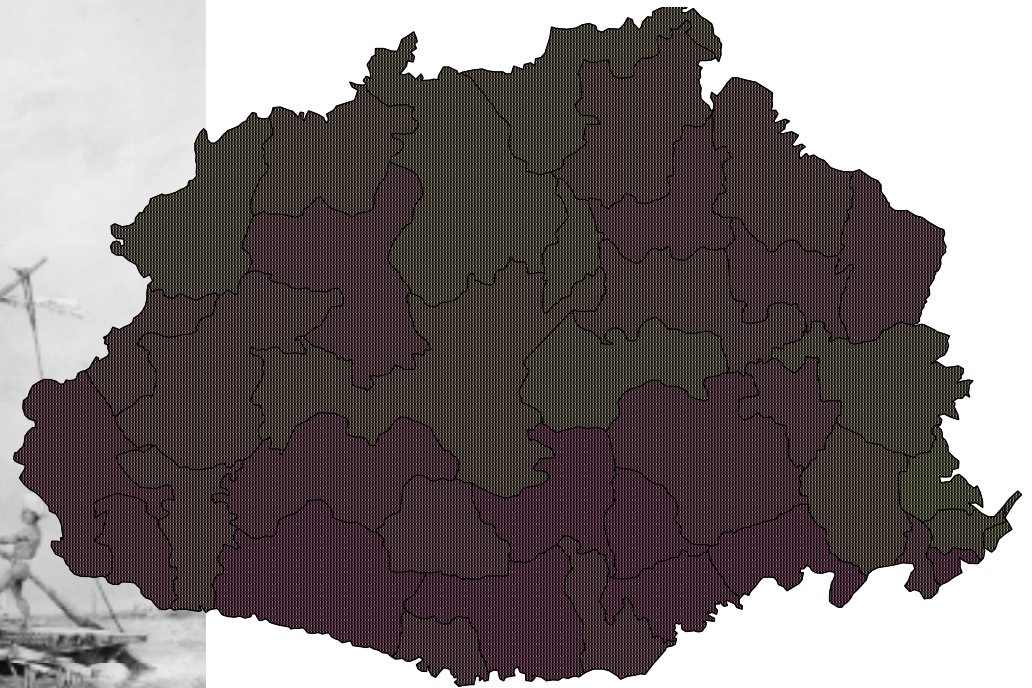


The Provincial Profile **MAPPED**



A Prototype Social Atlas for Fiji

by Marc Schlossberg, U.S. Peace Corps Volunteer

The Provincial Profile - MAPPED

A Prototype Social Atlas for Fiji

Introduction

The following pages introduce a prototype Social Atlas for Fiji. GIS skills are still in the developing stages throughout Fiji, but as the 1996 Census results become available by the end of 1997, the opportunity to use GIS will be greatly expanded. Therefore, this Social Atlas is designed to highlight some of the GIS methods by which the 1996 Census data can be analysed and presented to the public.

The maps on the following pages have been created using indigenous Fijian data at the Tikina level within Viti Levu. This limited data set has been used in order to simplify the mapping process and demonstrate the concept of thematic mapping and GIS analysis.

Base Data

The data for the maps come from the Provincial Profile Project, a comprehensive survey and report of demographic and housing characteristics of rural Indigenous Fijians. The report was compiled by the Ministry of Fijian Affairs and completed in March 1995. The Provincial Profile displays its data in tables and in alphabetical order by province and Tikina. While the Provincial Profile has been extremely useful, it is limited in its ability to help readers understand the data in a regional context.

The data in the Provincial Profile was collected at a village level and then consolidated at the Tikina level. This Tikina level data was based on original pre-1940s Tikina boundaries. These old boundaries have been consolidated by government into larger Tikina areas in order to make government administration easier. The maps in this Social Atlas use the

newer Tikina boundaries. Therefore, the Provincial Profile data had to be converted to these new boundaries. Once this conversion was completed, mapping could commence. Copies of the conversion chart can be obtained from the Native Lands Commission.

The government has recently changed its attitude again toward tikinas and is beginning to reinstitute the use of the original "old" Tikina boundaries.

Base Map

The base maps in this Atlas use Tikina as the level of data analysis. The Tikina boundaries were digitised by students at the GIS Lab at the University of the South Pacific. Digitising took place at a 1:250,000 scale. Polygonisation of the tikinas and provinces was conducted at the Ministry for Regional Development.

Hardware and Software

Data analysis, conversion, and bar chart analysis were developed in Microsoft Excel. Thematic mapping and GIS analysis were conducted using MapInfo 4.1. Map images and bar charts were copied to PageMaker for final layout of this Social Atlas.

Mapping hardware consisted of an IBM PC, with a Pentium 133Mhz chip, 16MB RAM, 1.2G hard drive, and a 15" monitor. Printouts were made by a Hewlett Packard Deskjet 820Cxi Windows based printer.

Data Display and Scale

The data on the following maps represents *rural indigenous Fijians only*. Some tikinas include urban centres within their boundaries, however the characteristics of those urban areas are not included in this Atlas.

In most maps, the data has been divided into five categories. Most maps display data using natural data breaks. The only exceptions are the three maps displaying toilet type - they use quantile ranges from 0-100%. Quantile ranges allow for easy comparison between characteristics (flush, pit, or water seal toilets), but are less useful than natural breaks in analysing the distribution within a single trait (concrete housing distribution only).

The bar charts mirror the maps in displaying the figures for each Tikina. They are displayed in descending order by data (rather than Tikina name), thus providing an additional method of comparing Tikina data.

About the Author

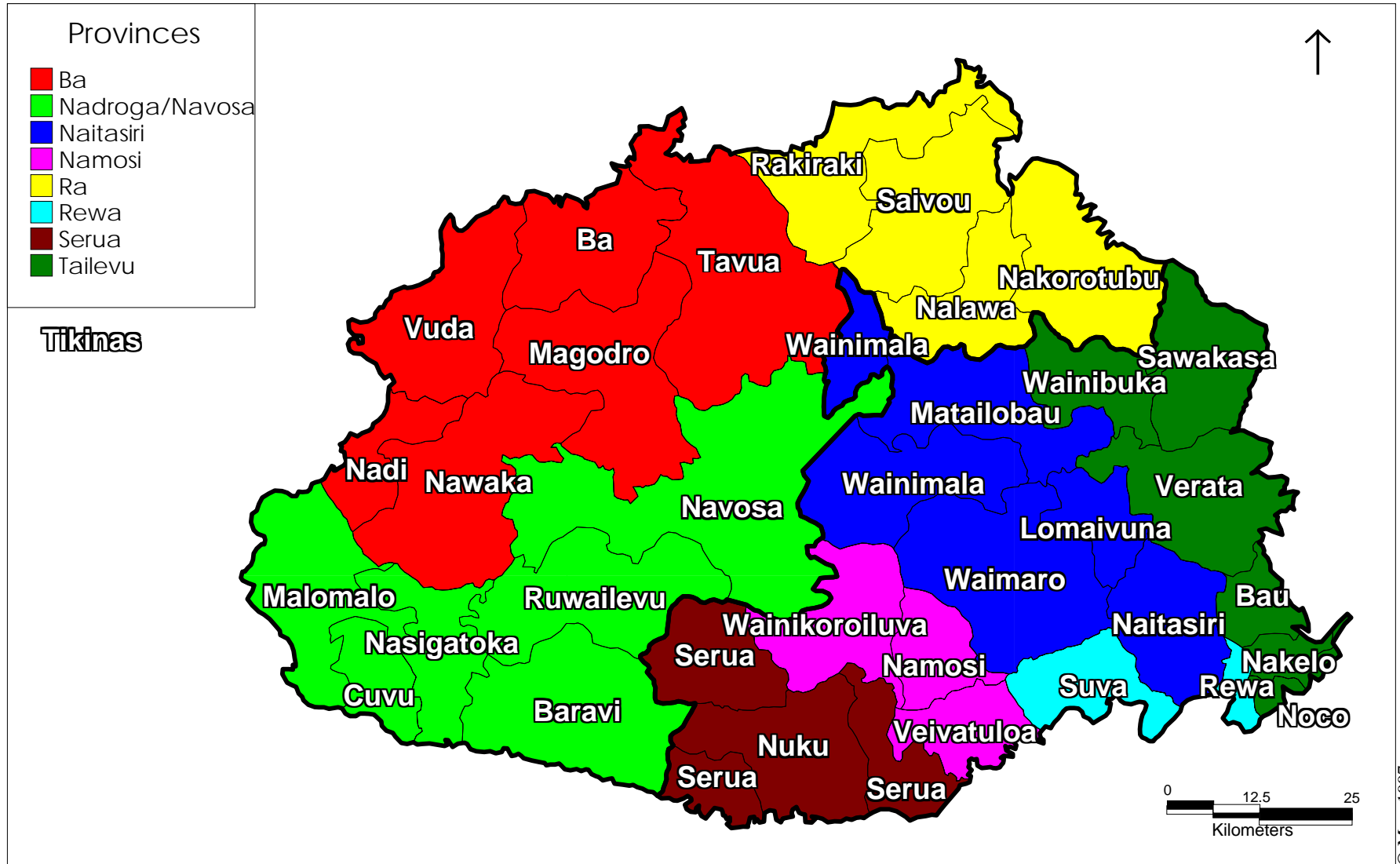
This Atlas was compiled by Marc Schlossberg, a U.S. Peace Corps Volunteer with the Ministry for Regional Development in Fiji.

Prior to his service as a Peace Corps Volunteer, Marc obtained a Master's degree in Urban and Regional Planning with a focus on GIS. In September, 1997, he will continue his studies of GIS by beginning a Ph.D. program in Urban, Technological, and Environmental Planning at the University of Michigan in the United States.



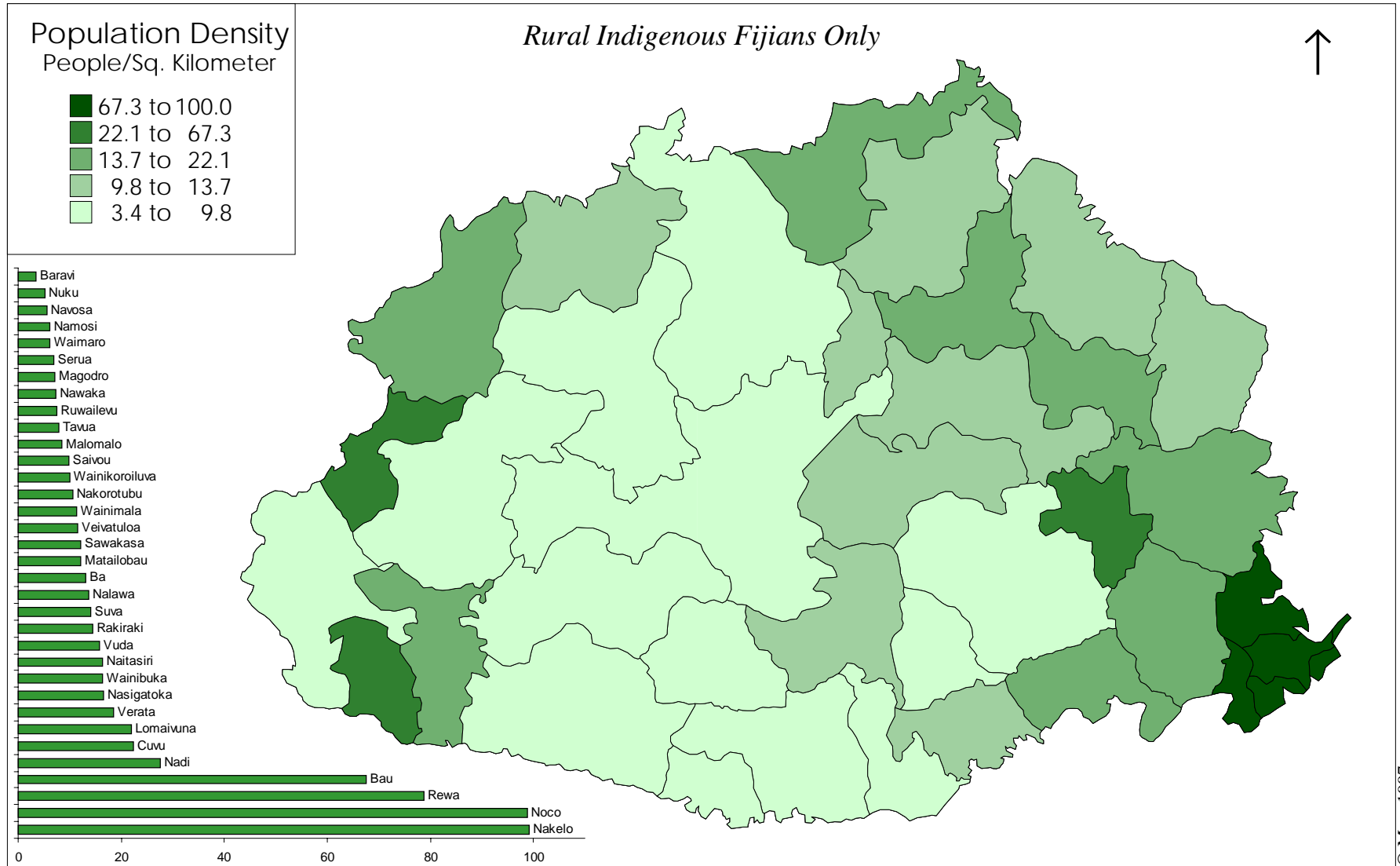
Provinces and Tikinas

Viti Levu

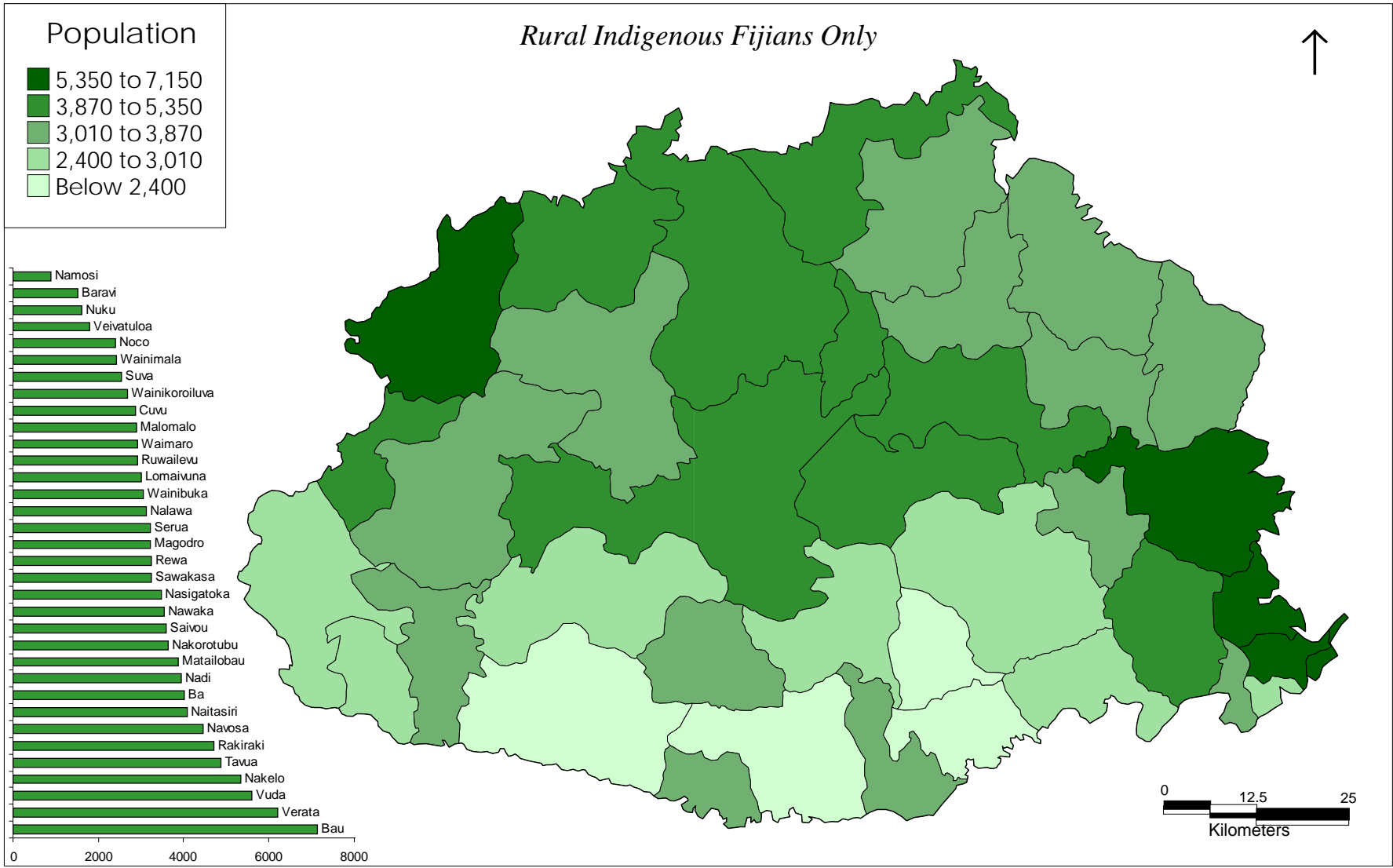


Population Density

Total People/Square Kilometer

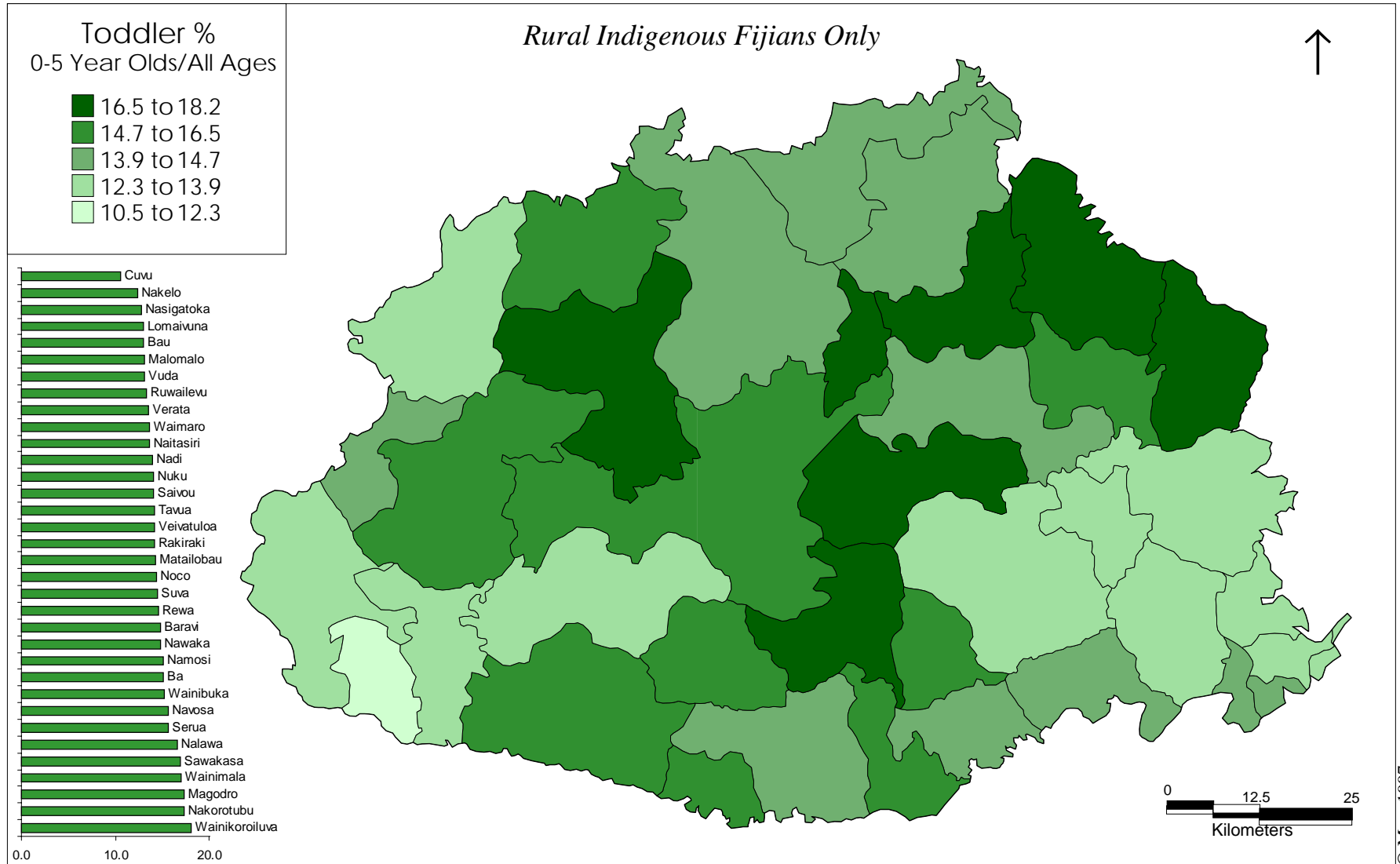


Total Population



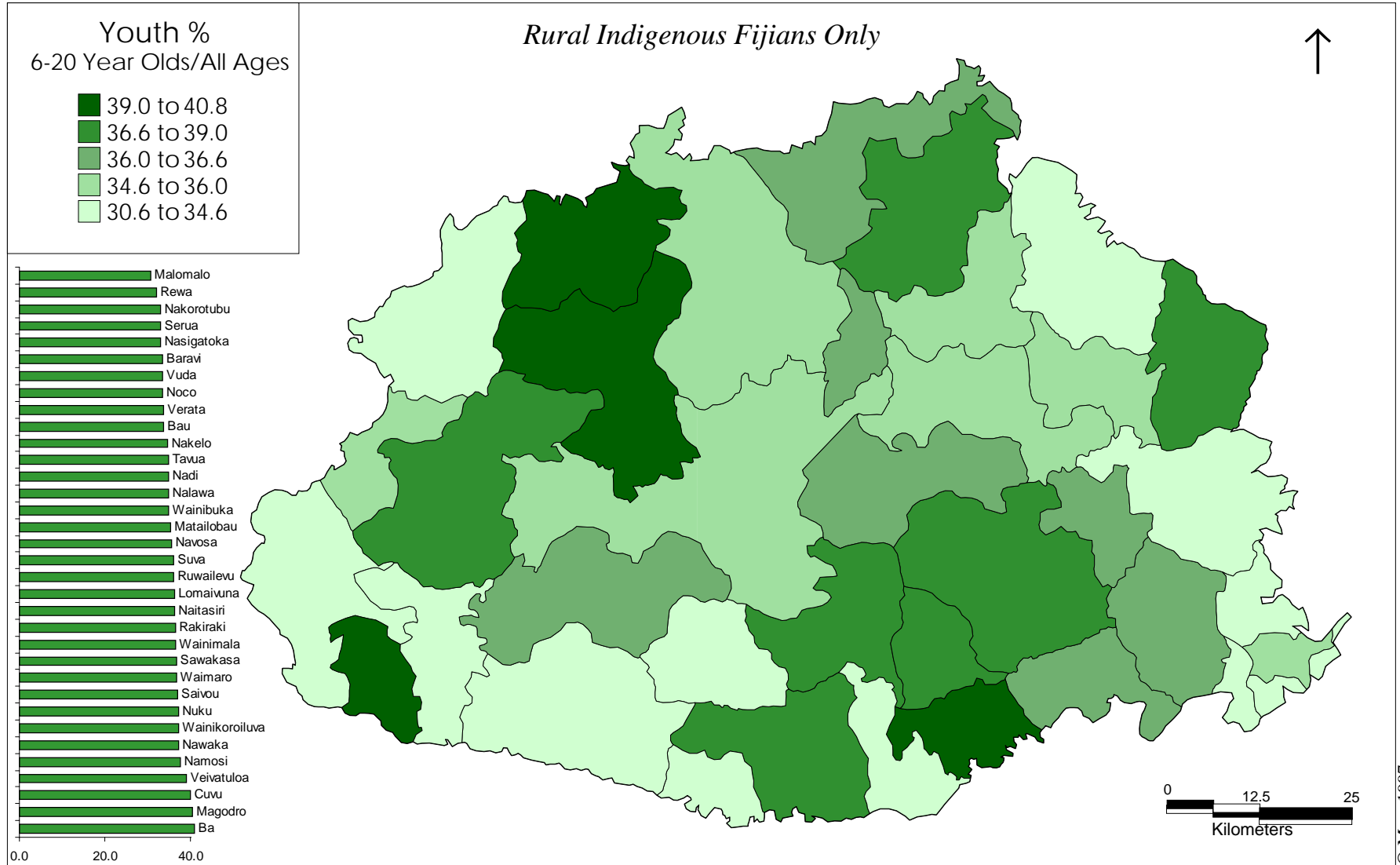
Toddler Percentage

0-5 Years Olds/Total Population All Ages



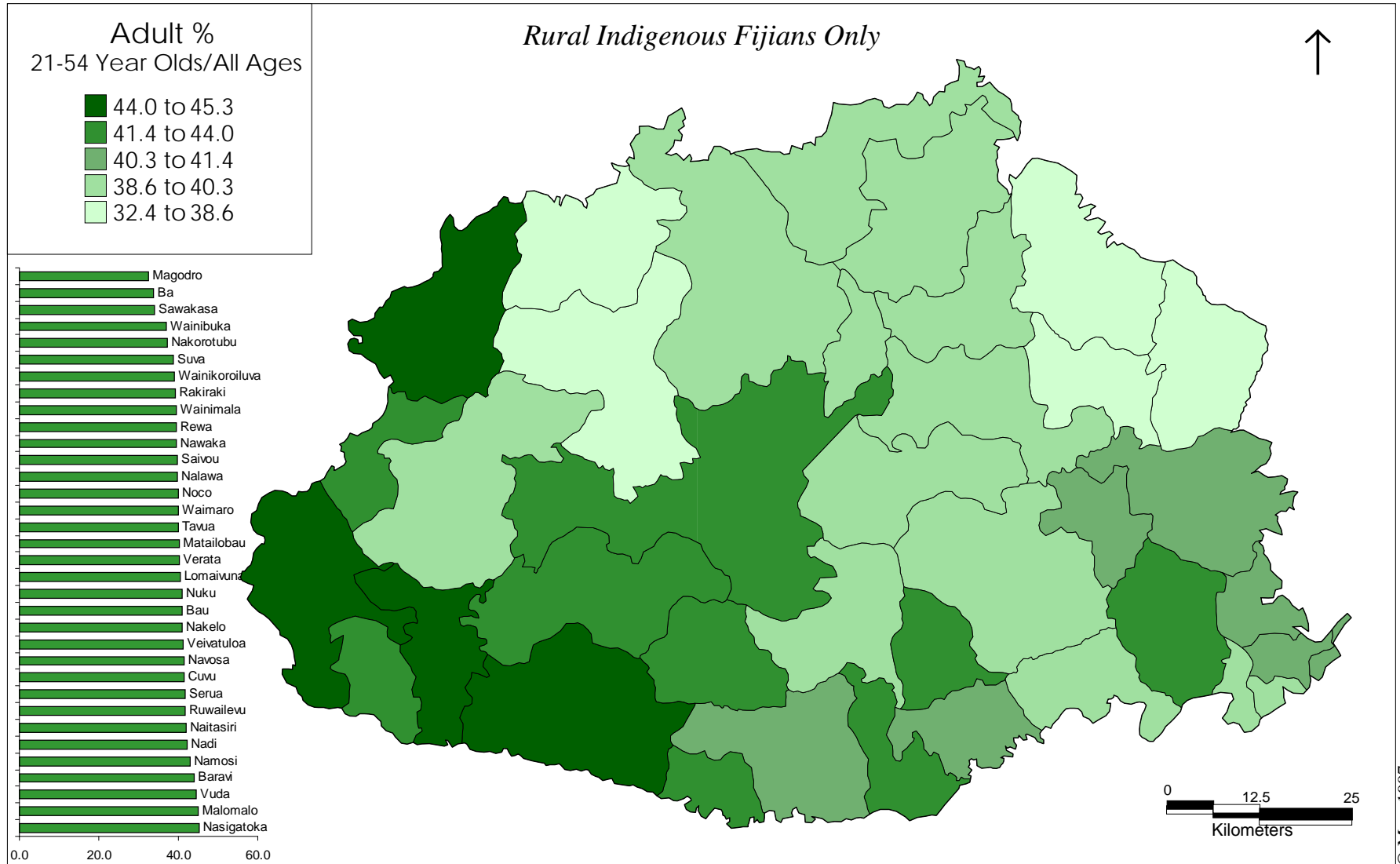
Youth Percentage

6-20 Year Olds/Total Population All Ages



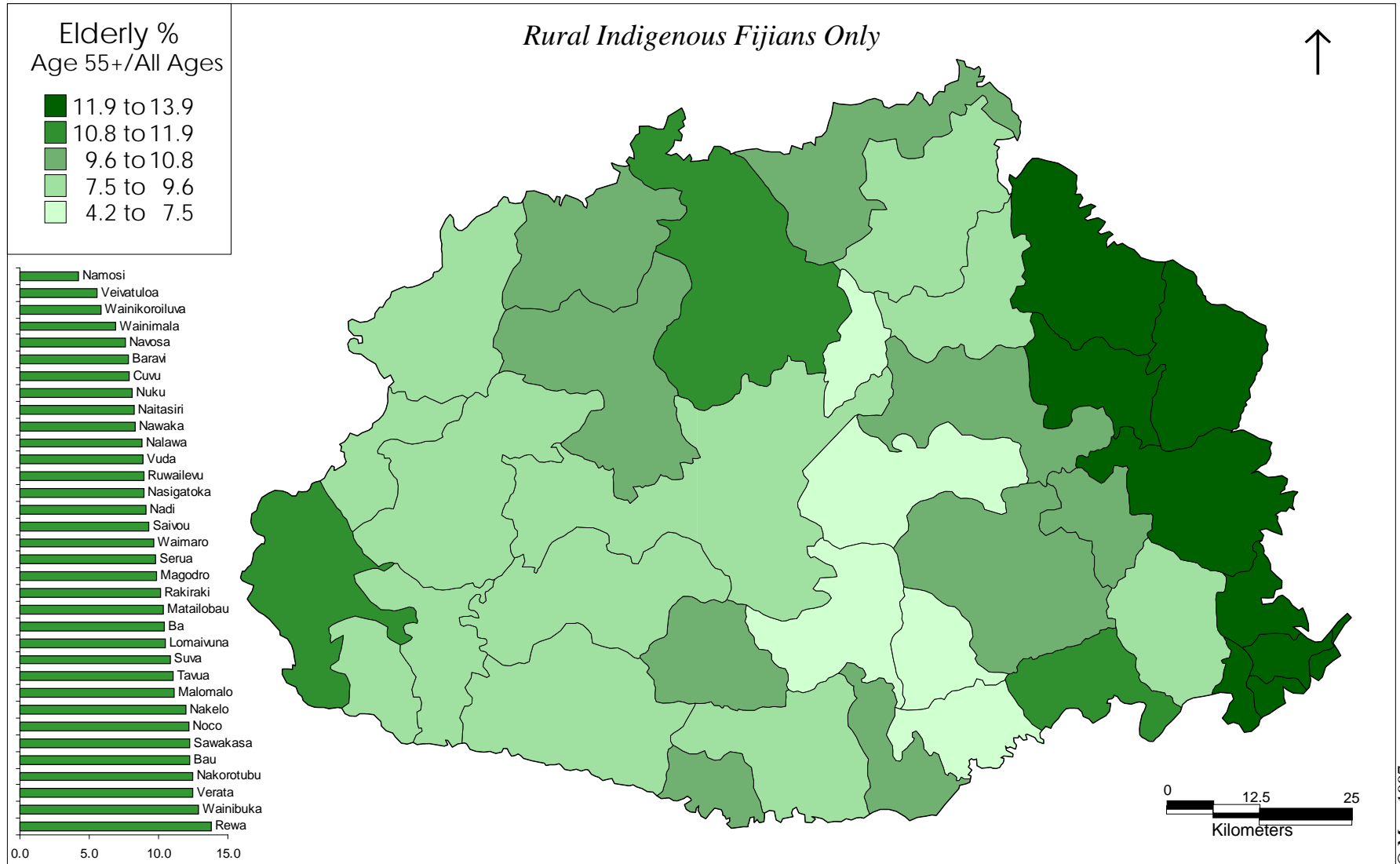
Adult Percentage

21-54 Year Olds/Total Population All Ages

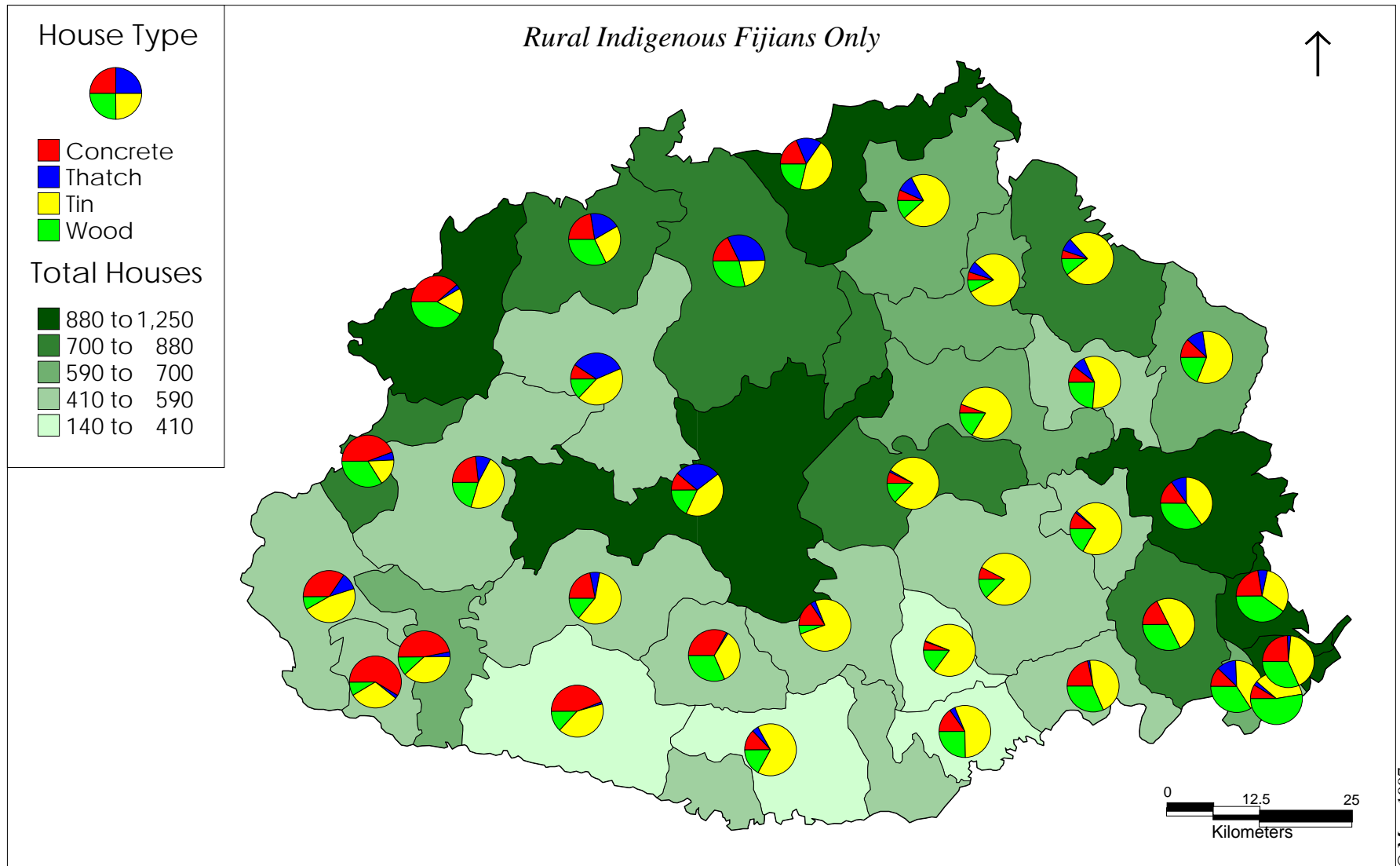


Elderly Percentage

Age 55+/Total Population All Ages

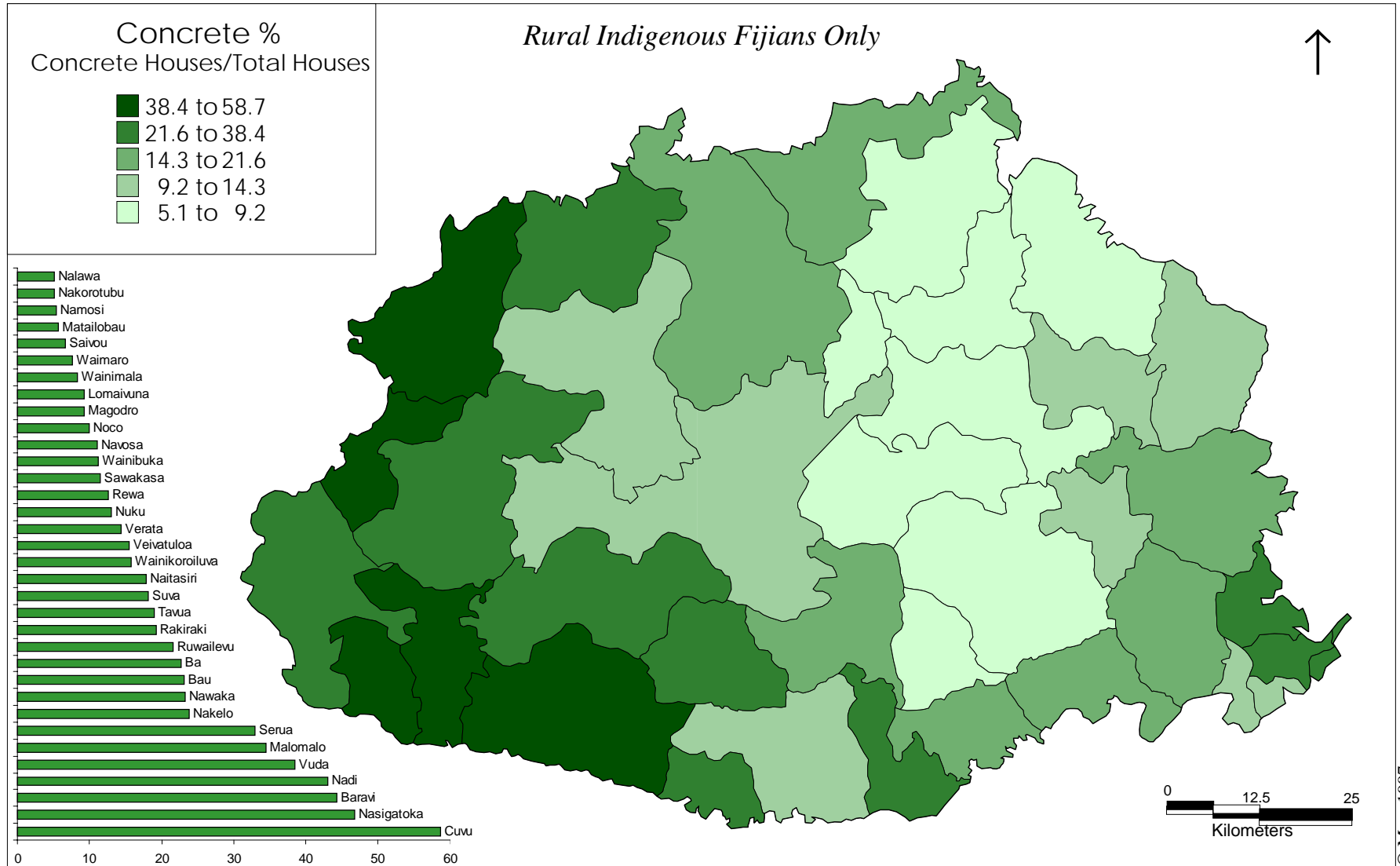


Total Houses and Housing Type



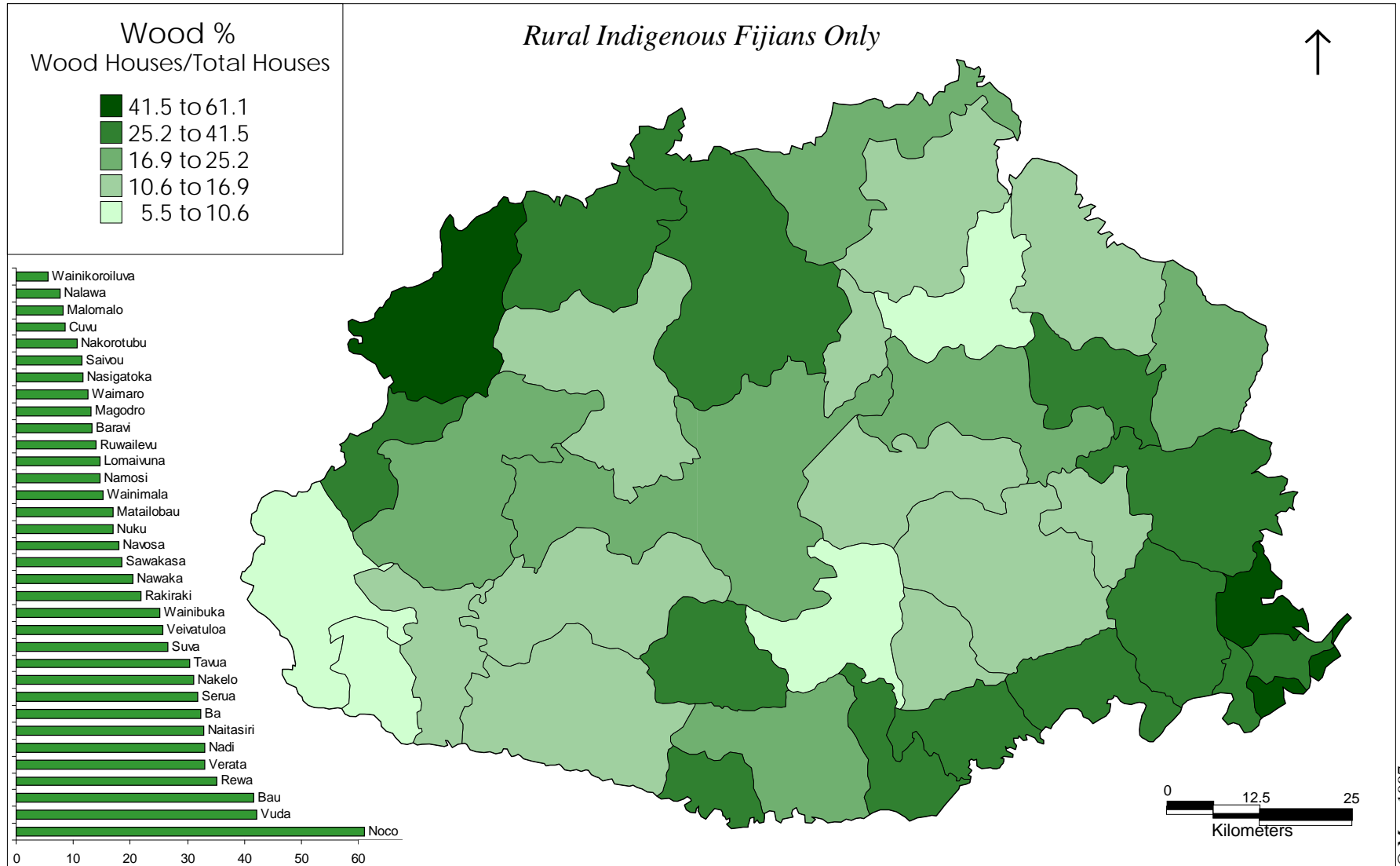
Concrete House Percentage

Concrete Houses/Total Houses



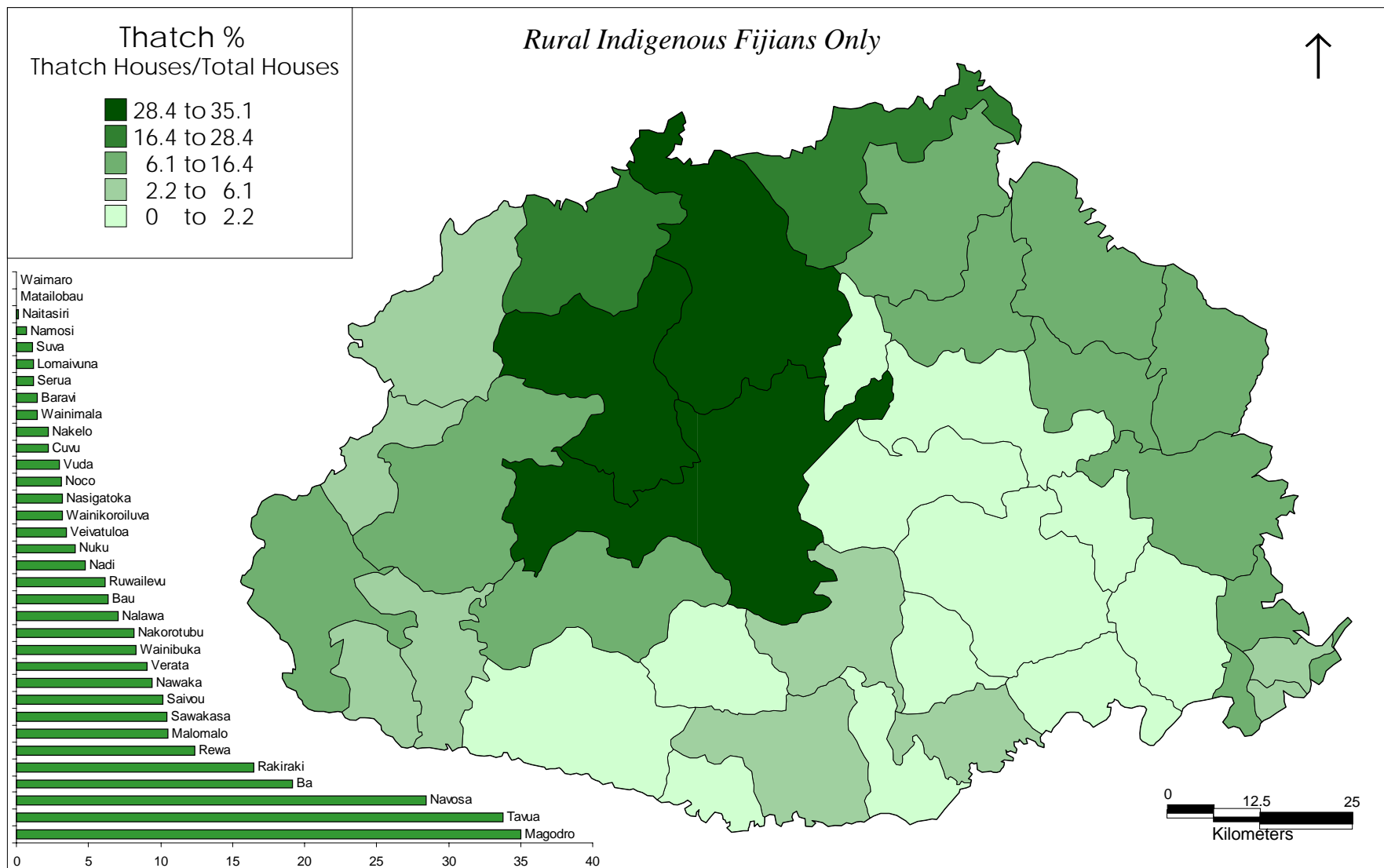
Wood House Percentage

Wood Houses/Total Houses



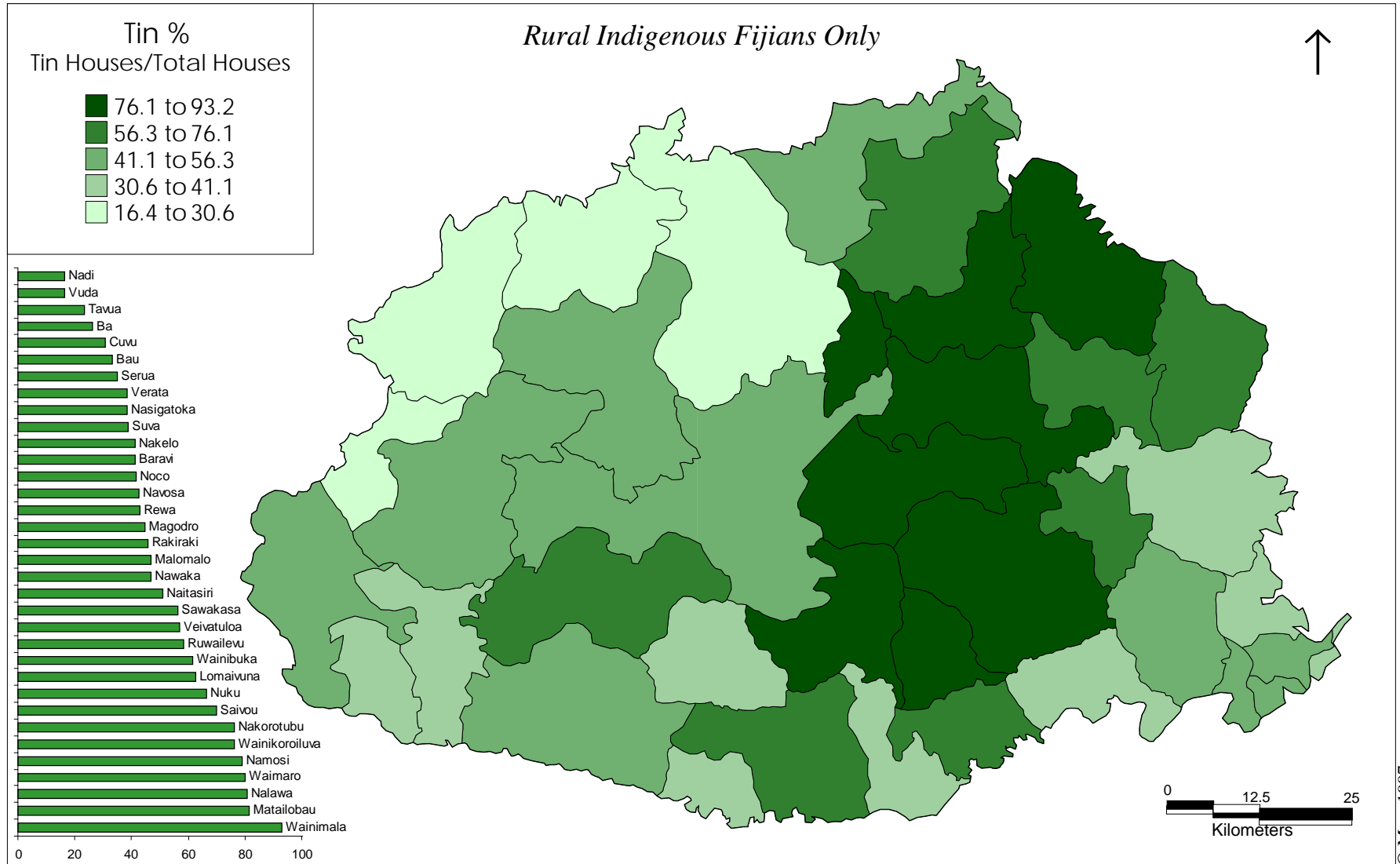
Thatch House Percentage

Thatch Houses/Total Houses



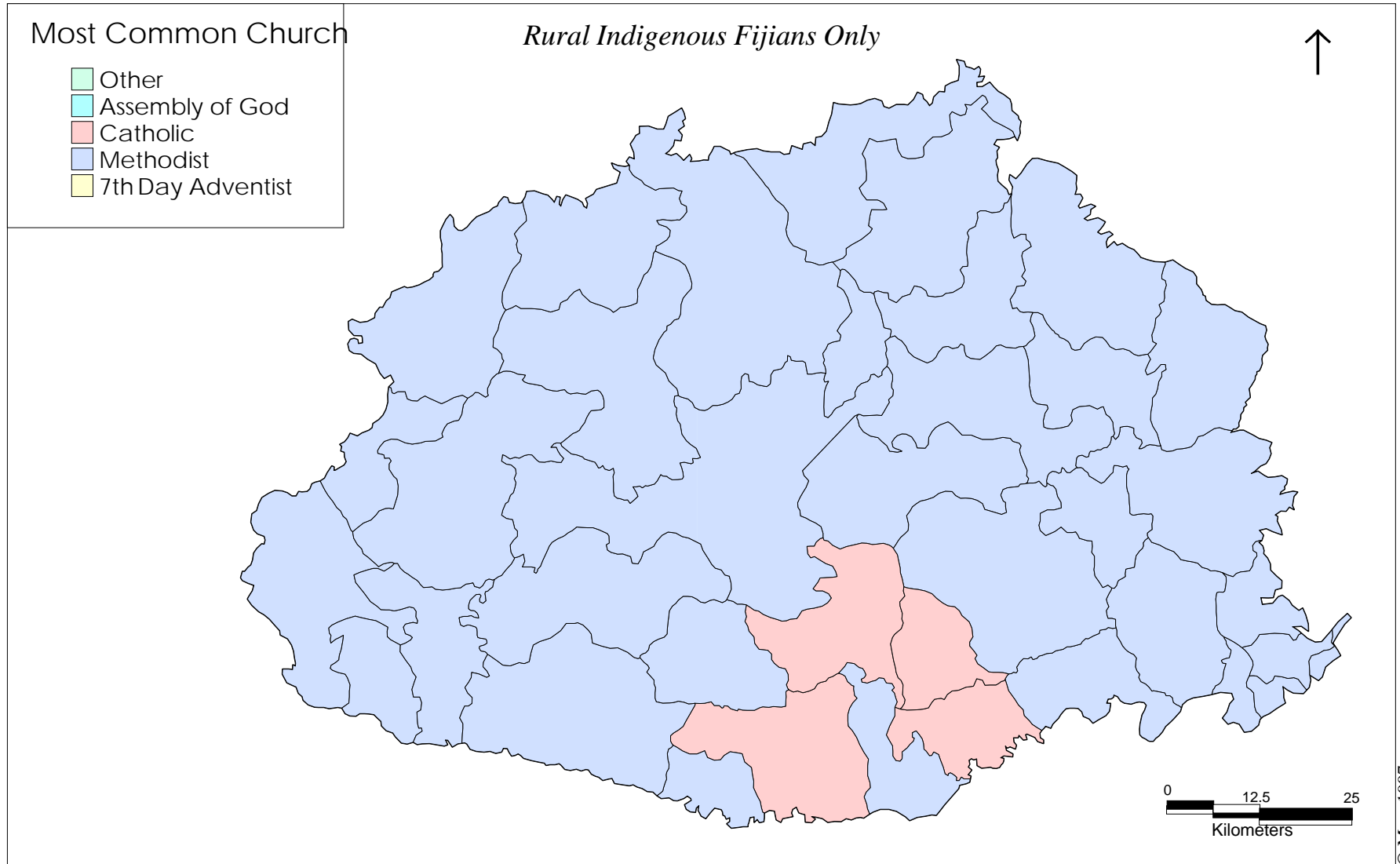
Tin House Percentage

Tin Houses/Total Houses



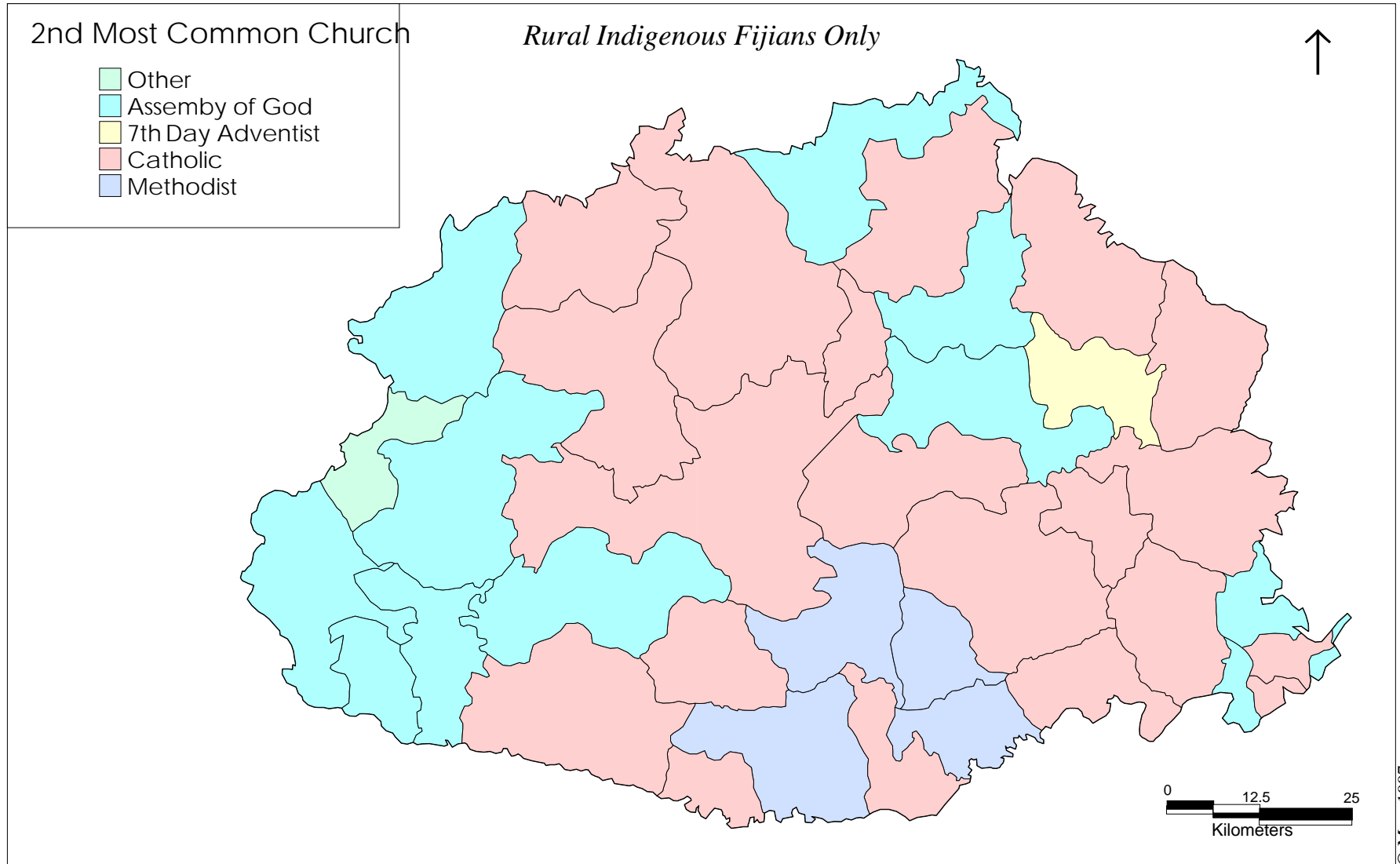
Most Common Church

Total Population



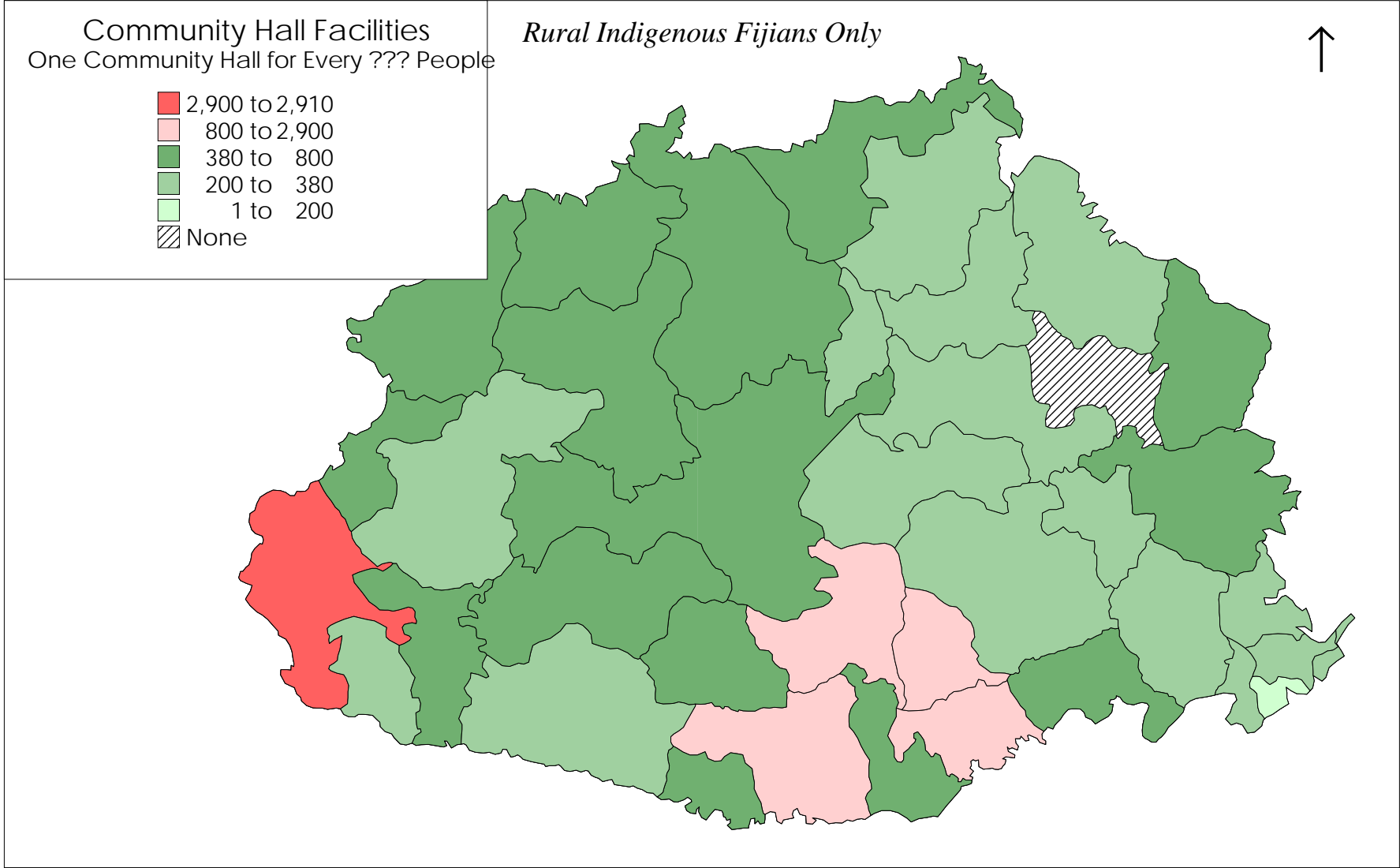
Second Most Common Church

Total Population

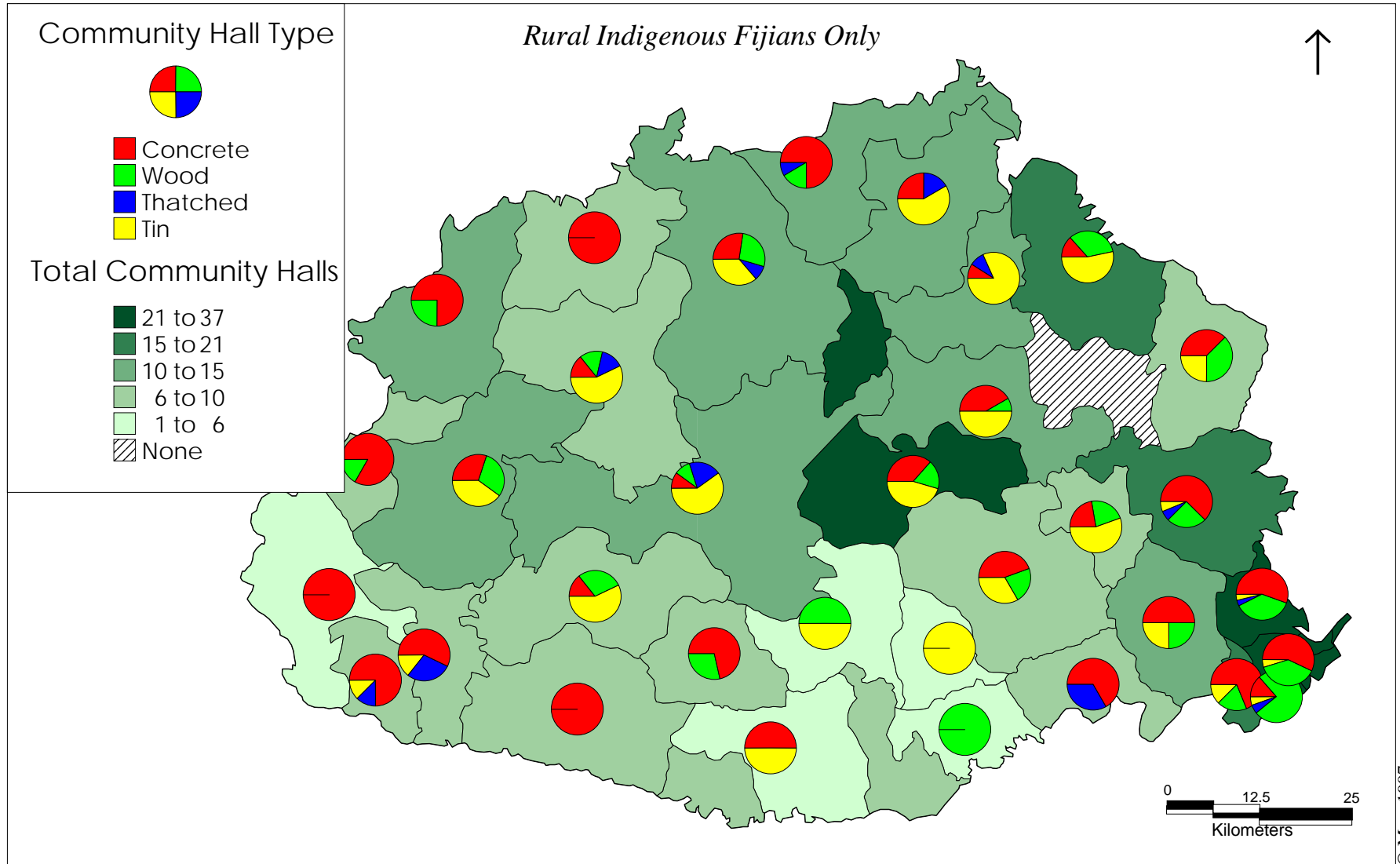


Community Hall Facilities

*Total Community Halls/Total Population
People Per Community Hall*

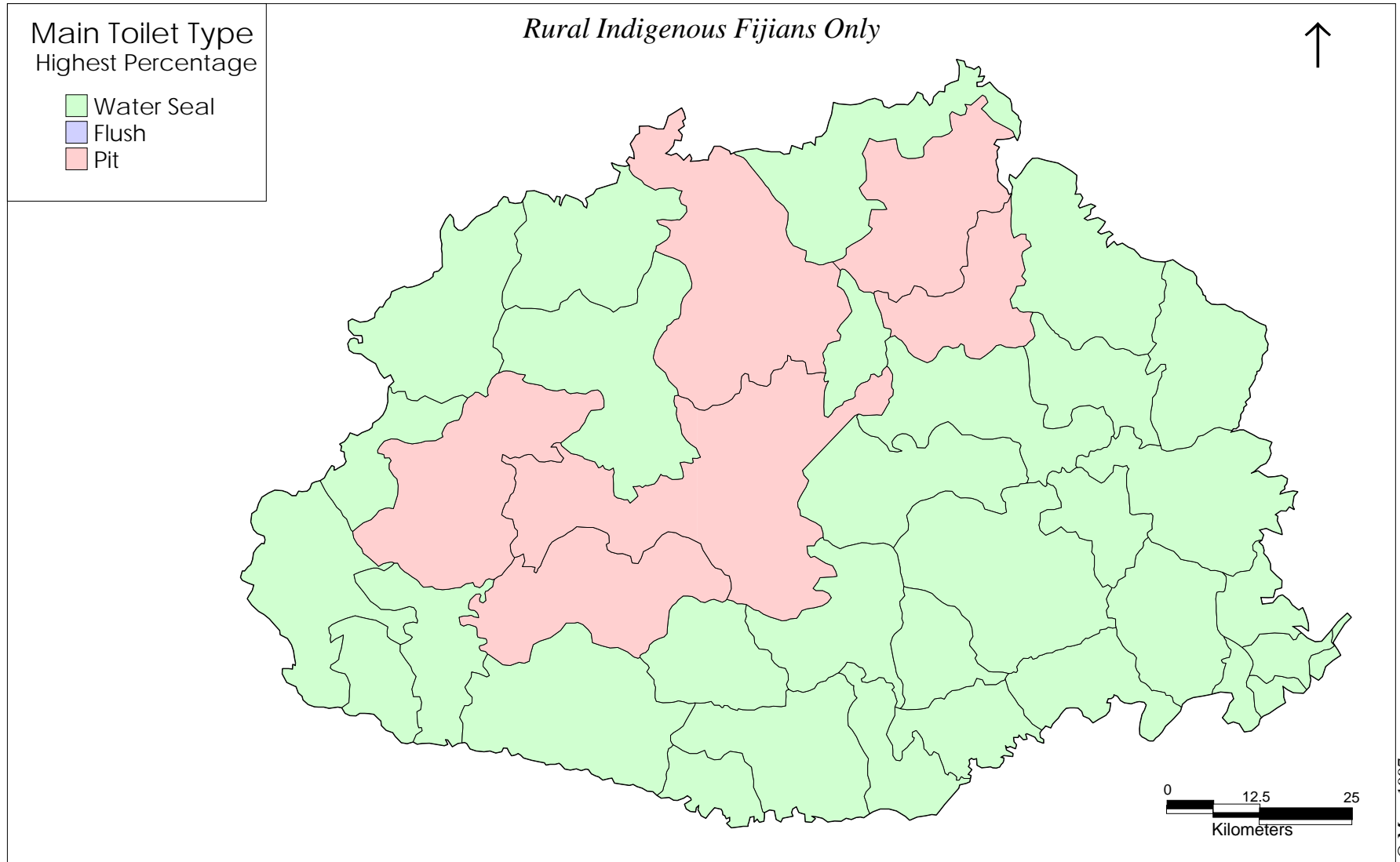


Total Community Halls and Community Hall Type



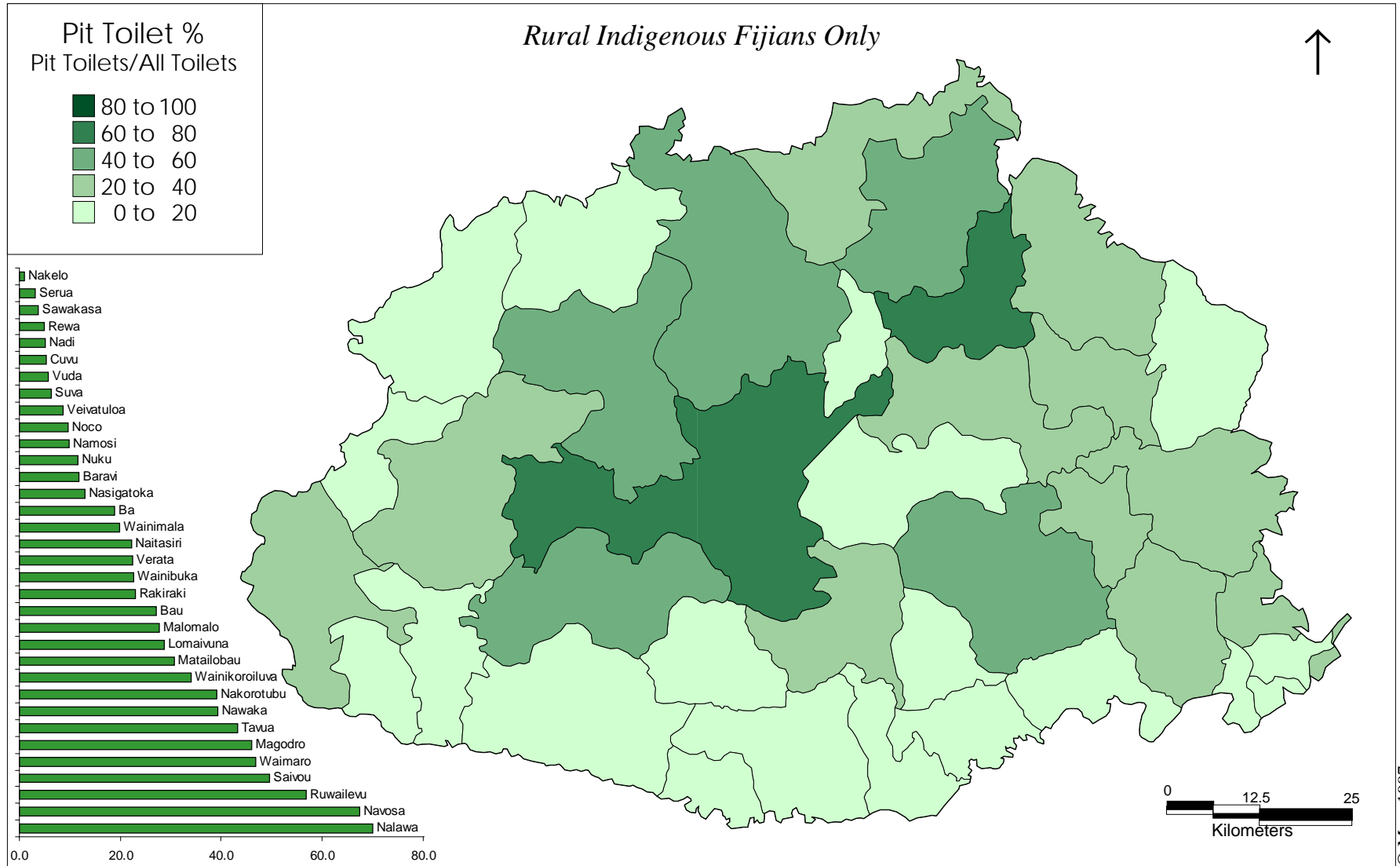
Predominant Toilet Type

Compared by Percentage of Each Type



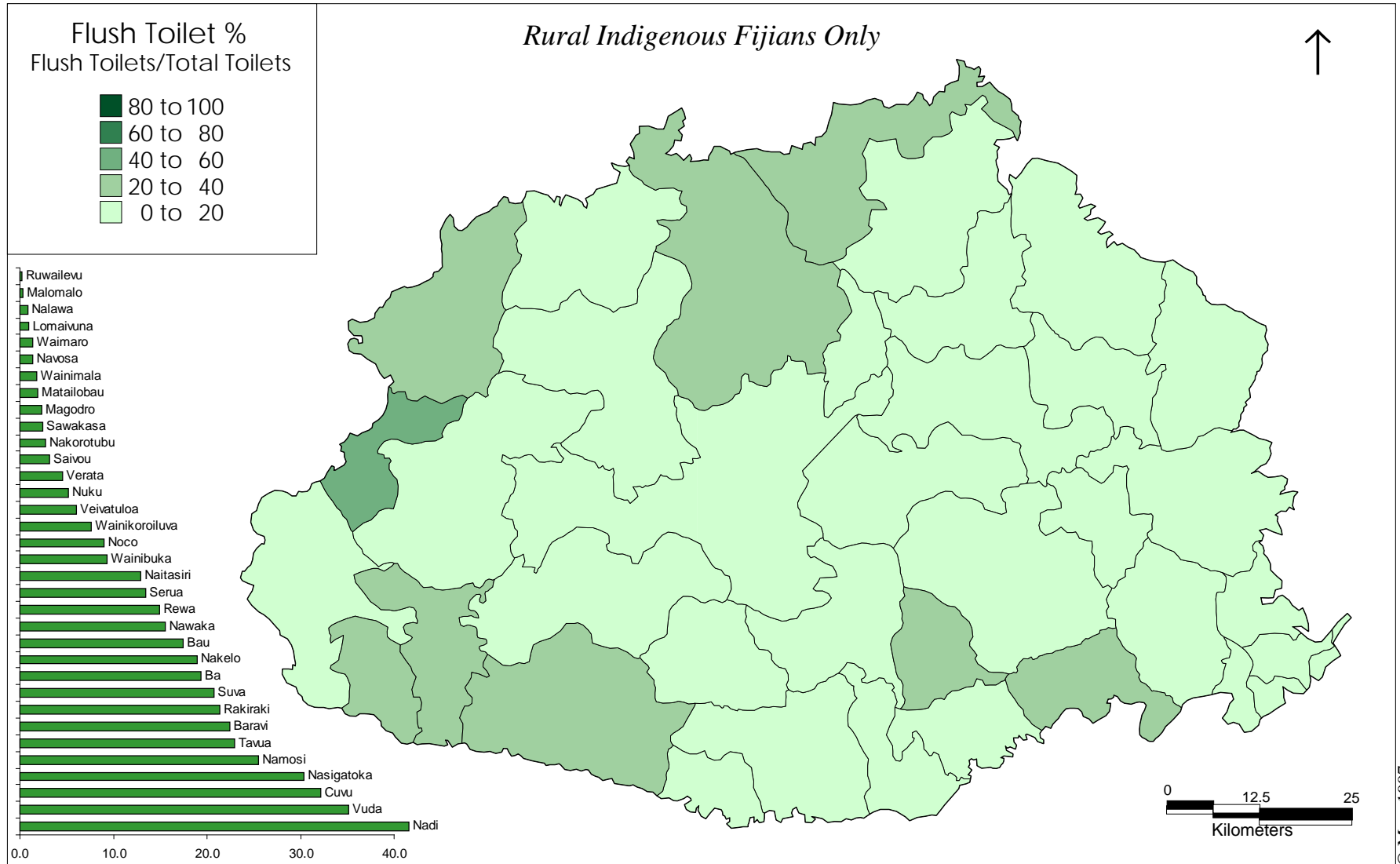
Pit Toilet Percentage

Pit Toilets/Total Toilets



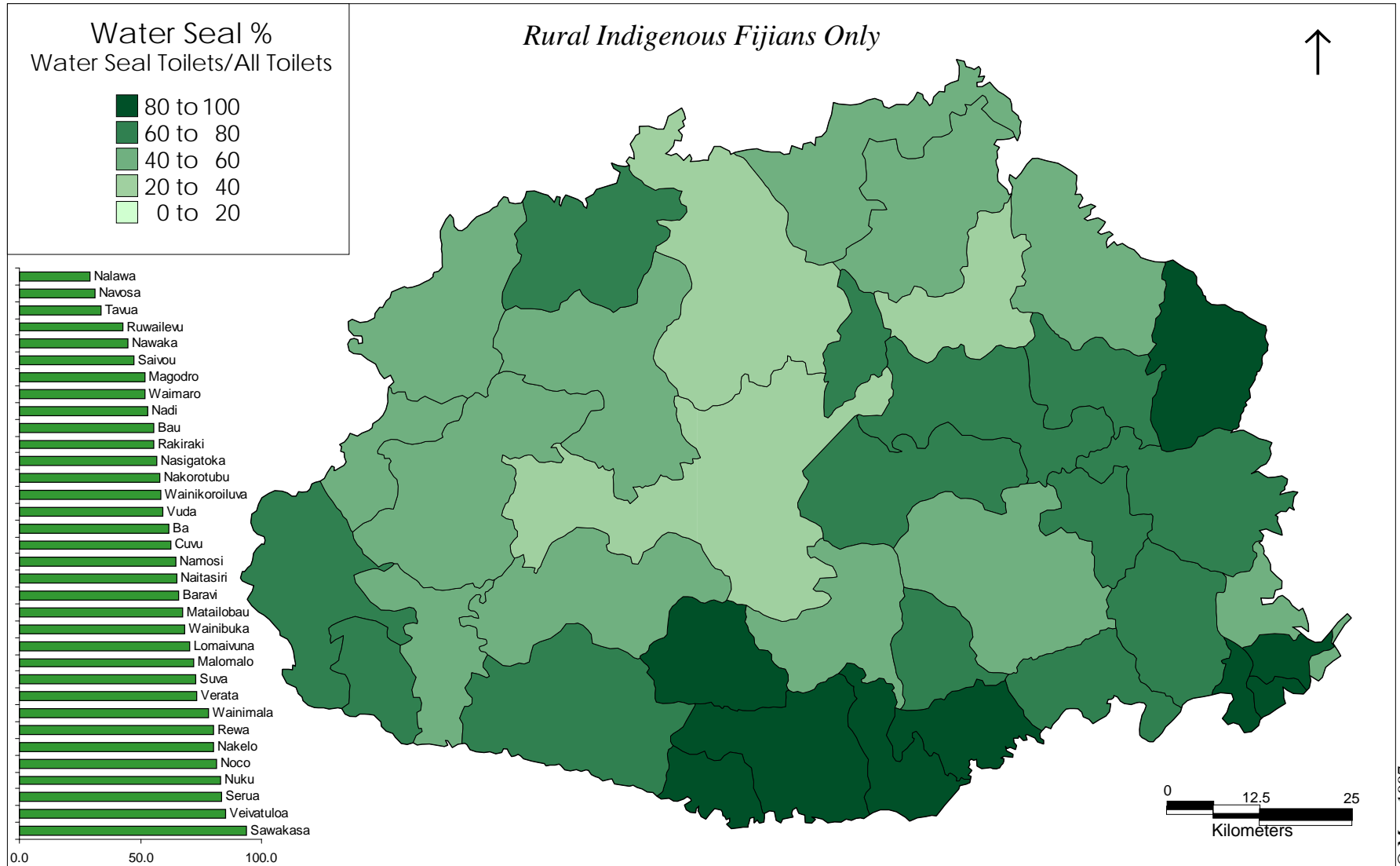
Flush Toilet Percentage

Flush Toilets/Total Toilets



Water Seal Toilet Percentage

Water Seal Toilets/Total Toilets



Raw Data

From the Provincial Profile

Rural Indigenous Fijians Only

Tikina						Age Distribution				House Type				
	Area (Sq. Mi)	Area (Sq. Km)	Total People	Population Density (Mi)	Population Density (Km)	Toddlers Age 0-5	Youth Age 6-20	Adult Age 21-54	Elderly 55+	Total Houses	Concrete	Wood	Thatch	Tin
Ba	118	305	4020	34	13	609	1638	1355	418	699	161	230	136	172
Baravi	168	436	1515	9	3	224	505	668	118	182	124	37	4	17
Bau	41	106	7141	174	67	928	2411	2925	877	1170	288	518	79	285
Cuvu	50	128	2878	58	22	304	1150	1196	228	722	289	42	11	380
Lomaivuna	53	136	3013	57	22	391	1089	1217	316	309	48	76	6	179
Magodro	175	453	3215	18	7	557	1299	1043	316	407	42	59	158	148
Malomalo	131	340	2901	22	9	380	889	1309	323	671	190	45	58	378
Matailobau	122	317	3879	32	12	554	1366	1557	402	511	39	116	0	356
Nadi	55	143	3944	72	28	550	1373	1663	358	839	304	233	34	268
Naitasiri	96	249	4077	42	16	556	1478	1708	335	514	127	235	1	151
Nakelo	21	54	5353	255	99	660	1854	2199	640	750	238	311	22	179
Nakorotubu	133	343	3644	27	11	633	1197	1359	455	363	40	82	63	178
Nalawa	88	229	3139	36	14	520	1093	1249	277	444	32	48	44	320
Namosi	55	144	878	16	6	133	331	377	37	147	8	22	1	116
Nasigatoka	81	210	3469	43	17	444	1146	1569	310	843	279	70	19	475
Navosa	302	783	4458	15	6	695	1579	1846	338	974	98	159	252	465
Nawaka	187	483	3549	19	7	526	1322	1405	296	511	133	117	54	207
Noco	9	24	2400	267	99	346	803	958	293	608	41	252	13	302
Nuku	120	310	1612	13	5	226	597	659	130	321	35	46	11	229
Rakiraki	126	327	4715	37	14	669	1722	1845	479	942	177	202	152	411
Rewa	16	41	3241	203	79	471	1041	1281	448	513	83	232	82	116
Ruwailevu	149	386	2927	20	8	390	1056	1220	261	263	112	72	32	47
Saivou	141	366	3592	25	10	504	1328	1427	333	366	45	78	69	174
Sawakasa	103	267	3252	32	12	551	1193	1109	399	684	75	120	68	421
Serua	178	460	3212	18	7	502	1059	1337	314	538	168	162	6	202
Suva	70	180	2533	36	14	367	913	979	274	749	97	142	6	504
Tavua	241	624	4887	20	8	691	1697	1957	542	1033	141	227	252	413
Veivatuloa	60	157	1806	30	12	256	706	744	100	595	49	81	11	454
Verata	129	335	6218	48	19	841	2094	2506	777	1049	174	401	110	364
Vuda	137	355	5611	41	16	737	1876	2502	496	1342	347	380	27	588
Waimaro	184	477	2920	16	6	397	1074	1167	282	232	43	71	0	118
Wainibuka	71	185	3049	43	16	464	1065	1127	393	598	58	131	43	366
Wainikoroiluva	103	266	2673	26	10	484	990	1043	156	440	74	26	15	325
Wainimala	164	423	2426	30	11	413	887	958	168	360	34	62	6	258

Raw Data

From the Provincial Profile

Rural Indigenous Fijians Only

Tikina	Religious Affiliation					Community Hall Type					People per Community Hall	Toilet Type			
	Methodist	Catholic	7th Day Adventist	Assembly of God	Other	Total Community Halls	Concrete	Wood	Tin	Thatched		Total Toilets	Pit	Flush	Water Seal
Ba	2740	914	110	155	346	7	7	0	0	0	574	629	119	122	388
Baravi	949	186	0	71	79	7	7	0	0	0	216	294	35	66	193
Bau	6465	117	138	324	247	27	15	10	1	1	264	935	253	163	519
Cuvu	2139	9	4	258	23	8	6	0	1	1	360	500	27	161	312
Lomaivuna	2306	422	38	170	77	9	2	2	5	0	335	516	148	5	363
Magodro	2771	221	136	66	81	7	1	1	4	1	459	424	195	10	219
Malomalo	2373	0	117	208	127	1	1	0	0	0	2901	554	154	2	398
Matailobau	3650	5	65	128	31	12	5	1	6	0	323	700	215	13	472
Nadi	3221	125	140	148	310	6	5	1	0	0	657	687	35	286	366
Naitasiri	2988	444	225	351	67	12	6	3	3	0	340	706	157	91	458
Nakelo	4051	599	88	287	386	21	12	8	1	0	255	855	8	162	685
Nakorotubu	2801	366	351	68	6	15	2	5	8	0	243	654	256	18	380
Nalawa	2118	170	231	310	123	11	1	0	9	1	285	500	350	4	146
Namosi	281	877	1	0	0	1	0	0	1	0	878	141	14	36	91
Nasigatoka	2423	25	17	309	248	7	4	0	1	2	496	587	76	178	333
Navosa	2199	1023	749	260	29	10	1	1	6	2	446	886	598	12	276
Nawaka	2909	97	123	249	171	10	3	3	4	0	355	520	205	81	234
Noco	1978	291	13	98	11	37	5	28	2	2	65	356	34	32	290
Nuku	319	1186	3	84	19	2	1	0	1	0	806	250	29	13	208
Rakiraki	3784	47	340	372	107	12	9	2	0	1	393	820	188	175	457
Rewa	1917	245	100	470	338	16	11	3	2	0	203	482	24	72	386
Ruwailevu	2199	134	130	393	119	7	1	2	4	0	418	506	288	1	217
Saivou	1929	1081	509	117	40	12	3	0	7	2	299	499	247	16	236
Sawakasa	2816	434	51	63	17	8	3	3	2	0	407	529	20	13	496
Serua	2451	462	32	191	105	7	5	2	0	0	459	448	14	60	374
Suva	1830	315	284	49	76	6	4	0	0	2	422	376	24	78	274
Tavua	2153	1584	473	162	88	11	3	3	4	1	444	671	291	154	226
Veivatuloa	673	961	50	120	2	1	0	1	0	0	1806	263	23	16	224
Verata	4540	487	176	326	131	16	10	4	1	1	389	977	219	44	714
Vuda	4958	134	81	293	160	12	9	3	0	0	468	831	47	292	492
Waimaro	1900	764	103	18	139	9	4	2	3	0	324	529	248	7	274
Wainibuka	1978	80	841	57	114	0	0	0	0	0	0	377	85	35	257
Wainikoroiluva	630	1516	467	60	0	2	0	1	1	0	1337	420	143	32	245
Wainimala	1319	745	55	87	220	11	4	2	5	0	221	434	86	8	340