



Fiji's thoughts & experience on

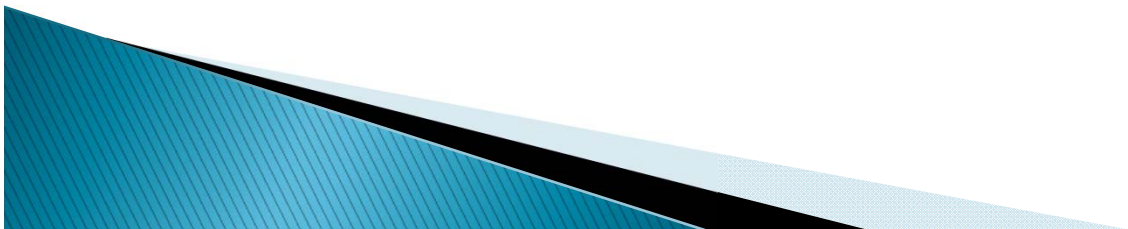
integrating statistics & gis

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- Mr Poasa Neimila(Fiji Bureau of Statistics)



OUTLINE

- Background on GIS work in FIJI(Government Level)
- Statistics & GIS
- Challenges & Constrains of GIS Development
- Way forward





Background

- ▶ Following trends in the developed world – adopting the technology and methods
- ▶ Progressing – Accepting the importance of GIS in analysis purpose & the need for remote sensing data
- ▶ “DATA sharing” – Never Black & White Issue!!!
- ▶ Most agencies are still in the PHASE 1 Mode “Collecting data and its ATTRIBUTES”, as for some – “Analysis Mode”
- ▶ Reviving the Fiji Geospatial Information Council Qtr Meetings



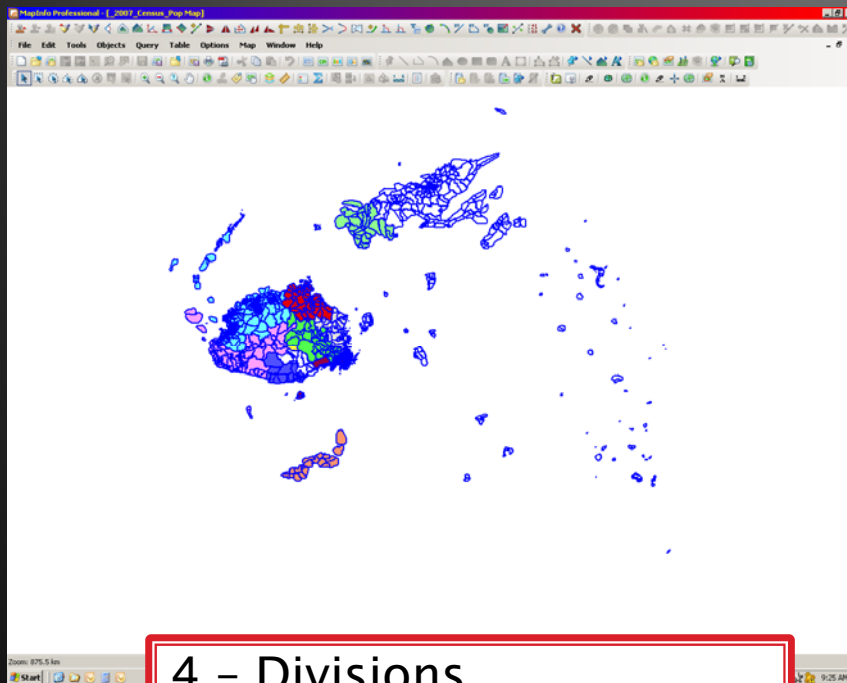
2014 GIS PROJECTS

- ▶ National Land Register
- ▶ National Land Use Utilisation Plan
- ▶ Election Mapping
- ▶ National Disaster Management Office Response Mapping
- ▶ *Depended on other agencies data to successfully complete these projects.*

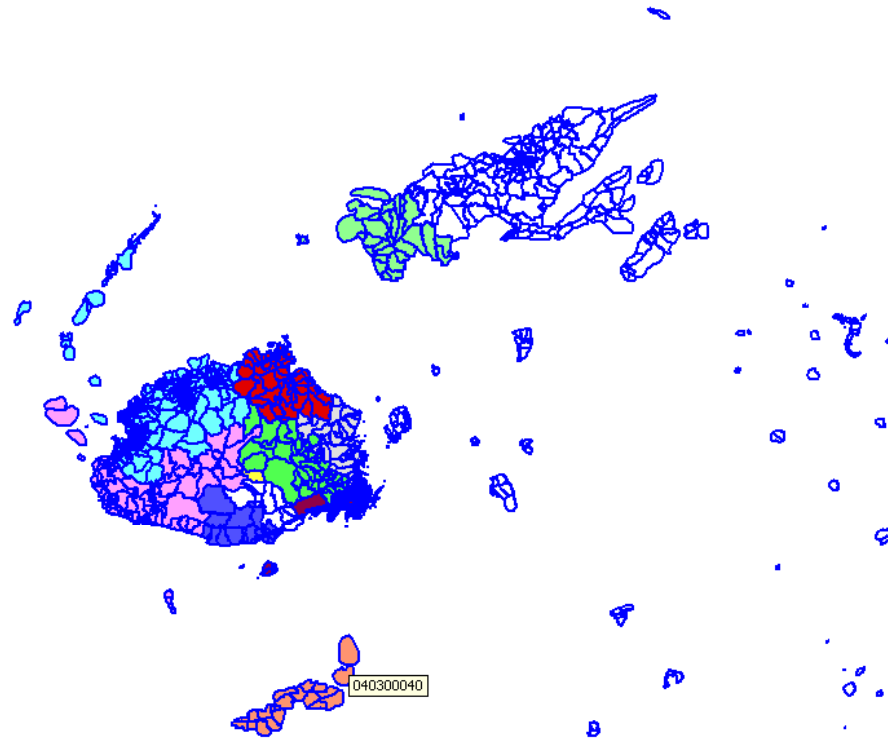


Intergrating statistics & gis-Census data

Fiji Islands Census Enumeration Areas



4 – Divisions
15 Provinces
86 Districts (Tikina)
1602 Enumeration Areas



Info Tool	
Enumeration_Area:	040300040
Province:	Kadavu
Tikina:	Nakasaleka
Area:	0
EA:	040300040
Total:	275
TFijian:	271
TIndian:	0
TRotuman:	0
TOther:	4
Tmale:	140
MFijian:	138
MIndian:	0
MRotuman:	0
MOther:	2
FTotal:	135
FFijian:	133
FIndian:	0
FRotuman:	0
FOther:	2

<< >> List _2007_Census_Pop



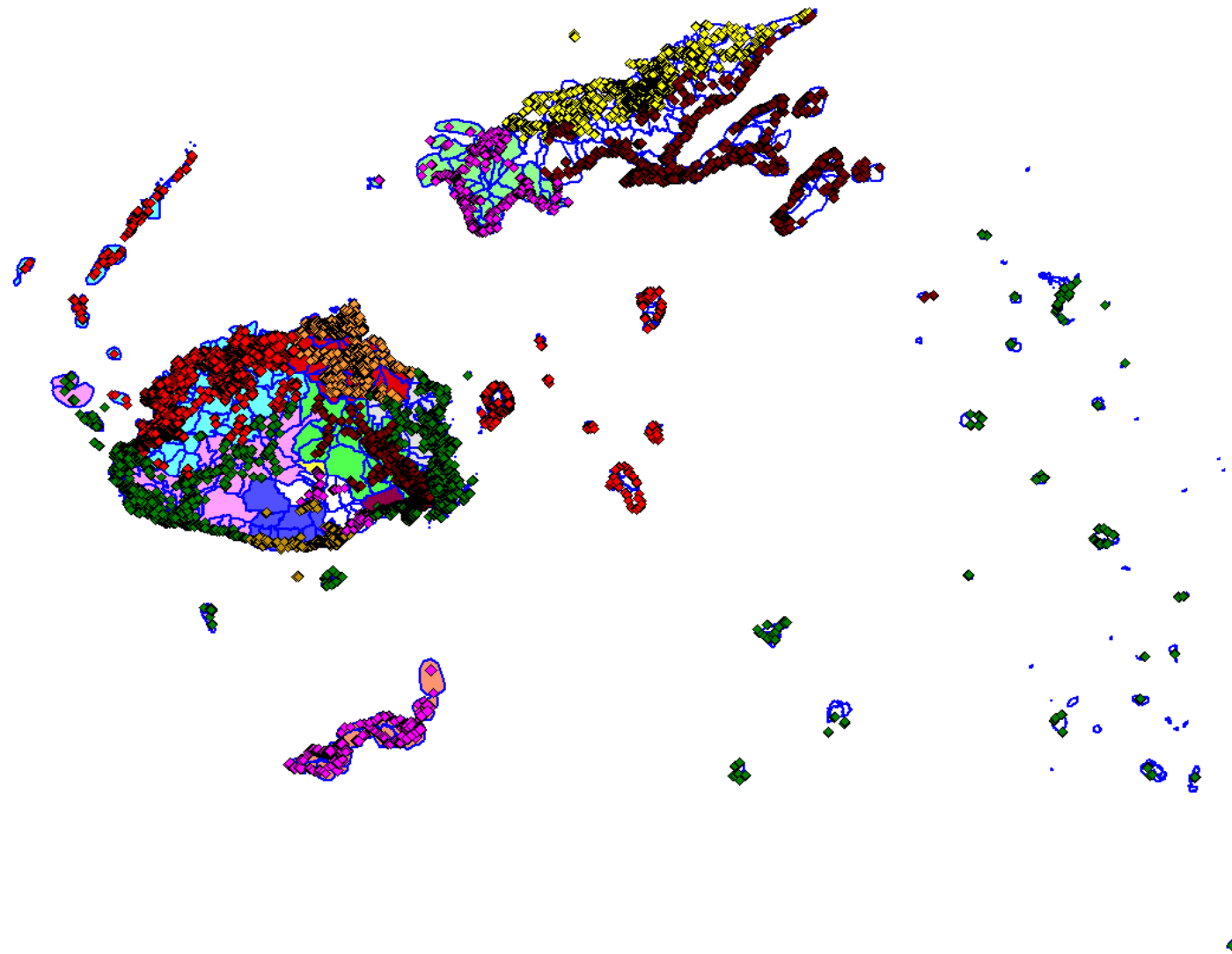
Fiji Islands Census Enumeration Areas & GPS



- One of the first country to use GPS in Census taking in the South Pacific
- 200 Garmin e-trex GPS unit
- 20 Laptops
(Sponsored by UNFPA)
- 1602 Enumeration Areas
- 174 423 households

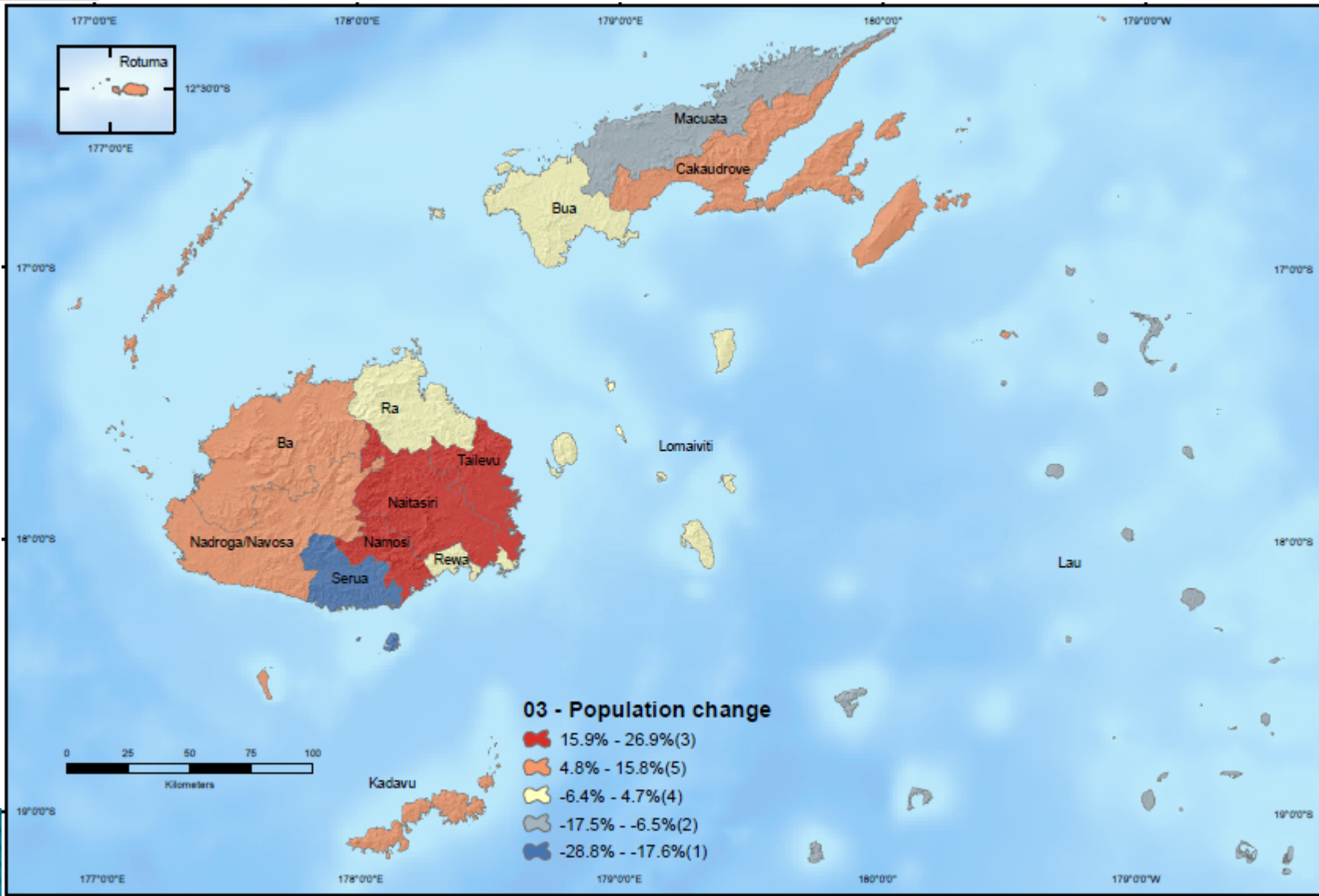


Fiji Islands Census Enumeration Areas & GPS-2007 Census



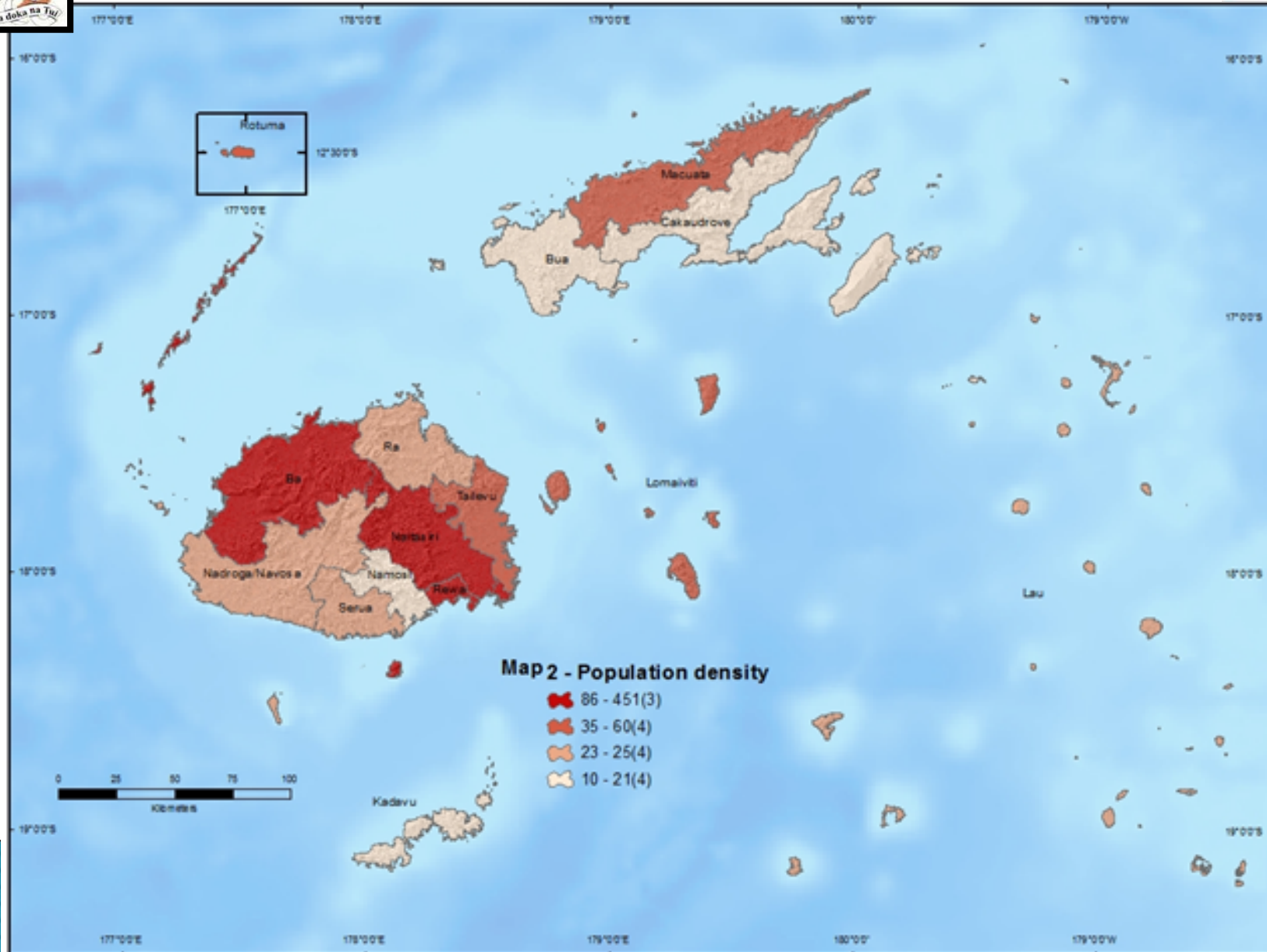


2007 CENSUS Enumeration Areas (EAs) - Population changes (1996 - 2007)



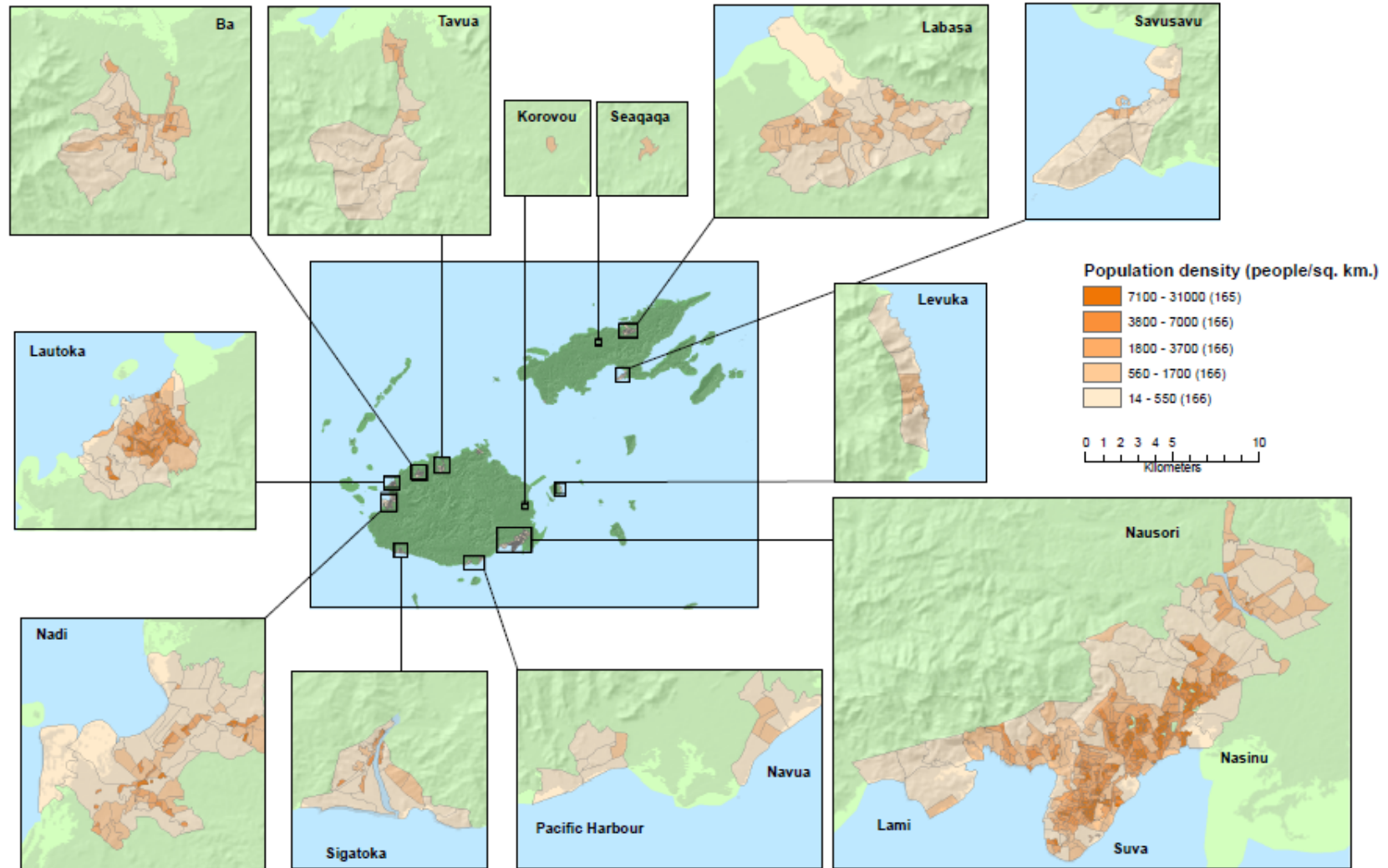


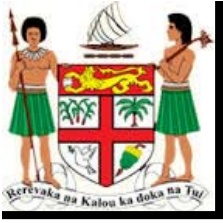
2007 CENSUS Enumeration Areas (EAs) - Population Density





Map 02 - Population density





Example of Statistical Data Analysis with Geospatial Technology



▶ Sugar Cane Production Analysis

- Data was collected on the annual progress of output per parcel of land on our State Land Tenure.
- In order to perform some form of analysis, our GIS Team needed to identify what sort of statistical data could be used for so that some form of information could be gained by this project.





- The data collected was not geospatially referenced so what had to be done was to somehow join the data with something that was geospatially recognized.
- This was done by the linking of specific fields in the spreadsheet to fields within the state land parcels layer in Arc map.

Excel Sheet

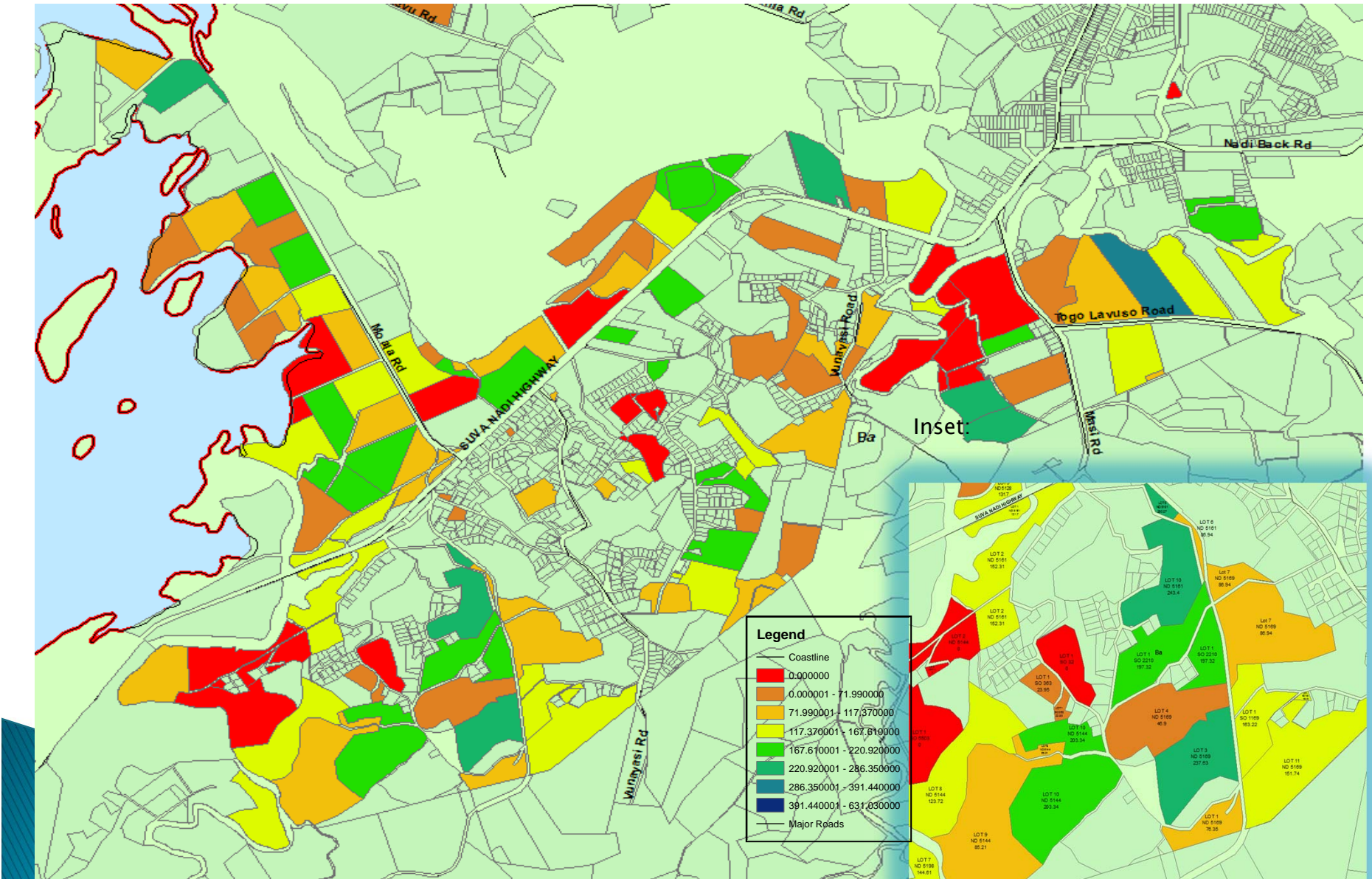
	A	B	C	E	F	G	H
1							
2	Numb	Name	File#	Lease	SCA	FBA	Reg Da
3	4209	Ultra Kumari aka Ultra Devi	4/13/895	8.1	4.9	55	18-Sep-13
4	1024	RAM HANS	4/13/424	2.4	2.3	63	21-Aug-91
5	8889	Suruj Bali	4/13/456	3.1	3	37	20-May-13
6	1	Est of Phul Kuar	4/13/793	5.6	5.7	282	22-Sep-03
7	2	SHU RAM	4/13/794	5.2	5.3	12	22-Jan-90
8	3	Kamal Prasad f/n Hem Raj	4/13/795	4.6	4.6	388	23-Mar-99
9	4	Virendra Kumar	4/13/796	5.2	4	346	15-Jul-03
10	5	RAM PRAKASH	4/13/797	4.8	4.8	427	22-Jan-90
11	6	Rajend Prasad	4/13/798	4.8	4.8	289	6-Jun-03
12	8	AMI CHAND	4/13/800	5.3	5.3	342	22-Jan-90
13	9	Est of Mohan	4/13/801	5.7	5.7	163	27-Jul-05
14	10	VUENDRA KUMAR F/N RAM RATTAN	4/13/802	7.1	5.7	511	5-Dec-94
15	11	PRABHA SHANKAR	4/13/803	8.1	8.1	333	22-Jan-90
16	12	Palpa Nadan	4/13/804	5.3	5.3	530	11-May-10
17	13	VISHUDHA NAND F/N D S AWASTHI	4/13/805	7	5.7	299	17-May-95
18	14	VUJAY LAL	4/13/806	5.7	5.7	289	22-Jan-90
19	15	VUEND PRASAD	4/13/807	6	6.1	490	22-Jan-90
20	16	Est of Vidya Prasad aka Vidya Prasad	4/13/808	4.8	4.8	296	7 Aug 13

Attribute Table

ALLOT	LANDNAME	LANDTYPE	TENURE	CCMS	LDFILE	VERIFIEDST	COMMENTS	TLA
	MUASARA		SL		4/11/1303	V		R09
	MUASARA		SL		4/11/1305	V		R09
	MUASARA		SL		4/11/1784	V		R09
	MUASARA		SL		4/11/1284	V		R09
	TAVANASAI & MUASARA		SL		4/11/1290	V		R09
	TAVANASAI & MUASARA		SL		4/11/1289	V		R09
	TAVANASAI & MUASARA		SL		4/11/1285	V		R09
	TAVANASAI & MUASARA		SL		4/11/1287	V		R09
	TAVANASAI & MUASARA		SL		4/11/1304	V		R09
	TAVANASAI & MUASARA (PT OF)		SL		4/11/1304	V		R09
	TAVANASAI & MUASARA		SL		4/11/1307	V		R09
	VENADRAVADRA NO 1		SL		4/11/1232	V		R09
	VENADRAVADRA NO 1		SL		4/11/1233	V		R09
	VENADRAVADRA NO 1		SL		4/11/1234	V		R09
	VENADRAVADRA NO 1		SL		4/11/1236	V		R09
	VENADRAVADRA NO 1		SL		4/11/1244	V		R09
	KAVOKAINAGASAU		SL		4/11/1386	V		R09
	KAVOKAINAGASAU		SL		4/11/1390	V		R09
	KAVOKAINAGASAU		SL		4/11/1391	V		R09
	KAVOKAINAGASAU		SL		4/11/1387	V		R09
	KAVOKAINAGASAU		SL		4/11/1372	V		R09



Sugar Cane Production 2013 Outcome:





Challenges – Fiji

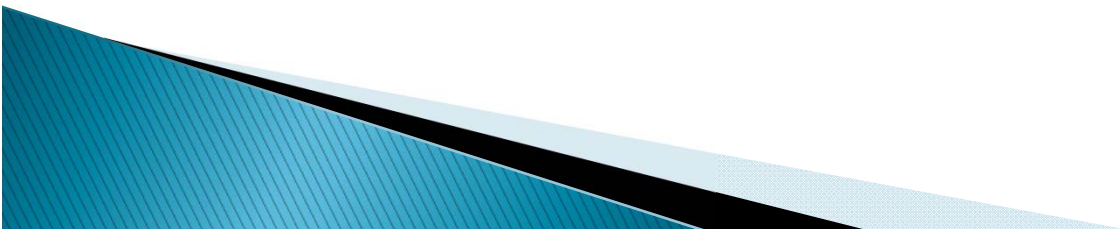
- ▶ Geospatial capabilities are fragmented, inconsistent, and duplicated.
- ▶ Our ability to create data in general is ahead of our ability use data effectively to solve problems
- ▶ Value of geospatial information is not fully realized in the community.
- ▶ Lack of institutional arrangements – no clear understanding of the roles and mandates – no policy framework and leadership
- ▶ Sharing information does not come easy
- ▶ Data without Meta Data – Credibility, accuracy, legitimacy, status
- ▶ Proper Inventory. Knowledge of who has what.
- ▶ Skill requirements and training mechanism





How can we make progress

- ▶ Develop a national, regional and global strategic framework for geospatial information
- ▶ Build capability and capacity within the local/governmental GIS community
- ▶ Establish means to assure accurate & quality geospatial information
 - Sustainable funding to maintain the quality of data
- ▶ Promote data sharing, accessibility, and dissemination



How can we make progress..... cont'd

- ▶ Embrace trends in information technology
- ▶ Promote geospatial advocacy and awareness
- ▶ Partner with civil society and the private sector
- ▶ Evolving a shared vision for the future in management of geospatial information nationally and globally
- ▶ A multi national legal or policy framework in place. To deal with as data acquired will likely to be processed in another country by a corporate organization.





What we are doing.....

- ▶ Reviving the Fiji Geospatial Information Council(Cabinet Decision –05/02/1991)
- ▶ Drafting Fiji's National GIS Strategies
- ▶ Created a directory of data custodians
- ▶ Started signing MOU's with agencies who request for data





Thank you
“VINAKA VAKALEVU”

