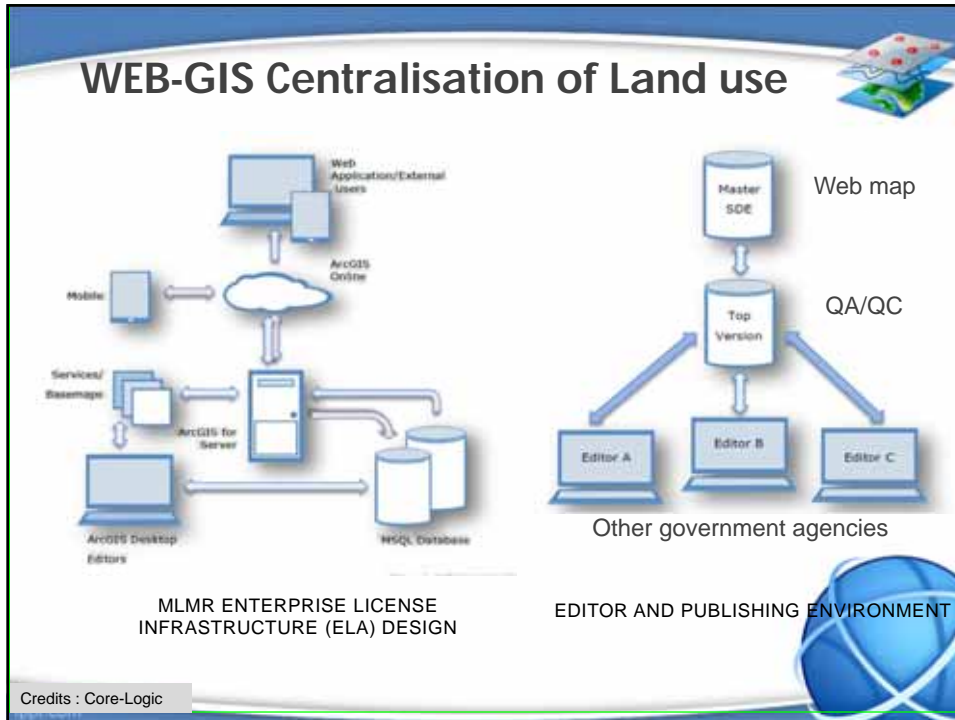
National Land Use Development Web-GIS

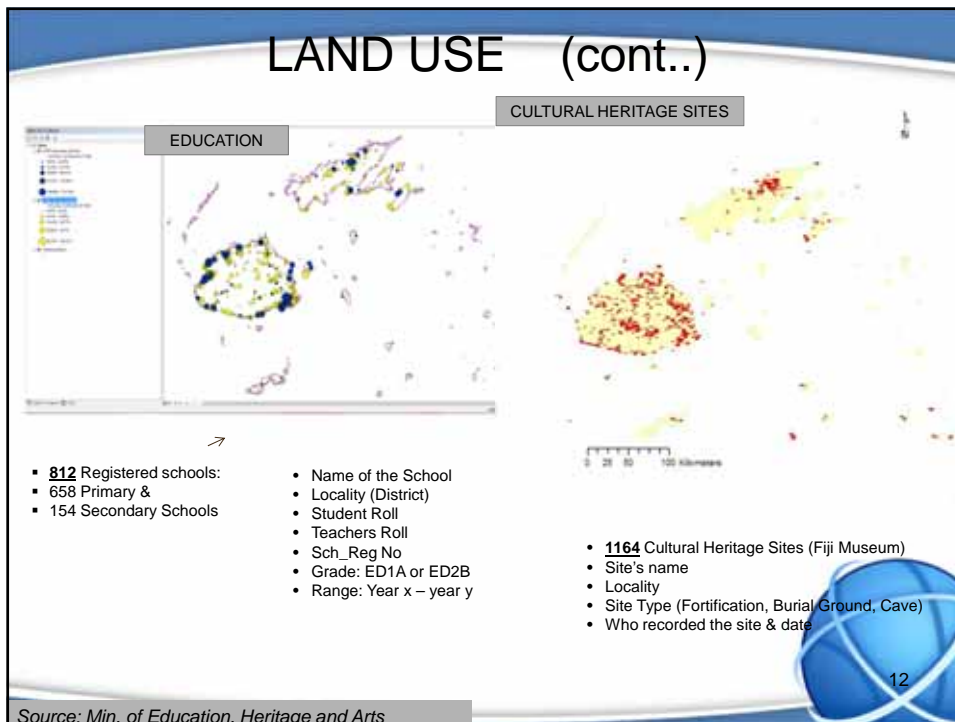
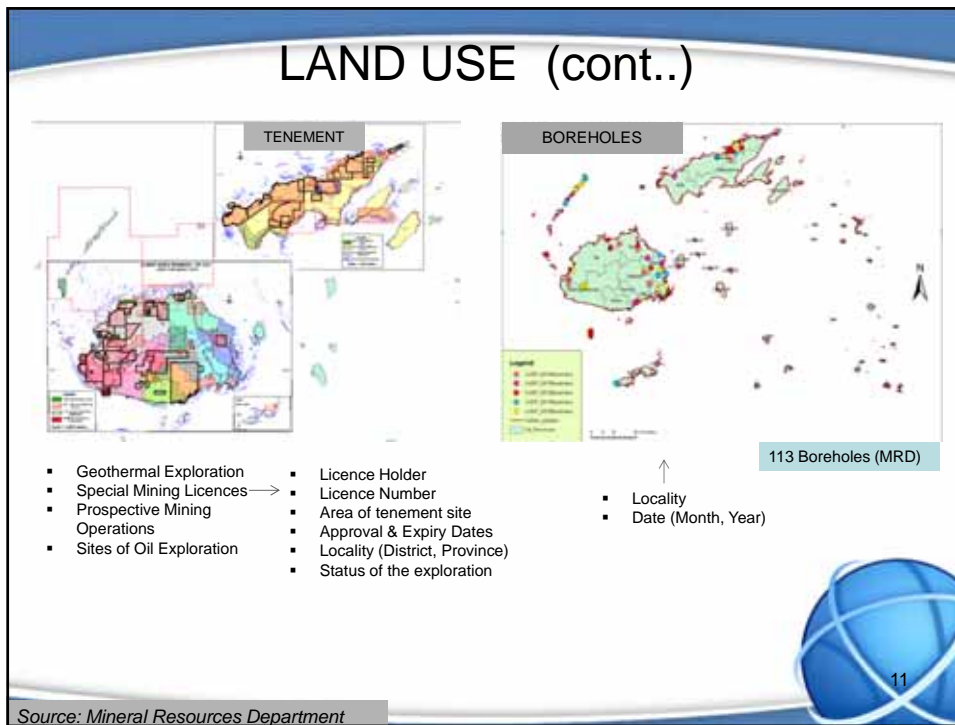
- Supports Pillar 6 of the PCCPP by “making more land available for productive & social purposes”
- Enables government to monitor major developments on land use activities.
- Modeling and mapping our land use using the integrative collaborative capabilities of a web-GIS, to better plan Fiji’s way forward

land.com











LAND USE (cont..)



Major Supermarkets

- 90 Supermarkets


Source: Lands Department



Source: Dep. of Tourism & Fiji Tourism Board


390 Registered Hotels

- Name of hotel
- Name of Licensees
- No. of Rooms/Dormitories/Bures/Units/Cottages/Villas
- Capacity & number of beds




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LAND USE (cont..)




Source: SPC - GSD




Land Cover / Land Use

- Barren Land
- Coastline
- Coastal Dunes
- Coastal Forest
- Coastal Parkland
- Subsided Land
- Forest
- Swampy Land
- Wetland
- Open/Urban Land
- Coconut
- Palm Oil
- Rice
- Sudlow-Gardner Parkland
- Scrubland Forest
- Shrub
- Highland Forest
- Water
- Wet Land



	Capability Division	Major Uses	Map
1 AVAILABLE	<ul style="list-style-type: none"> (a) Suitable for ploughing and for intensive cropping 	I - III	1:10'
	<ul style="list-style-type: none"> (b) Unsuitable for ploughing but suitable for low intensive cropping under traditional cultivation methods 	IV	1:10'
2 MEDIUM	<ul style="list-style-type: none"> (a) Unsuited for arable cropping but suitable for pasture in forestry use 	V - VIII	1:10'
	<ul style="list-style-type: none"> (b) Unsuited for production vegetation, suitable only for protective purposes 	IX	1:10'



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Source: Min. of Agriculture, Land Use Planning Section

Utilities – Water Authority of Fiji

Identify

Identify From: **NAVADELEBA REGIONAL WATER SUP**

Location: **L_129433_440 3,862,931.149 Meters**

Field	Value
FID	6
Shape	Polygon
NAME	NAVADELEBA REGIONAL WATER SUP
CONSUMER	URBAN RURAL/TOWN
CAPACITY	5250 Cu.m/day
SOURCE	SURFACE/BORN
RESOURCES	3040 Cu.m total
OP_METERS	3534
POPULATION	12286

Identified 1 Feature

Source: WAF

ID	Project	Name	Coordinates	Capacity	Source	Resources	OP_Meters	Population
1	Project	Navadeleba Regional Water Supply	129433_440	5250 Cu.m/day	SURFACE/BORN	3040 Cu.m total	3534	12286
2	Project	Navadeleba Regional Water Supply	129433_440	5250 Cu.m/day	SURFACE/BORN	3040 Cu.m total	3534	12286
3	Project	Navadeleba Regional Water Supply	129433_440	5250 Cu.m/day	SURFACE/BORN	3040 Cu.m total	3534	12286
4	Project	Navadeleba Regional Water Supply	129433_440	5250 Cu.m/day	SURFACE/BORN	3040 Cu.m total	3534	12286
5	Project	Navadeleba Regional Water Supply	129433_440	5250 Cu.m/day	SURFACE/BORN	3040 Cu.m total	3534	12286

- Telecom Fiji Limited (Cables, Ducts Network)
- FEA : Power-Stations & HV - Lines

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LAND USE (cont..)

EMERGENCY RESPONSE

81 Police Stations
162 Health Facilities
1910 Fire Hydrants
1850 Evacuation Centres

Legend

Emergency_Response

- all other values

Infrastructure_Category

- Evacuation Centre
- Fire Hydrant
- Health Centre
- Police Station
- Unknown
- Roads
- Coastlines

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ADMINISTRATIVE BOUNDARIES

LAND TENURES

- Provinces
- Old Districts
- New Districts
- Town Boundaries

- Cadastral Layer (GDBs)
- Tenures

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Suva Town Planning Scheme

Prepared by Project Team based on DTCP's Approved Zoning Schemes

Percentage of parcels within municipality boundaries with Lot and Plan IDs linked to approved zoning					
Municipality	% linked	Total Parcels of each Municipality	Municipality	% linked	Total Registered Parcels
1. Suva	79.70%	11,398	8. Levuka	98.12%	321
2. Wa	98.84%	1,271	7. Nadi	98.72%	1,843
3. Labasa	98.81%	1,268	9. Savunuku	98.09%	578
4. Lami	98.95%	1,270	9. Nakorou	98.33%	1,384
5. Lautoka	98.90%	7,981	10. Sigatoka	97.76%	313

Zoning Geodatabase & PDF outputs

SOILS

Viti Levu - Major Landforms

Viti Levu - Internal Drainage of Soils

Soil Temperature Regime	Separates soils of low lands & foothills from soils of up-lands. This differentiation reflects the change in soil temperature regimes (STR) at 600m altitude Isothermic STR above 600m & isohyperthermic STR below 600m
Landform	Groups soils into major landform categories
Parent Materials	Further differentiates soils on the basis of the parent material from which they develop
Soil Internal drainage	Further subdivides soils on the basis of internal drainage classes
Soil Moisture Regime	And a final differentiation is made on the soil moisture regime under which they form: aquic, udic, perudic, ustic

- Soil Series (1 -227)
- Land Use Capability (1 – 8)
- Major Landforms (12 classes)
- Internal Drainage
- Soil Moisture Regime
- Soil Temperature Regime
- Slope (8 classes)

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Source: Min. of Agriculture, Land Use Planning Section

Viti Levu & Vanua Levu Geology

LUCIP_Geology_250000

<all other values>

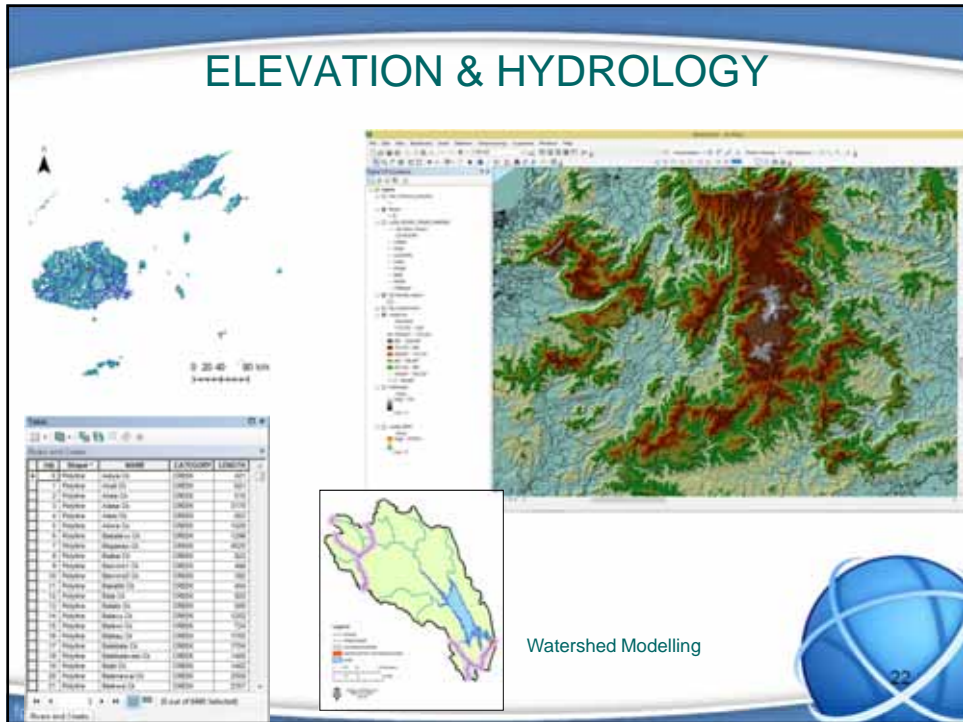
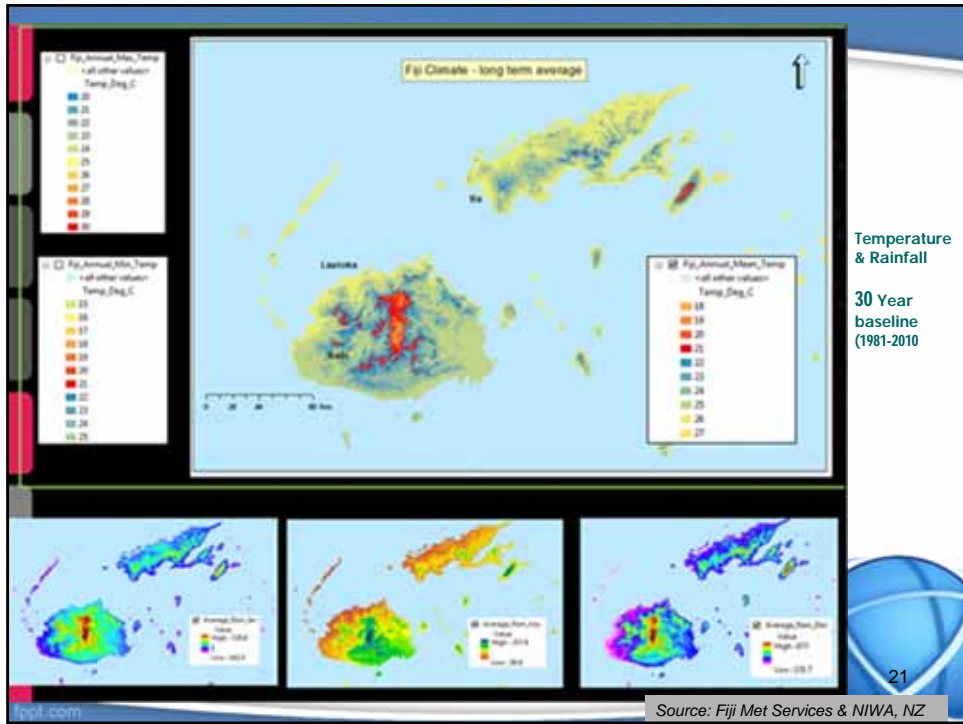
Group

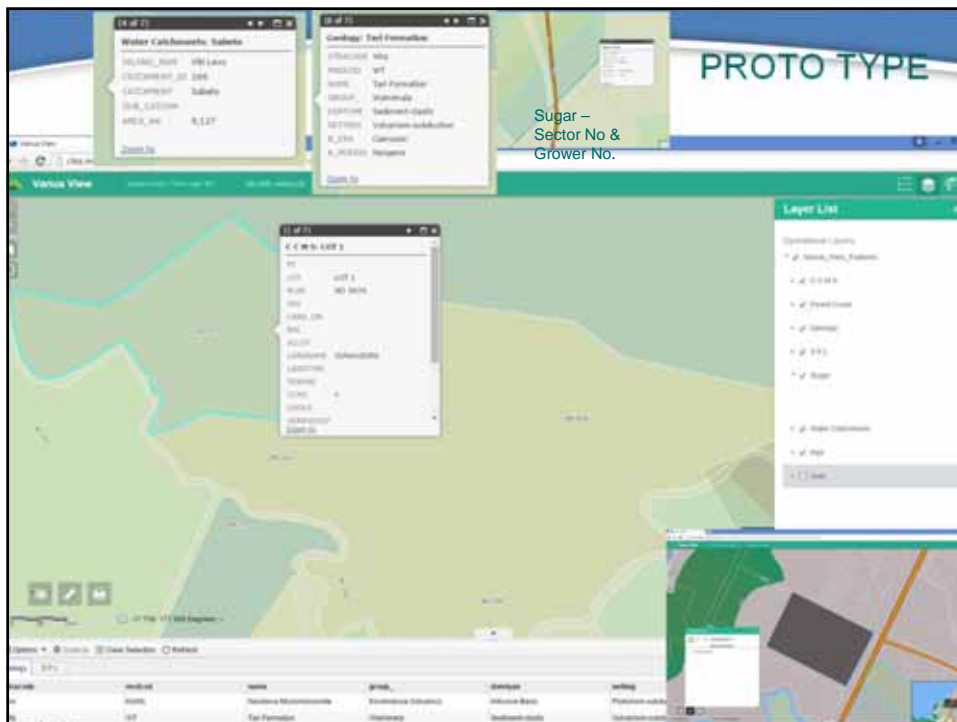
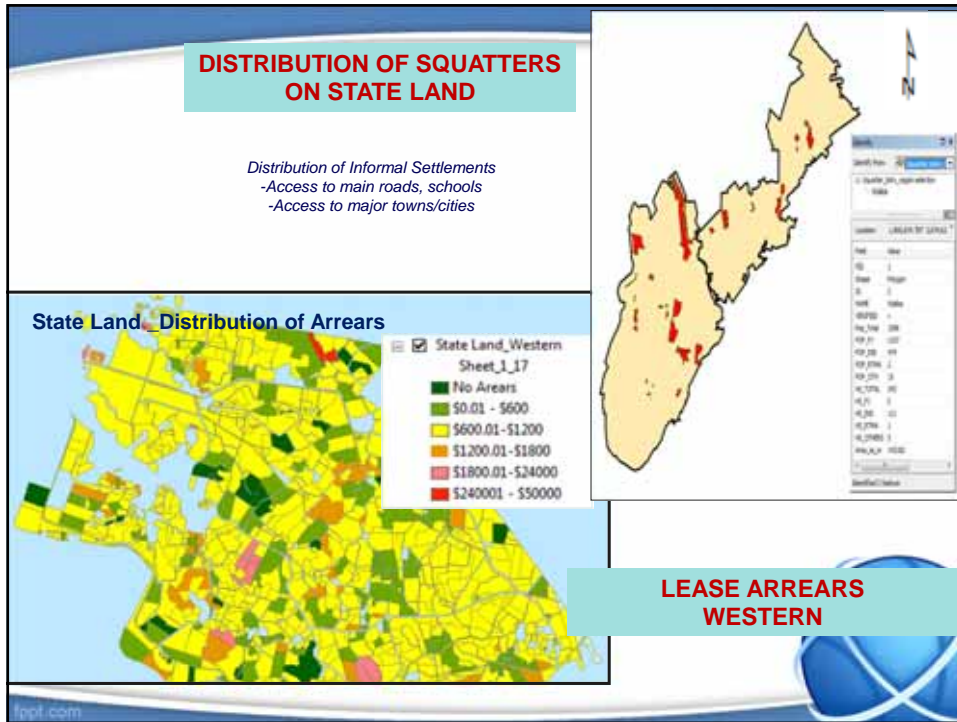
- Ba Volcanic
- Colo Plutonics
- Cuvu Sedimentary
- Koromavua Volcanic
- Medrautucu
- Nadi Sedimentary
- Navosa
- Ra Sedimentary
- Savura Volcanic
- Tokalau Limestone
- Tuva
- Unclassified
- Verata Sedimentary
- Wainimala
- Yavuna

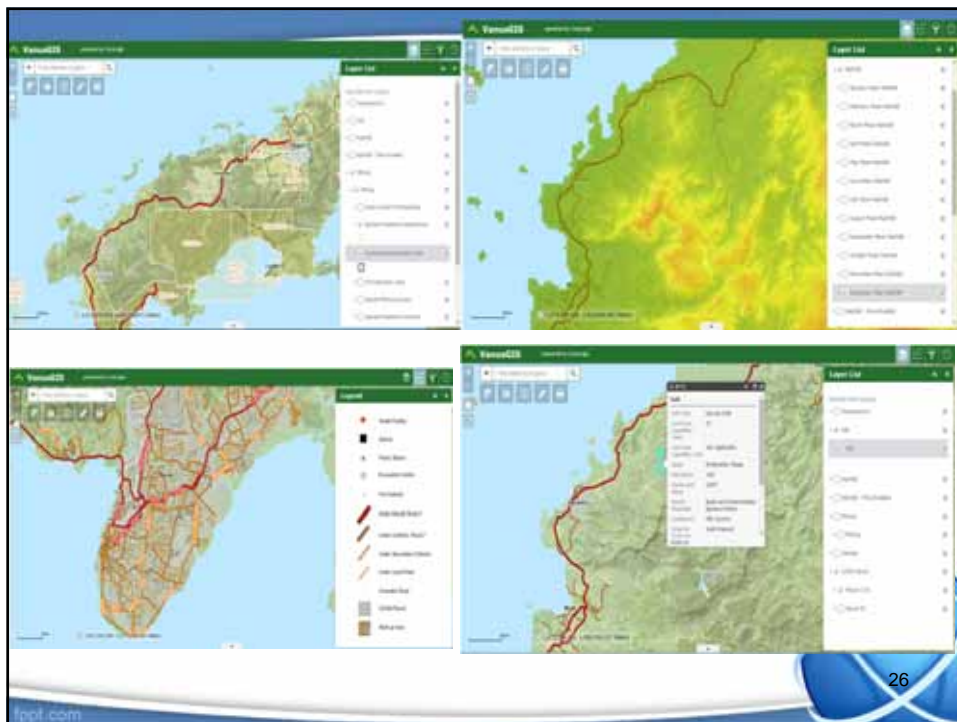
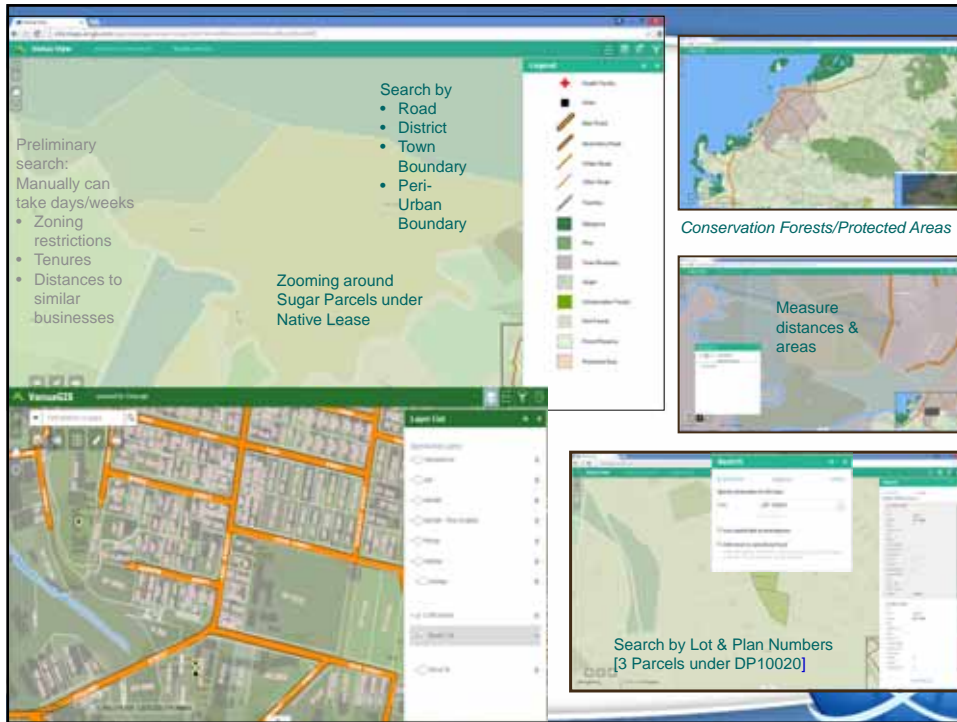
GEOLOGY_VITI LEVU

Source: MRD

#	Shape	Shorcode	MIRcode	Name	Group	Strattype	Setting	B_era	B_period
1	Polypgm	00a	00a	Wainimala Micromonitons	Wainimala Volcanic	Strattype	Volcanism subduction	Cameroic	Neogene
2	Polypgm	00b	00b	Nakorobu Basalt	Ba Volcanic	Sediment clastic	Volcanism subduction	Cameroic	Neogene
3	Polypgm	00c	00c	Baravatu Silt	Ba Volcanic	Strattype basic	Volcanism subduction	Cameroic	Neogene
4	Polypgm	00d	00d	Baravatu Silt	Ba Volcanic	Strattype basic	Volcanism subduction	Cameroic	Neogene
5	Polypgm	00e	00e	Baravatu Silt	Ba Volcanic	Strattype basic	Volcanism subduction	Cameroic	Neogene
6	Polypgm	00f	00f	Fluvial Deposits	Unclassified	Sediment clastic	Sedimentation	Cameroic	Quaternary
7	Polypgm	00g	00g	Cu Sandstone	Tuva	Sediment clastic	Sedimentation	Cameroic	Neogene
8	Polypgm	00h	00h	Roaandava Basalt	Ba Volcanic	Strattype clastic	Volcanism subduction	Cameroic	Neogene
9	Polypgm	00i	00i	Wainimala Conglomerate	Ra Sedimentary	Sediment clastic	Volcanism subduction	Cameroic	Neogene
10	Polypgm	00j	00j	Yavuna Conglomerate	Tuva	Sediment clastic	Sedimentation	Cameroic	Neogene
11	Polypgm	00k	00k	Verata Conglomerate	Tuva	Sediment clastic	Sedimentation	Cameroic	Neogene
12	Polypgm	00l	00l	Nakorobu Basalt	Ba Volcanic	Sediment clastic	Volcanism subduction	Cameroic	Neogene
13	Polypgm	00m	00m	Nakorobu Basalt	Ba Volcanic	Sediment clastic	Volcanism subduction	Cameroic	Neogene
14	Polypgm	00n	00n	Nakorobu Silt	Ba Volcanic	Sediment clastic	Volcanism subduction	Cameroic	Neogene







Challenges

- **Data sharing** – undertaking spatial analysis on certain data is limited (confidential) thus some important information may remain inaccessible.
- **Delays** in receiving data
- Delays in cleaning in-housed data
- Procurement process can take months

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Phase Two

- Suitability Mapping
- Upgrade of Vanua-GIS application to smart phones/gadgets
- 3D modelling of key government office buildings

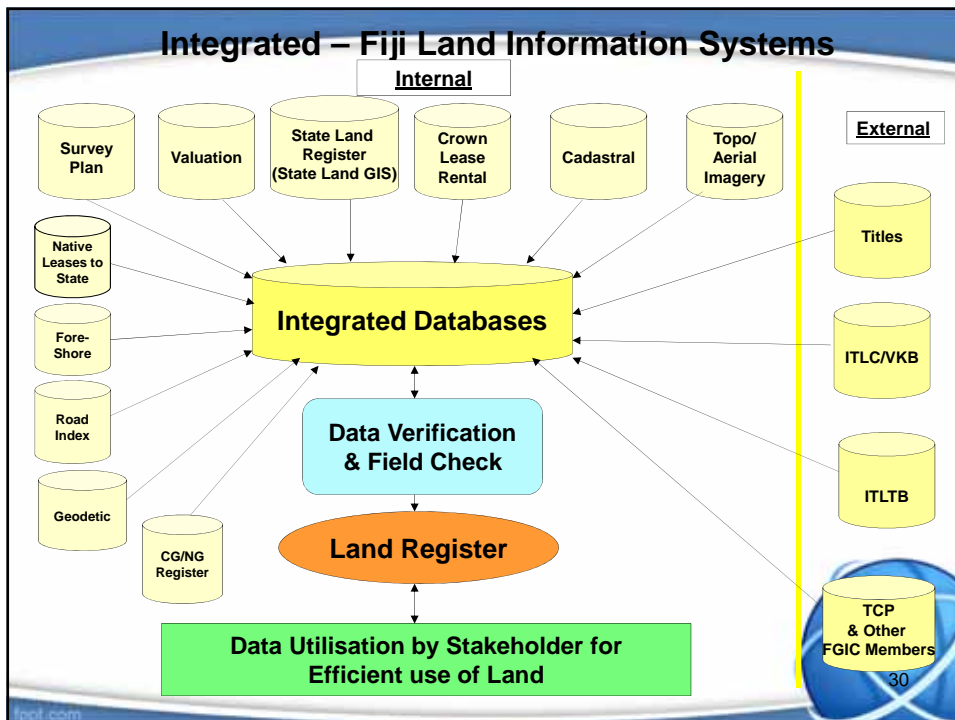
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National Land Register

- Project focuses on registering and integrating all surveyed land information in Fiji.
- Search by Titles, then proceed to register information on tenures, leases, boundary definitions, area, land valuation and land ownership.



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Land register update

- ◉ **State Lease** - 19,735 leases
- ◉ **Freehold Leases** - 42,792 Certificate of Titles
- ◉ **iTaukei Leases** - 38,000 Native Leases

How many have been registered?

- ❖ **State** - **100%**
- ❖ **Freehold** - **100%**
- ❖ **Native** - **8% ***

- ❖ *** (awaiting MOU with iTLTB)**



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Thank you.



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