



TABUAERAN ISLAND



2008

SOCIO-ECONOMIC PROFILE

PRODUCED BY THE MINISTRY OF INTERNAL AND SOCIAL AFFAIRS,
WITH FINANCIAL SUPPORT FROM THE UNITED NATION DEVELOPMENT PROGRAM,
AND TECHNICAL ASSISTANCE FROM THE SECRETARIAT OF THE PACIFIC COMMUNITY.



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TABUAERAN ANTHEM

TEIRAKE TE I TABUAERAN	ARISE FANNING ISLANDERS
<i>Teirake Tei Tabuaeran Tabeka Abara Ba ena toronibwai Ibukin Uean te Atua</i>	<i>Fanning Islander arise Uphold our island high Thriving wealth For the Almighty God</i>
<i>Teirake ngkai Tei Tabuaeran(bass) Kona tangira abam aio Nano matoa iai</i>	<i>Arise now Fanning Islanders(bass) Love your Island Devote your heart never fall</i>
<i>Mwengau rikiau ma ngkoa I bungiaki iai Nna bwebwerake iaona Ba bain neboan te Atua</i>	<i>My home and land where I come from My birth place I will grow on it As praising gift of God</i>
<i>Ao kaini kawa nako Baina te bonnano Ao ngkami boua Aikai tei ni matoatoa</i>	<i>All village people Have the heart of cooperation Village heads and People Withstand your ground</i>
<i>Unimwane ao Unaine Rorobuaka ao ataeiaine Teroririkirake maua tianako ee</i>	<i>Oldmen and Oldwomen Men and women Young generation steady go</i>

FOREWORD

*by the Honourable Amberoti Nikora,
Minister of Internal and Social Affairs, July, 2007*

I am honored to have this opportunity to introduce this revised and updated socio-economic profile for Makin island. The completion of this profile is the culmination of months of hard-work and collaborative effort of many people, Government agencies and development partners particularly those who have provided direct financial and technical assistance towards this important exercise.

The socio-economic profiles contain specific data and information about individual islands that are not only interesting to read, but more importantly, useful for education, planning and decision making. The profile is meant to be used as a reference material for leaders both at the island and national level, to enable them to make informed decisions that are founded on accurate and easily accessible statistics. With our limited natural and financial resources it is very important that our leaders are in a position to make wise decisions regarding the use of these limited resources, so that they are targeted at the most urgent needs and produce maximum impact.

In addition, this profile will act as reference material that could be used for educational purposes, at the secondary and tertiary levels. This is one of the intentions when the revision exercise was conceived in the first place. In its new format, the profile contains valuable information on the history, geography, demography, commerce and trade, natural resources, the environment, and many other important facts about the islands. The vision to make the island profile important reference material will be further enhanced with the launching of the Ministry's website. This is indeed a revolutionary step in the sense that such valuable information will be made accessible on the internet, for everyone to use in and outside Kiribati.

The profiles have potential economic value because they provide the kind of information that local and foreign investors need. This aspect of the profiles will be improved with time, as better information on marine and land resources becomes available and incorporated in the book.

The island profiles are useful development documents for individual islands and the nation as a whole. Whether they are used by students, businessmen, tourists, politicians, or planners, I can say with conviction that it will prove a useful resource on Kiribati.

Te Mauri, Te Raoi and Te Tabomoa to everyone.

ACKNOWLEDGEMENTS

The preparation of this profile involved the hard work and commitment of various individuals, Government ministries and external development agencies. At the outset, the initiative and financial support of the United Nations Development Program (UNDP) must be acknowledged with deep appreciation. UNDP financed the revision of the profiles through a joint UNDP-GoK project known as *Strengthening Decentralized Governance in Kiribati (SDGiK)*.

Other regional organizations that have been very supportive to the profiling exercise include the South Pacific Geo-science Commission (SOPAC), who provided technical support in relation to the incorporation of GIS and CHARM in the project. The South Pacific Commission (SPC), who assisted in the establishment of POPGIS for use in data sourcing and analysis, provided input to the structure of the profiles, recommended the incorporation of valuable data and information, and generously offered to publish the profiles. Without their assistance, the profiles as you see them now will not have attained such a high quality in terms of content and appearance. The Ministry of Internal and Social Affairs owes much gratitude to these organizations particularly their concerned staff, for their readiness to assist even if it was beyond their terms of engagement.

The project office of the Commonwealth Local Government Forum (CLGF) based in Fiji, through its Pacific Project, also contributed invaluable assistance to the project, in particular to Component 3, which focused on capacity development of local government bodies on the outer islands. Several of the activities under this component were jointly funded by CLGF, thereby absorbing much in terms of financial costs and time. For these contributions, we are very much thankful.

The various ministries of Government have helped in one way or another, especially in the furbishing of valuable data and information used in this profile. The project has been successful in maintaining the good relationship that had developed with other ministries and civil organizations. In addition, inter-agency committees were established for monitoring and technical support during the implementation phase of the project. The most important of these committees is the Outer Island Project Coordinating Committee (OIPCC), which serves as the overall steering body of SDGiK. Other technical working committees were also instrumental in getting some of the difficult tasks done. These working committees include the committee on the review of the Local Government Act, and the committee on the review of development procedures. One of the important lessons learned from the establishment of these committees is that it is possible to cut across borders to get the kind of commitment and cooperation that are reflected in the achievements of the project.

Hopefully the network of cooperation, which is necessary in sustaining and improving the profiles in future, is maintained between the various ministries of Government. As the leading agency in the production of this profile, the Ministry of Internal and Social Affairs must ensure that the linkages between the statistical units of various government departments remain intact.

Due to its multi-dimensional nature, far too many people are involved in the profiling exercise to allow acknowledgement on a personal level. It is hoped that by according merit to their respective agencies will somehow convey the deep sense of gratitude, which the project owes to these committed individuals. With this in mind, we would like to acknowledge the great contribution and support of the Ministry of Internal and Social Affairs (MISA), in particular the Rural Planning Division (RPD), the Local Government Division (LGD), the Community Development and Services Division (CDSD), and the Accounting Unit,

who spearheaded the various activities related to their areas of expertise. The successes that have been achieved in the different project components are indeed the result of their collective work.

Ultimately the greatest contribution and sacrifice in the production of these revised Island Profiles is offered by a few committed individuals, both within the Ministry as well as from outside who deserve to be acknowledged. Nei Terautete Tareti, the computer operator in the Rural Planning Division who collected the initial data, Nei Buraieta Tekabwaara who worked hard to collect and update data required for the profiles as well as the GIS data maps. Nei Ruta loata, who assisted in data collection, designed the graphic formats in the profiles, willingly assisted in collection of outer island data and pictures and had to work extra hours to complete her profile responsibilities.

Phil Bright and his colleagues at SPC in Noumea generously offered to edit and publish the profiles, besides arranging for a work attachment with SPC for two of MISA staff. The profiles will have not attained the very high quality in which you see them now without their assistance. In addition, the improved layout and presentation of information is also based on their professional views and guidance.

The strong support and leadership of the Minister of Internal and Social Affairs, Honorable Amberoti Nikora has been a significant factor in the successful undertaking and completion of the profiling exercise, and for the whole SDGiK project for that matter. His support would have not been that strong without the equally solid support and guidance of the former Secretary of MISA, Karib'aiti Taoaba, and Rikiau Takeke, the current Secretary.

The Deputy Secretary, Manikaoti Timeon spearheaded the profiling and completed the first prototype on Makin after which project staff continued drafting the other outer island profiles. His immense effort and guidance in the profiling is a major contribution to the completion of these profiles. The unwavering efforts and dedication of Nei Erimeta Barako in the completion of the profiles even after the SDGiK project had ended, culminated in the completion of these outer island profiles. Tebwaania Taateria eventually came in and provided much required assistance in general profiling work. Ultimately, the KAPII project under the directions of Kautuna Kaitara, the KAPII Coordinator, Kaiarake Taburuea, the Project Manager and Paul Craig, provided the required funds and support in the eventual completion of the profiles.

To everyone who have contributed in one way or another to the production of this useful document, including the many people and organizations on the outer islands, the Government of Kiribati is deeply indebted, and wish to thank you immensely for your useful contributions.

AMI BAU TE MAURI TE RAOI AO TE TABOMOA.

KAM BATI N RABWA.

Table of Contents

ACKNOWLEDGEMENTS.....	- 4 -
CHAPTER 1: INTRODUCTION.....	- 10 -
1.1 Summary of Main Socio-Economic Indicators.....	- 11 -
CHAPTER 2: GENERAL BACKGROUND.....	- 12 -
2.1 LOCALE.....	- 12 -
2.1.1 Location, Size and Land Area.....	- 12 -
2.1.2 Physical features.....	- 12 -
2.1.3 Climate and Soil.....	- 1 -
2.1.4 History and Culture.....	- 1 -
CHAPTER 3: TE MAURI – ENVIRONMENT, RESOURCES AND SOCIAL SERVICES.....	- 3 -
3.1 DEMOGRAPHY.....	- 3 -
3.1.1 Total population.....	- 3 -
3.1.2 Growth rate.....	- 3 -
3.1.3 Population Density.....	- 4 -
3.1.4 Breakdown of Population.....	- 6 -
3.1.5 Population by Gender.....	- 6 -
3.1.6 Population distribution by religion.....	- 7 -
3.1.7 Out-migration.....	- 7 -
3.2 LAND RESOURCES.....	- 8 -
3.2.1 Land and Marine Tenure.....	- 8 -
3.2.2 Land Ownership and Use.....	- 9 -
3.3 MARINE RESOURCES.....	- 9 -
3.3.1 Size of reef and Lagoon area.....	- 9 -
3.3.2 Status of Fish Resources.....	- 10 -
3.3.3 Pattern of fishing activities.....	- 11 -
3.3.4 Current Developments.....	- 11 -
3.3.5 Issues facing fishing and development of marine resources.....	- 12 -
3.4 THE ENVIRONMENT.....	- 13 -
3.4.1 Environmental Issues.....	- 13 -
3.5 EDUCATION.....	- 14 -
3.5.1 Number of school age children, proportion enrolled in schools.....	- 14 -
3.5.2 Proportion of Primary school attendance.....	- 14 -
3.5.3 Proportion of Junior Secondary School Attendance 2005.....	- 16 -
3.5.4 Breakdown of school enrolment at different levels.....	- 18 -
3.5.5 Percentage of pupils completing Primary and JSS.....	- 18 -
3.5.6 Number of schools, type and state of facilities.....	- 22 -
3.5.7 Number of Teachers and Teacher/Pupil Ratio.....	- 23 -
3.5.8 Performance of Pupils in national tests/exams.....	- 23 -
3.5.9 Community involvement to improve standard of education.....	- 23 -
3.6 HEALTH.....	- 24 -
3.6.1 Health Facilities & Staff.....	- 24 -
3.6.2 Most Common Health Problems.....	- 25 -
3.6.3 Cases of malnutrition, HIV/AIDS, TB, etc.....	- 25 -
3.7 HOUSING.....	- 26 -
3.7.1 Total number of residential houses, type and status.....	- 26 -
3.7.2 Other issues.....	- 26 -

3.8 WATER	- 27 -
3.8.1 Water Supply Sources	- 27 -
3.8.2 Status of Water Supply	- 27 -
3.8.3 Other Issues	- 27 -
3.9 ENERGY	- 29 -
3.9.1 Fuel	- 29 -
CHAPTER 4: TE RAOI – SOCIAL CAPITAL, COMMUNITY LIFE AND GOVERNANCE	- 30 -
4.1 LOCAL INSTITUTIONS AND SOCIAL CHANGE	- 30 -
4.1.1 The Maneaba System and Unimwane Association	- 30 -
4.1.2 Women Organizations	- 31 -
4.1.3 Youth Associations	- 32 -
4.1.4 Sport Associations	- 32 -
4.2 RELIGION	- 33 -
4.2.1 Main religious denominations	- 33 -
4.3.1 Traditional political system – description and status	- 33 -
4.3.2 Local government system	- 33 -
4.3.3 Interface between Local Government and Traditional Political System	- 35 -
4.3.4 Crime and Justice System	- 35 -
CHAPTER 5: TE TABOMOA – ECONOMIC ACTIVITIES, INFRASTRUCTURE AND UTILITIES	- 37 -
5.1 ISLAND ECONOMY	- 37 -
5.1.1 Subsistence Economy	- 37 -
5.1.2 Copra cutting	- 38 -
5.1.3 Employment	- 40 -
5.1.4 Trade and Commerce	- 40 -
5.1.5 Cooperative and Local Finance	- 41 -
5.1.6 Remittances	- 41 -
5.2 ECONOMIC ACTIVITIES	- 43 -
5.2.1 Agriculture	- 43 -
5.2.2 Fisheries	- 45 -
5.2.3 Handicrafts	- 46 -
5.3 INFRASTRUCTURE	- 46 -
5.3.1 Land Transport	- 47 -
5.3.2 Sea Transport and Shipping	- 49 -
5.3.3 Air Service	- 49 -
5.3.4 Issues facing Transportation	- 49 -
5.3.5 Communication	- 51 -

LIST OF TABLES AND FIGURES

TABLES

Table 1	Annual rainfall for Tabuaeranl
Table 2	Population by religion
Table 3	Size of reef and lagoon
Table 4	Council priority projects
Table 5	School enrolments 2005-2006
Table 6	Teacher:Pupil ratio
Table 7	Women associations
Table 8	Youth associations
Table 9	Committed crimes 2007
Table 10	Revenue from copra 2003-2005
Table 11	Village bank shares

FIGURES

Figure 1	Geographical view of Tabuaeran
Figure 2	Population trend 1947-2005
Figure 3	Population by age group
Figure 4	Population pyramid
Figure 5	Household location of fishing
Figure 6	Types of fishing activities
Figure 7	Most common health problems
Figure 8	Structure of traditional authority
Figure 9	Copra production 1995-2005
Figure 10	Access to food trees

LIST OF ACRONYMS

SDGIK	Strengthening Decentralized Governance in Kiribati
MDGs	Millennium Development Goals
MOP	Ministry Operational Plan
NDS	National Development Strategy
UN	United Nations
GOK	Government of Kiribati
SOPAC	South Pacific Geo-Science Commission
CHARM	Comprehensive Hazard and Risk Management
GIS	Geographic Information System
CLGF	Commonwealth Local Government Forum
OIPCC	Outer Island Project Coordinating Committee
MISA	Ministry of Internal and Social Affairs
RPD	Rural Planning Division
LGD	Local Government Division
CDSD	Community Development and Services Division
SPC	Secretariat of the Pacific Community
MOH	Ministry of Health
MELAD	Ministry of Environment Land and Agricultural Development
MEYS	Ministry of Education Youth and Sport
MFED	Ministry of Finance and Economic Development
POPGIS	Population GIS
RC	Roman Catholic Church
KPC	Kiribati Protestant Church
SDA	Seventh Day Adventist Church
LDS	Church of Jesus Christ of Latter Day Saints
COG	Church of God
KHLP	Kiribati Handicraft and Local Produce Company
KSECL	Kiribati Solar Energy Company Limited

CHAPTER 1: INTRODUCTION

The first Island Profiles were published in the late 1980s, about 20 years ago. Apart from being used as a resource book by project personnel in the Rural Planning Division, it remained largely unused, and the information quickly became obsolete as the years passed without any attempt to update a lot of the statistics contained in them. This is the first time that the profiles are being updated and upgraded to suit today's need for information. In addition to the upgrading exercise, the profiles will also be updated, annually if possible, depending on the regularity and availability of reliable statistics. The current revision is based on a mixture of methodologies including importation of data from different government ministries (MOH, MELAD, MEYS, and MFED), the use of PopGIS software to analyze and map data, face to face interviews, questionnaire surveys and the use of reference materials and the internet.

While the purpose of the profiles is to serve as the basic information tool for planners and decision makers, it can also be used to meet the needs of students, business people, politicians, tourists, planners, and the public in general. This is possible due to the fact that it contains unique and interesting information on the island's culture, economy, natural resources, environment, infrastructure, social services and various other features. With the incorporation of MDG indicators in this new version, the profiles will now serve a very useful purpose of becoming an important tool to monitor the country's performance in respect of achieving MDG targets. Island-level statistics enables more specific analysis of the situation faced by Kiribati in the different sectors of health, education, poverty reduction, gender equality, the environment, and HIV/AIDS. These are the issues embodied in the eight goals set by the United Nations which countries are expected to achieve by the year 2015.

Another new feature of the profiles is the introduction of a computerized back-up system, which is made up of an electronic copy of the profile, as well as a GIS program which enables detailed analysis of statistics right down to the village and household levels. The ultimate objective of the whole exercise is to have an efficient and reliable source of information about the outer islands, that is not only available in hard copy, but better still one that could be accessed immediately by the push of a keyboard button. This will enable professionals and lay people alike to acquire information quickly, for whichever purpose they may have. The profiles will be made available on the Ministry's website – www.misa.com, or alternatively through PRISM. This will enable international access to the profiles for the use of traveling officials, overseas students, potential investors and visitors. Apparently the website will contain information other than the island profiles, from the various divisions of the Ministry and perhaps additional relevant information from other government ministries. Upon completion of the website two goals will be achieved, first, that the information will be available on line for the first time and, second, that such useful information will be accessible from anywhere in the world in electronic form. This is going to be a significant achievement in itself.

The continual usefulness of the profiles, and other information contained in both the hard and electronic versions, will depend to a great extent on a reliable system of updating and upgrading. After all, information changes all the time, as do the technology upon which it depends. Finally, it is hoped that the profiles in their new format and accompanying electronic features will serve the purpose for which they are designed, and much more. We wish every user of this profile enjoyable reading, and trust that they find it interesting and rewarding.

1.1 Summary of Main Socio-Economic Indicators

	NATIONAL			TABUAERAN		
	Total	Males	Female	Total	Male	Female
Total population (November 2005)	9253	45612	46921	2539	1285	1254
Urban population	4031	19435	20876			
Percent of national population				2.74	1.39	1.36
Percent urban (%)	43.6					
Rate of Growth (%) of total population 2000-2005	9.5			44.5		
Population density	127			75		
South Tarawa population density	2558			75		
% population younger than 15years	37	38	36	43	42	43
% population 15-24 years	21	21	20	19	19	19
% population 15-59 years	58	57	58	54	54	54
% population 60 years and older	5	5	6	8.6	3.19	5.41
Age dependency ratio	74			86	86	83
Households						
Number of private households	1399			438		
Number of persons in private households	8864	43749	44895	2470		
Average household size	6.3			5.6		
Number of institutions (non-private)	43					
Number of persons in institutions	3889					
Labor market activity	3696	20013	16956	1118	616	502
Employed population	3471	18883	15832	1032	583	449
Cash workers	1313	8095	5038	241	153	88
Village workers	2158	10788	10794	791	430	361
Unemployed	2254	1130	1124	86	33	53
Non-labor market	2106	7926	13143	338	123	215
Students	7323	3496	3827	153	66	97
Persons engaged in home duties	6077	793	5284	98	1	97
Inactive persons	3662	1996	1666	39	32	7
Retired persons	3227	1179	2048	47	23	24
Disabled or sick persons	709	398	311	1	1	0
Prisoners	71	64	7	0	0	0
Labor market participation ratio	63.6	71.5	56.3	76.79	83.36	70.01
Employment-population ratio	22.6	28.9	16.7			
Unemployment rate (%)	6.1	5.6	6.6			
Education						
School enrolment rates 6-15 year olds (%)	91.0	89.1	93.0	88.7	47.2	52.1
Proportion of population 15 years and older with secondary or higher education	50.5	51.6	49.5	12.3	12.4	12.2
Proportion of total population with secondary or tertiary	19.4	18.2	20.5			

CHAPTER 2: GENERAL BACKGROUND

2.1 LOCALE

2.1.1 Location, Size and Land Area

Tabuaeran, also known as Fanning Island or Fanning Atoll (both Gilbertese and English names are recognised) is one of the Line Islands of the central Pacific Ocean, and part of Kiribati. It is an atoll located at 3°51'36"N, 159°21'52"W. The maximum elevation is about 3 m (10 ft) above high tide. Fanning Island lies 228 nautical miles north of the equator. It is about 153 miles northwest of Christmas, 260 miles a little east of north from Jarvis, 75 miles southeast of Washington Island, and 200 miles southeast of Palmyra.

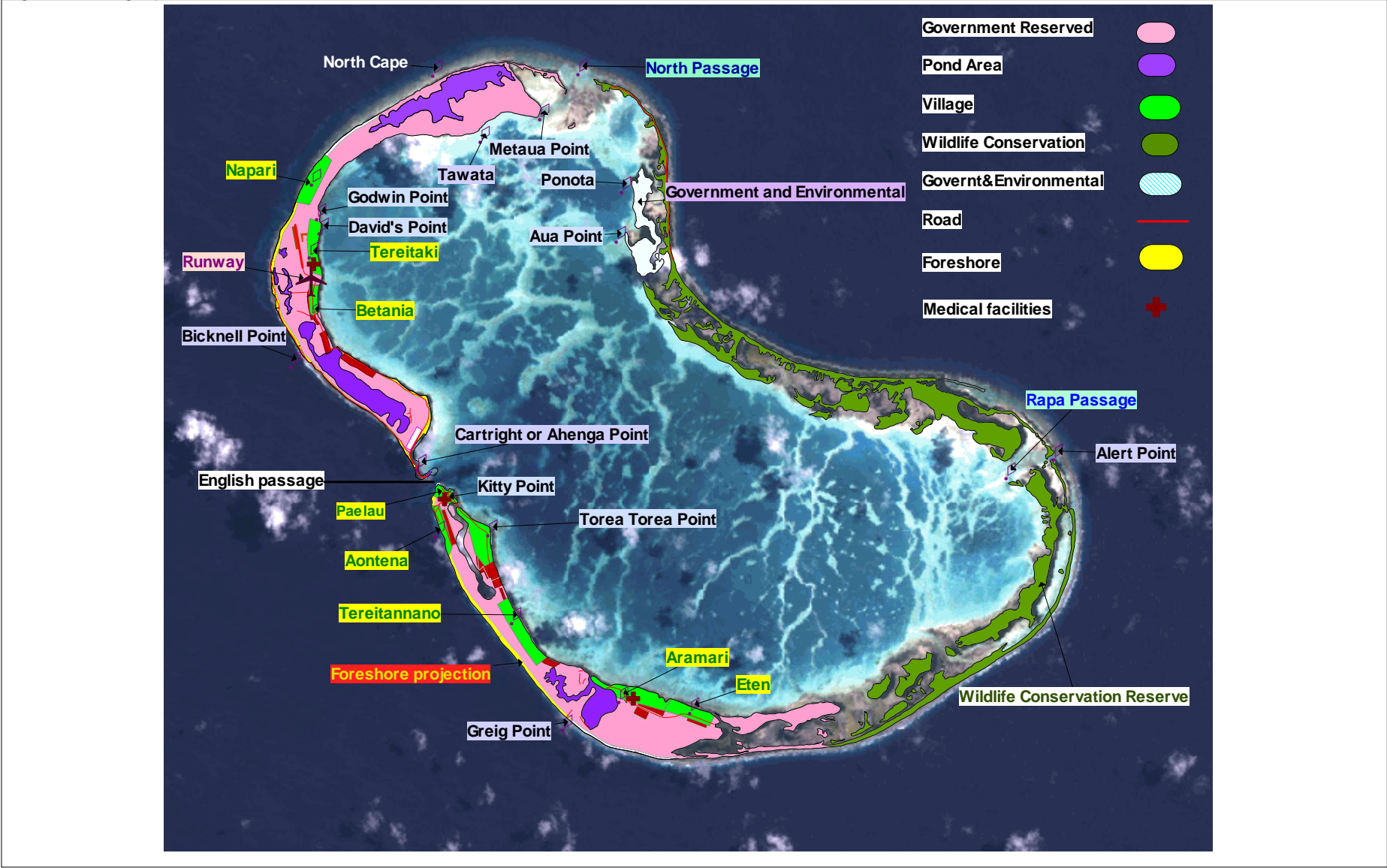
The island is a roughly oval coral atoll, 9.5 nautical miles northwest and southeast, by 6 miles wide. The land area is variously given at 13, 15, 17, and 26 square miles, and 8,500 acres. The first and last agree roughly, and seem about correct. The enclosed lagoon has an area of 426 square miles. The deepest water in the lagoon is about 50 feet, only three-quarters of a square mile exceeds 30 feet in depth, and most of it is very shallow.

2.1.2 Physical features

Sufficient depth of water through the passage for any merchant ship to pass in, and on the inner or bay side is smooth and convenient anchoring, which, together with the abundance of wood and water, the tropical fruits, best of fresh, and excellent turtle, here to be obtained, make this a very desirable spot, for the refitting of a ship, and refreshing a crew.

The island's shape took the similar image of a giant footprint and others may declare it as giant peanut shape island. It is theoretically a low-lying atoll with a narrow fringing reef and three principal islets almost encircling a marine lagoon. The lagoon is tidal, and the surrounding brackish marshes and extensive intertidal mudflats create estuarine-like conditions. There are several small islets in the lagoon and some areas of salt pans. The diagram in the following map below gives best explanation of how the island bestows its natural features upon the view and people's explanation on how the island looks like. The allocated areas within the map constitute much on how the island looks at present and in the near future. Main areas as such; villages, runways, passage, health centers, schools, island council, development areas, government conservation areas and many others, have therefore included upon better glimpse and good assessment of how the island is in developing process.

Fig 1: A Geographic view of Tabuaeran



2.1.3 Climate and Soil

The climate although warm is very uniform and healthful, with the mean temperature 83.5 (73 to 92) degrees F., modified by nearly continual trade winds. These blow from the southeast 45 percent, from the east 30 percent, and from the northeast 13 percent of the time. The annual rainfall is variable, but usually is between 80 and 100 inches, with as much as 125 inches, and occasional drier years. The late fall usually is the driest time of the year. The barometer stays close to 30 inches of mercury. The weather is worst in March and April, but severe storms are rare

Table 1: Annual Rainfall by Month 2001 (inches)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000	8.3	25.1	61.9	195.6	216.1	143.3	180.2	35.9	116.1	39.5		
1999	56.3	51.2	155.8	112	187	90.4	63.5	14.4	14.3	73.2	5.7	10.9
1998	234.9	260.1	34.3	7.8	202.7	172.8	56.7	2.1	6.7	2.1	7	70.8

2.1.4 History and Culture

“At some 900 miles distant, Tabuaeran is one of the closest landfalls to the Hawaiian Islands, and the atoll was possibly used as a stopover by the Polynesians who first settled Hawai’i. Artifacts have been discovered that indicate possible early settlements by people from Polynesia—probably the Cook Islands or Tonga.” (<http://en.wikipedia.org/wiki/Tabuaeran>)

“The atoll was discovered by the American captain Edmund Fanning on June 11, 1798, on the American ship *Betsy* and was named for him.^[1] At the time, the atoll was uninhabited, and in fact, like all of the Line Islands, has no truly native population. After Fanning, it was visited by whalers of several nationalities. At the place where he first set foot setup a memorial stone in declaration of his arrival and other people who came after him.” (<http://en.wikipedia.org/wiki/Tabuaeran>)



“Prior to 1855, Captain Henry English and 150 laborers from Manihiki settled, and began producing coconut oil for export. He put the island under British protection, when it was visited by W.H. Morshead in the HMS Dido on October 16, 1855.” (<http://en.wikipedia.org/wiki/Tabuaeran>)

"Fanning was formally annexed to Great Britain by Captain William Wiseman of the HMS Caroline on March 15, 1888. A deep opening was blasted. thereafter called the English Channel, on the west side of the atoll. Tabuaeran hosted a cable station on the Trans-Pacific cable between Canada and Australia, a part of the All Red Line, beginning in 1902. In September 1914 (World War I), the Cable Station was shelled by a German gunboat, the Nürnberg, and the station slightly damaged. In 1939 the atoll was incorporated into the British colony of the Gilbert and Ellice Islands, and later, in (1979), gained independence, becoming part of the Republic of Kiribati (pronounced kee-ree-bahs)." (<http://en.wikipedia.org/wiki/Tabuaeran>)

The cultural values of the people of Tabuaeran is somehow different as compared to other islands, since it's a place of where people from all over Kiribati came to resettle and make worth their living, each have came from different districts of the Gilbert Islands; northern, central and southern district.

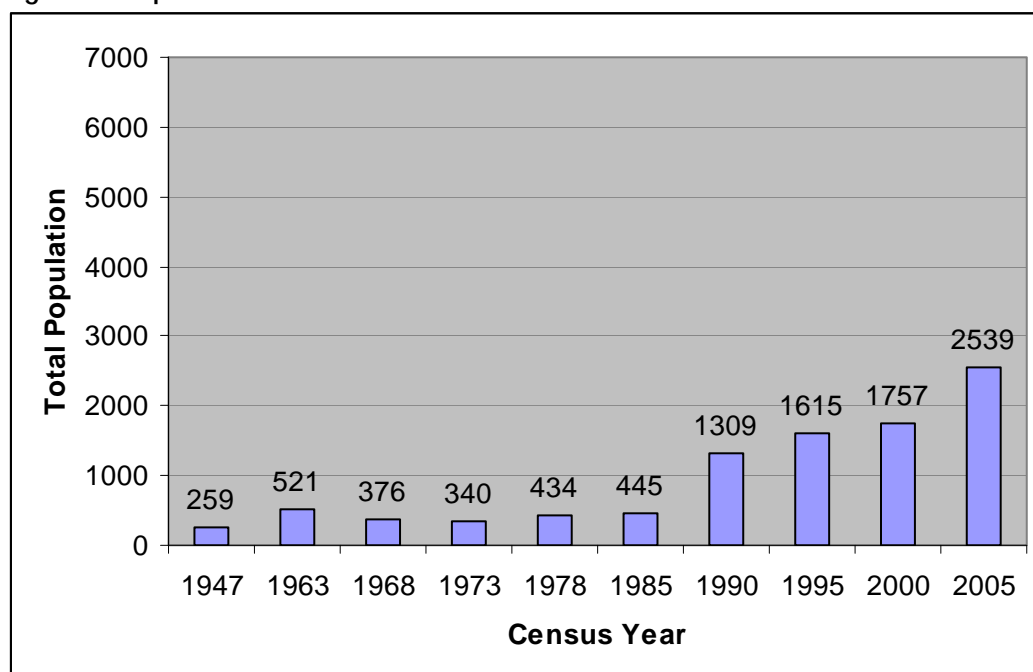
CHAPTER 3: TE MAURI – ENVIRONMENT, RESOURCES AND SOCIAL SERVICES

3.1 DEMOGRAPHY

3.1.1 Total population

The 2005 census recorded a total population of Tabuaeran of 2,539. In general the population trend shows a low yet steady increase of Tabuaeran population between 1947 and 1985. Five years later in 1990 there was a significant increase due to the resettlement phase 2 that from each island were selected to live on Fanning island that constitute of a total of 242 (refer to migration map), followed by a constant slow increase until the 2005 census when the population again increased rapidly. During this last census in 2005 there a big jump from the previous census figure of 1757 to 2539. The increase of more than 700 people within a period of only 5 years is unusual. This reason could be attributed to the high number of resettlement send from Tarawa under the government's plan of decreasing the population of Tarawa. In other ways, high migrants of people searching for better welfare or even the visiting of family and friends may have great significance effect upon the sudden high increase.

Figure 2: Population of Tabuaeran 1947-2005



Source: 2005 census, National Statistics Office, Bairiki, MFPED.

3.1.2 Growth rate

The annual population growth rate for Tabuaeran between 2000 and 2005 is 7.4%, compared to the previous inter-censal annual growth rate of 1.7% which is in fact support the idea of steady increase as illustrated in figure 1 above. It is noted however that on the eve of the 2005 census many visitors and

migrants to Tabuaeran increased steadily due to finding good jobs or proper and necessary means of making good living which has great influence impact on the proportion of the 2005 population

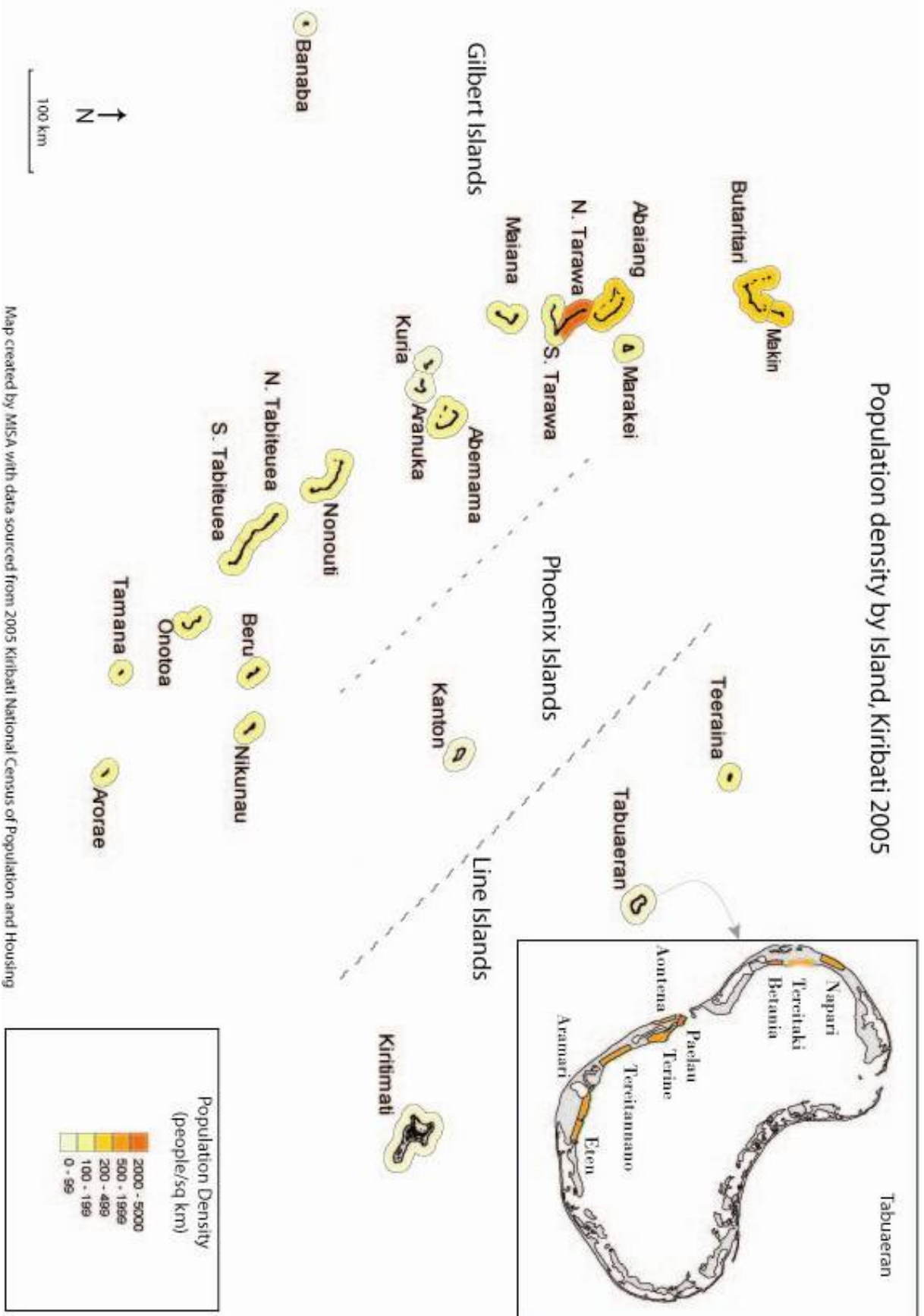
Compared to other islands, Tabuaeran recorded as the second highest with annual growth rate of 7.4 after Kiritimati which had 8.0% respectively. These annual growth rates are well above the national rate of 1.8%.

3.1.3 Population Density

Population density is defined as the number of people living within a square kilometer of land. This is calculated by dividing the number of people in a given location with the area of land. Map below presents the population density by village, showing that Betania and Paelau are two times overcrowded compared to other villages of Fanning Island.

At the island level, Tabuaeran has a total land area of 33.75 square kilometers, giving average population density of 75 people per square kilometer. Compared with other outer islands in the country, Tabuaeran is the fifth most sparsely populated island after Kuria and Banaba. Furthermore it has a growing population with changing percent of density which is 44.5 % as of from 2000 to 2005 census

Population density by Island, Kiribati 2005

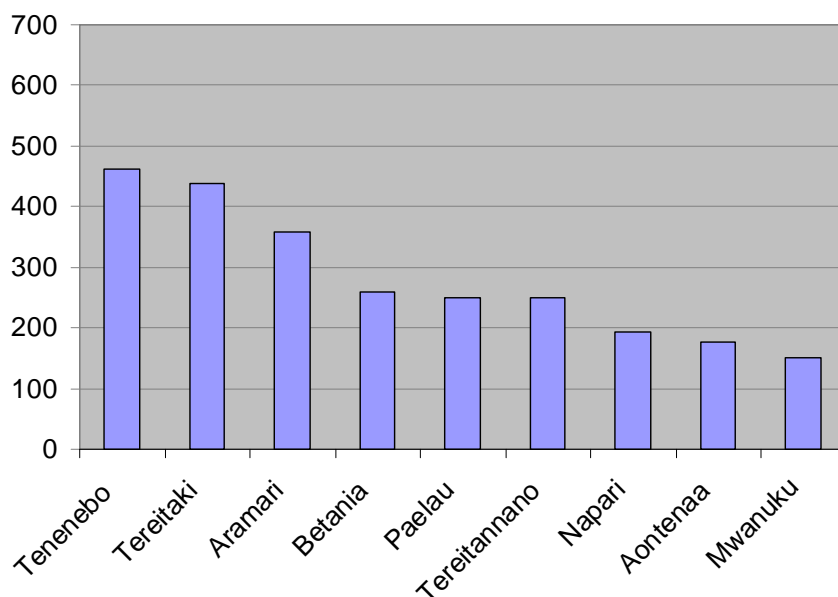


3.1.4 Breakdown of Population

The following is the breakdown of the population of Makin, looking at its age, sex, village and religious composition.

The population chart shown in Figure 2 above compares the distribution of population between the 10 villages. It is clear from the chart that a large proportion of the people are located on Tenenebo which is practically known nowadays as Terine, Tereitaki constitutes second largest population after Terine, in fact Mwanuku known as Eten these days held the least population compared to other villages of Tabuaeran.

Figure 3: Population by age group and village

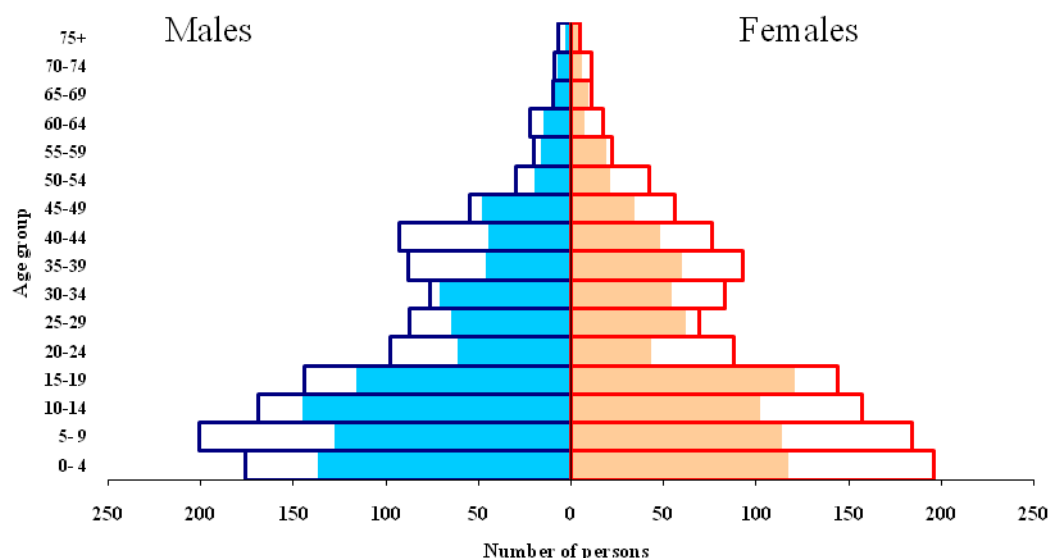


Source: 2005 Census of Population, NSO/MFED, 2007

3.1.5 Population by Gender

Statistics indicates that in 2005, out of Fanning's total population of 2539, males constituted 50.6% (1285) and females 49.4% (1254). In other words there are 97.6 females for every 100 males, a trend that diverts from the normal pattern where there are more females than males at national level. The higher male population also contradicts the fact that females have a longer life expectancy than males. However if considering facts such drinking disorderly, other facts that might shorten life than expected, male and also female are in the habit of the sort of life. Impeccably figure 3 signifies that large proportion of dependency age-group(age 0-15 and 50+) of both gender constituted most of Tabuaeran's population. Quite small proportion of the functional age group (20 – 50) most are to be retired upon reaching 50 years of age. Changes of trends may have been due to facts of death and migration or not on the island during the census was conducted.

Fig 4: Population pyramid, Tabuaeran 2000 (shaded area) and 2005



Source: based on the 2005 Census Analytical Report, SPC, 2007

3.1.6 Population distribution by religion

Table 2 below illustrates the population distribution by religion for Tabuaeran in 2005. The two most dominant churches on the island are the Roman Catholic Church (RC) with 1171 (46.12%) followers and the Kiribati Protestant Church (KPC) with 1154 (45.45%). Other religious denominations Bahai Faith has become the third largest denomination throughout the island, the Latter Day Saints (LDS) constitute of only 35 members while SDA has the least number. Other denominations such as Church of God (COG), Assembly of God (AOG) and other that are not mentioned all constitute only 2.64% of the island's population. Most denominations have their own place of worship except for the minor ones.

Table 2: Population by Religious denomination 2005

Religion	Total	Percent
RC	1171	46.12
KPC	1154	45.45
Bahai	109	4.29
Other	67	2.64
Mormon	35	1.38
SDA	1	0.04

Source: 2005 Census of population, NSO/MFED

3.1.7 Out-migration

In 2000 the population of Makin was 1757, as compared to 2,539 in 2005. This results in an increase of 782 persons in the last five years. Such a high increase is believed to be caused by coincidental influx of people to the island during or even before census day, resulting in the covering of the real trend of

population decline which is affecting many islands outside the capital Tarawa. Unfortunately information relating to the migratory movement of people from and to Tabuaeran is not available at the time of writing.

Reliable records show that in 1988 a total of 242 persons migrated to Tabuaeran (Fanning) from each island as starting from Makin until Arorae, there are others settled in other Line islands such as Washington (Teeraina) and Christmas island (Kiritimati). In regards with shipping and airline passenger data there are quite a number of migrants to the island just before the census year took place.

3.2 LAND RESOURCES

3.2.1 Land and Marine Tenure

The land has 9 villages altogether as mentioned earlier on. It is quite covered with shrubs, coconut trees, plantations of each individual in certain area that obtain under their lease. There are other sorts of plantations in which the island has uniquely due to the climate it has and that of historical relations. Banana, bwabwai, breadfruit, pandanus plantation and other sorts of plants that are able to be cultivated with the land soil, are sorts of vegetation that made the island outlook greenish, warm and cool through the thick vegetation that grow around the island. Mango tree is only seen on one area of Tabuaeran which is the NCL (Norwegian Cruise Line) compound. Other plants that are not indigenous to island also can be seen around the island such as sunflower.



(Vegetation types on Tabuaeran; shot by the visiting team to the island)

Tabuaeran was formerly an important seabird rookery with 12 breeding species, but populations are now much reduced and only about six species still breed regularly: White-tailed Tropicbird known as “te Gnutu” in local language (Phaethon lepturus), Red-footed Booby (Sula sula) also known as “te

Koota” in Kiribati, Great Frigatebird (Fregata minor) “te itei” in local terms, Brown Noddy (Anous stolidus) popularly known as “te lo” in Kiribati language, Black Noddy (A. minutus) in Kiribati is known as “te mangkiri” and White Tern (Gygis alba) where as “te matawa” as the local name. There is small population of the

Scarlet-breasted or Kuhl's Lorikeet (Vini kuhlii) on the northwestern islet. This species is believed to have been introduced by early Polynesian colonists. Tabuaeran is one of only four islands on which the Christmas Island Warbler or Bokikokiko (Acrocephalus aequinoctialis) is known to have occurred, but according to Perry (1980), the species has disappeared from this island since 1924. In fact, with increasing number of inhabitants the bird species declines.





3.2.2 Land Ownership and Use

Typically the land is owned by the State Government unlike the other islands of the Gilbert district. Settlement on the place requires people to pay for the lease with provided schemes of schedule to be followed when applying for settlement/business lease. Around about half of the land area where villages are located whereby the other half is for government preserve area or under the wildlife conservation (refer to Topographic & landuse map).

There two particular ways in which an individual is able to possess a certain piece of land in such as one business lease and the other is resettlement scheme. Settlement on the island is arranged by a certain committee known as “Resettlement Committee”, each island of the Line have distinct criteria or ways of selecting candidate(s) according to Tabuaeran island council own terms of measure.

Resettlement Committee is a certain group where it arranges the settlement of people who wish to live on other islands especially in the Line Islands example Tabuaeran, Kiritimati, and Teeraina. Any individual interested to migrate to Fanning (Tabuaeran) or Teeraina (Washington) must contact their island council on the issues, given a form to fill, and the council sends it over to the Resettlement Committee if approved send back to the island council to deliver it the interested individual

3.3 MARINE RESOURCES



3.3.1 Size of reef and Lagoon area

Table 3 (following table) shows the size of Tabuaeran’s reef, lagoon and land area in square kilometers. Tabuaeran has 51 square kilometers of reef. This is a quite a big reef area compared to other larger islands in Kiribati. The island is of big coral formation and also of lagoon; however one reef size of the larger ocean passages which cuts through the island had become shallow at one end, creating a small mud flat which is still linked to the ocean by a narrow passage. Shell fish could be found on the mudflat at low tide, and abundant schools of small fish live among the roots of the mangrove during high tide.

These resources provide an important source of food to the people of Tabuaeran people however the mudflat is located on the northeast of the island or opposite where the villages are located.

Table 3: Size of Reef/Lagoon Size

Islands	REF(sq/km)	REF base (sq/km)	LGN (sq/km)	LAND (sq/km)
Tabuaeran	51	unknown	110	33.7

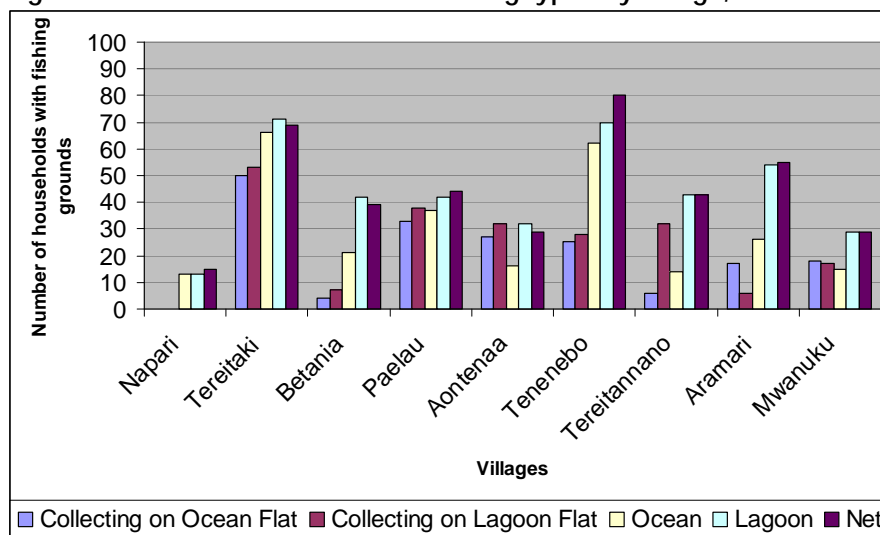
3.3.2 Status of Fish Resources



It is difficult to quantify the fish resources of Tabuaeran, or any island for that matter. However, it is generally accepted that the bigger the reef area the larger the fish resource, particularly reef fish. Therefore it could be concluded that due to large reef area of Tabuaeran it is obviously with a wide range of reef fish resource. Free migratory fish such as tuna (*te ati*, *te baiura*, *te ingimea*) flying fish (*te onauti*) and shark (*te bakoā*) are always available, and an increasing number of people are engaged in ocean fishing, compared to a very small number using the ocean and lagoon flats.

Despite the large area of lagoon, most of the people also prefer ocean fishing rather than lagoon fishing. There a quite number of village people who also prefer ocean fishing than lagoon fishing. Tereitaki and Tenenebo (Terine) village people have the highest number of household who normally go ocean as their fishing ground and also have the highest number of household who go lagoon fishing. The people of Napari village are not much of ocean flat collectors or lagoon flat collectors, yet they are more in ocean, lagoon and net fishing rather than fish collecting on flats. They have the least number of household who go fishing and which also has the least number of household (came third last) overall the island's total number of household.

Fig 5: Number of households with fishing types by village, 2005

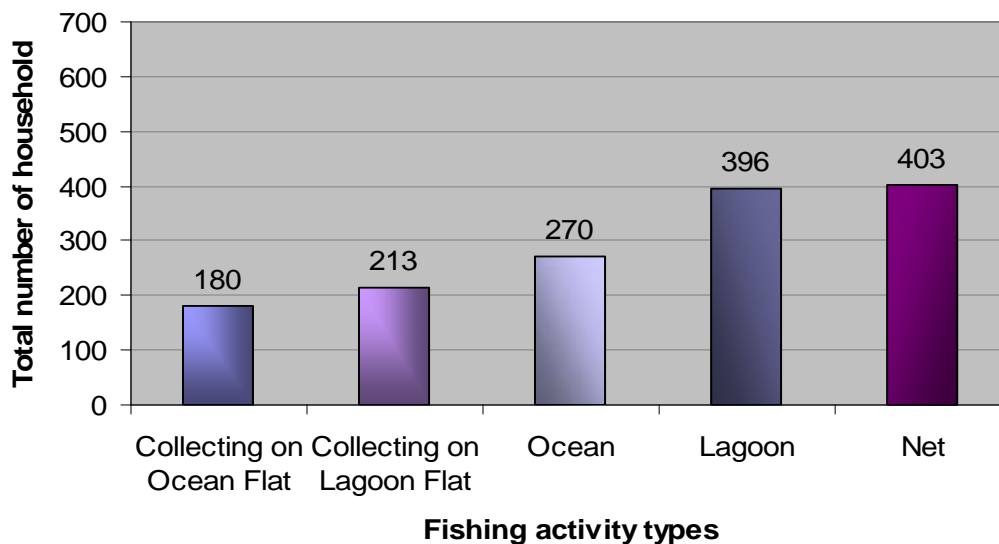


Source: National Statistics Office, MFEDP, 2005 census.

3.3.3 Pattern of fishing activities

Figure 4 categorized fishing activity generally by fishing area and method. The graph shows that the most frequented area for fishing is the Lagoon. This is the reef area surrounding the island which becomes accessible at low tide. Fishing methods commonly used on the Lagoon include: among others, collection of shellfish, hooking of octopus/sea worms (*te waibo*), rod fishing (*roarao*), spear-fishing (*katebe*), torch fishing (*kibe*), and more. The reason that most people use the lagoon flat for fishing is that the area is the most accessible and the methods of fishing used are simple and cheap. Also, the lagoon flat is normally rich in marine resources, which range from seashells obtained right from the beach to small and large fishes that live within the borders of the lagoon. However common method such as net fishing is normally used due to its suitability in providing enough supply of fish for the whole family as per fishing trip, in accordance to the living style of Kiribati people it is really normal to have extended family and offcourse most households on Tabuaeran have the least of 19 people living in one house. Lagoon fishing is basically undertaken in times of rough seas and weather, evidentially as in avoidance of any danger people are therefore forced or intimidated to buy tinned/canned food as their daily meal until the weather condition is normal.

Figure 6: Households and fishing activities



Source: 2005 Census of Population, NSO/MFED 2007

3.3.4 Current Developments

An attempt in improving and developing the island, current development are therefore vary from top priority to the least priority projects that the people of the island requested to their council representatives that be brought forward during the island council meeting. There are 10 priority projects needed to be send to Rural Planning Development a division of Ministry of Internal and Social Affairs, whereby only one each year is taken into fund processing. In consulting the Assistant Rural Planning Officer who undertakes the responsibility of looking into Tabuaeran's current proposed project as shown in the table as follow;

Table 4: Priority Project from Tabuaeran Island Council

Project Number	Description	Status
1	Road upgrading	Awaiting OIPCC's approval
2	Police office	Approved and awaits the fund
3	Council living quarters	Awaiting approval
4	Lagoon Ferry	Awaiting approval
5	Women Center	Awaiting approval
6	Council Mwaneaba	Completed
7	Navigation Beacon	Awaiting approval
8	FAD Fishing Aggregating Device	Awaiting approval
9	Airfield	Awaiting approval
10	Anchorage for Yatches, Truck for unimwane, Toilet and Council Resthouse	Awaiting approval

In regards with what is illustrated in the table above, clearly shows that the ideal for improving and conserving fish resources is at the 8 or more less second last top priority, FAD; Fish Aggregating Device, of which the people of Tabuaeran most needed issues to be looked at, which apparently should be the first thing requested on their priority list. The proposed projects therefore have constraints in regards with what councilors can all agree upon, despite the importance and its vitality, they chose upon what they see their island as whole is in need of and urgently requires attention and most of them are basically infrastructures example; women center, island council office, garage, road construction and many more.

3.3.5 Issues facing fishing and development of marine resources

Owing to its size, one of the future threats facing Tabuaeran is the impact of population growth on the supply of fish and other marine resources. Generally speaking the more the population grows the higher the pressure on fish and other marine resources. This is particularly true in the case of Tabuaeran where the reef and mudflat fish are comparatively small than previous years. It is likely that as more and more people are engaged in net fishing, the volume of catches will decrease. As according to village people while having a small chat, they also mentioned that at their first arrival to the island, there was abundant milk fish from big to small even the birds of various kinds, due to the introduction of net fishing and cats, the number of marine resources have declined due to the high number of net fishing with provided increase number of people resettling on to the island.

In turn this will lead to more people turning to ocean fisheries, however with the high capital cost of equipment and anticipated increase in rough weather (there has been a marked increase in strong westerlies), peoples dependency imported food to satisfy their daily food requirements is likely to increase. The ocean is still rich in migratory fish (especially tuna) and other exportable marine resources such as lobster, pet fish, and more. However the main constraint that had prevented commercial

fisheries operations in the past is the lack of storage and transport facilities to enable harvesting of these resources.

3.4 THE ENVIRONMENT



3.4.1 Environmental Issues

Coastal erosion is a major environment issue for the people of Tabuaeran. Many locations on Tabuaeran have been seriously eroded, resulting in the relocation of infrastructure (road, buildings, etc.) or the recurrent high expenditure of maintaining seawall protection and restructuring of causeways. Tabuaeran with the kind of topographical structure makes it particularly difficult to predict the flow of tides due to the aspect of an oval feature. In addition to being mediate size island, the reef flat is not narrow but quite big to some extent where it might have big chances of being protected from high tides and strong storms yet it is impossible to avoid strong ocean currents that shapes overall landscape of the island.

Apparently, the people of Tabuaeran do strongly believe that the construction of causeways in linking the islet of Tabuaeran is the main cause of serious coastal erosion on Tabuaeran. As shown in the picture above, it's been a habit for most island people to build causeway around the island as for better land access and easy travel where cars and motorbikes are able to be used in any place and destination. Changing the former structure of the island can be destructive and in some other ways beneficial, some areas being eroded while some are reclaimed (see pictures below; the first two show land been reclaimed and the last shows coastal erosion).



Land reclamation and coastal erosion shot by Ruta Ioata

3.5 EDUCATION

The data used in this section are derived from the Educational Statistical Yearbook for the years 2004 to 2006. The data are compiled by head-teachers and submitted to the Statistical Unit of the Ministry of Education at the end of every year. There are 3 primary schools, 1 JSS and 1 Senior Secondary school.

3.5.1 Number of school age children, proportion enrolled in schools

There are 4 types of schools within the formal education system in Kiribati, namely primary, junior secondary, combined junior/senior secondary, and senior secondary. The first 2 types of school, primary and junior secondary are normally located on every island for accessibility by all children of school age.

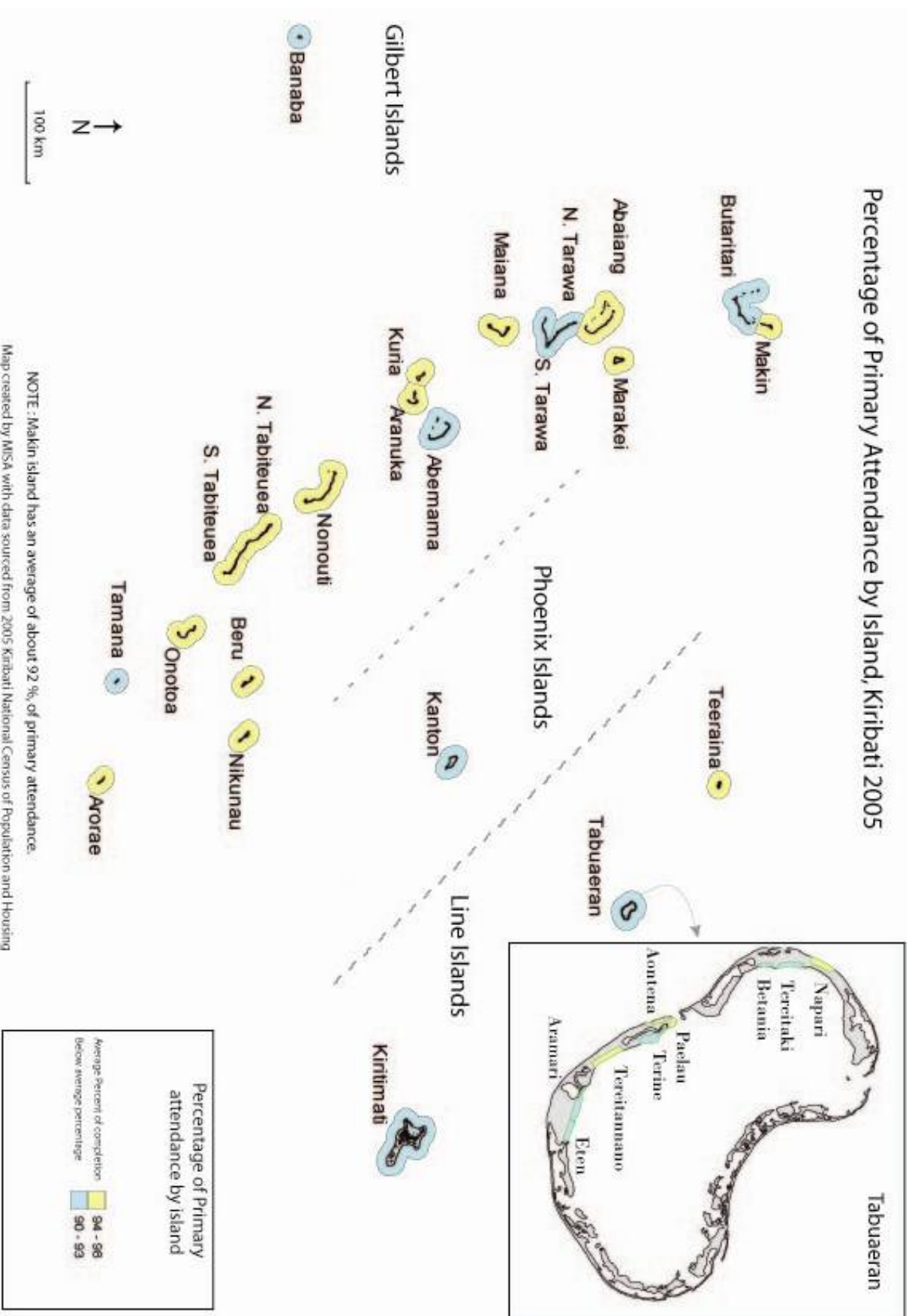
Formal education officially commences at Class 1 in the primary school for children who have reached the age of 6 years. Primary education continues for 6 years before children enter Junior Secondary School at age 12. They remain in JSS for 3 years before they finish and compete for a place in one of the various Senior Secondary Schools located mostly in South Tarawa and few on other islands such as Meleangi Tabai High on the village of Napari and newly built JSS situated on Paelau villagae located on Tabuaeran.

3.5.2 Proportion of Primary school attendance

There are 527 children who are of primary age out of the total number in the primary school age of 6-12 years, 92% were enrolled in primary schools. Males have dominantly high primary attendance proportion over females with an outstanding attendance rate of 94 % while females with only 89% of attendance. Males in the old traditions are therefore allowed to be send to school while females are left behind to learn house chores, in fact the reason behind is that there are more males (268) in the primary age as can be compared to females (259), There might be other underlying reasons in which hinders the females primary attendance, all needs to be taken into consideration for attendance differences.

Overall, Tabuaeran has a very outstanding primary attendance, even though it's below average ; 94% national primary attendance average, it does not quite simply signifies that it has bad primary attendance but eventually symbolizes the progress initiation of families in accepting and realizing the importance of education.

Percentage of Primary Attendance by Island, Kiribati 2005



3.5.3 Proportion of Junior Secondary School Attendance 2005

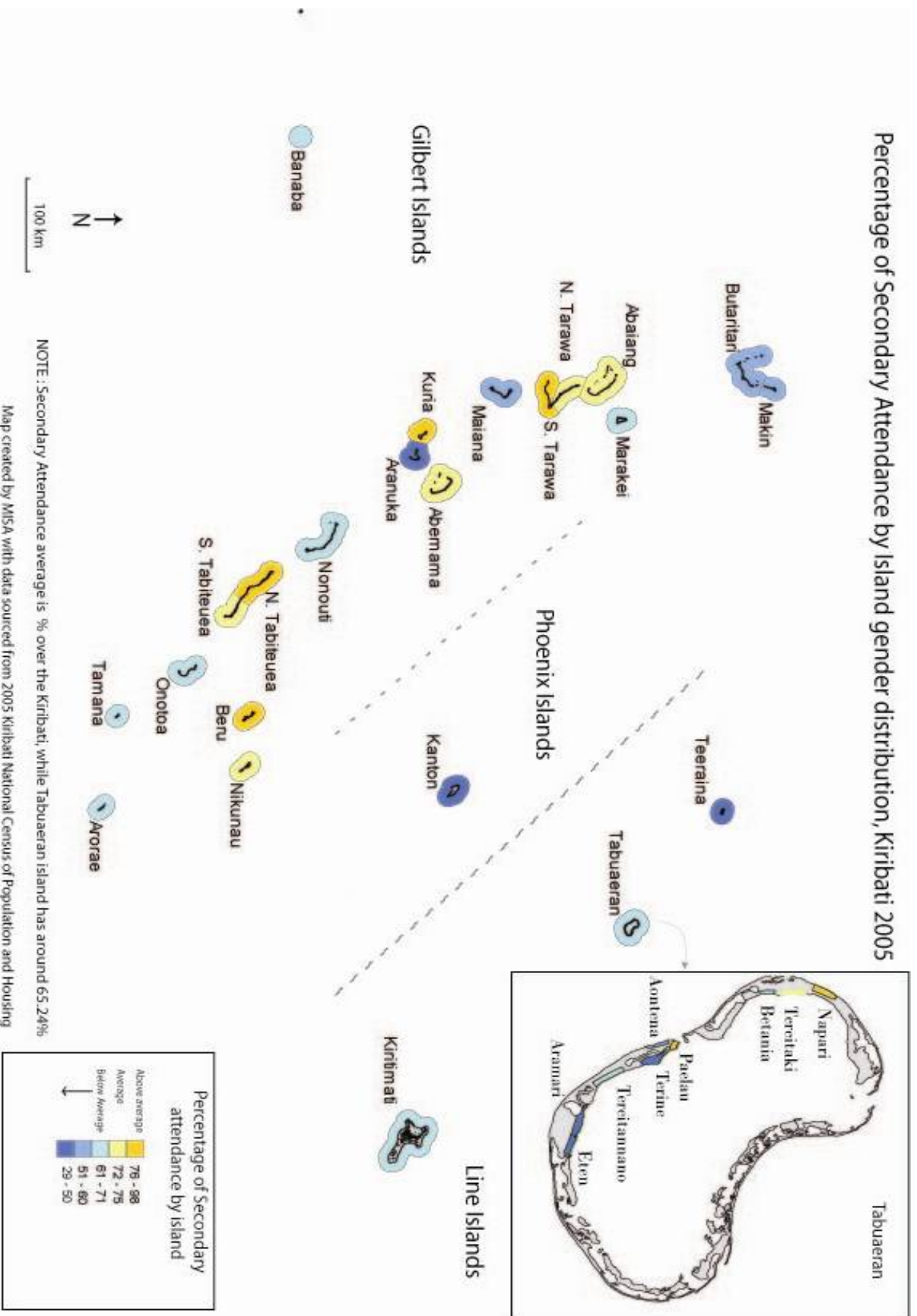
Ostensibly, every island has their own Junior Secondary School for the purpose of easy access of secondary schooling for every child aged 13-15 years. According to the 2005 census, Tabuaeran has around 160 children with legible JSS age, however there are only 77.5% of the total who attended JSS and the rest were basically restrained under certain circumstances as either personal or due to family decision or maybe have left school with provided disciplinary actions of the school or other unexplainable reasons and causes. Such reasons and hidden situations must be therefore thoroughly considered before concluding results from such survey.

Nevertheless, 77.5% of the total number of JSS aged student is compromised of gender combination. Males consequently have the proportion of 70.8% of the 89 total number of males aged 13-15, females on the other hand has the total of 71 with 85.9% JSS attendance rate. It has become a norm in most of the secondary school is that there higher females attendance as compared to males. Underlying causes and facts can be both lead from disciplinary issues from school and other personal related problem of the individual male student. Females also go into various procedures as males do in every secondary in fact male percentage of drop out is actually higher than females.

At national level, the average attendance is 83.4%, in fact Tabuaeran is only 77.5% which is apparently below average yet it is not quite poor as in comparative to other islands or country in the world. There are 14 islands with average attendance below the national average yet there are still above the normal average which is 50%.

Tabuaeran also has its own Senior Secondary which is hereby known as Meleangi Tabai High School formally named after the wife of the former and first President Ieremia Tabai. It has been established at the former Cable station (a former undersea telegraphic cable relay station that was established in 1902 by Cable and Wireless Ltd. but is currently a school) since 1981. There are 191 students aged for Senior Secondary school whereby only 68% of that total attended or enrolled in 2005 (according to Education Digest 2006)

Percentage of Secondary Attendance by Island gender distribution, Kiribati 2005



3.5.4 Breakdown of school enrolment at different levels

In 2006 a total of 490 pupils were enrolled in three primary schools, namely Ara Eden, Norwegian Cruise Line and Tebonnano. Of this number 222 were girls and 268 were boys. The total number of teachers in all three primary schools is 17, out of which 3 were based at Ara Eden, 5 at Tebonnano and 9 at NCL.

For the whole island there is only one Junior Secondary School, Keina Tiito Junior Secondary School (named after the former president's wife Teburoro Tiito). As of 2006 the number of pupils enrolled in all forms totals to 207. Of this figure 67 were in Form 1, 63 were in Form 2, and 77 were in Form 3. With a teaching staff of 11, the Teacher to Pupil ratio at JSS was 1 teacher to every 14 pupils.

3.5.5 Percentage of pupils completing Primary and JSS.

The number of pupils who were in class 5 of primary school in 2005 was 86. This is the same number that we would expect to enroll for class 6 in 2006. Surprisingly the figure increased to 99 in 2006, reflecting a difference of 13 over the previous year's figure. Assuming that no major changes occurred before the end of 2006, we could conclude that the percentage of pupils completing primary education on Tabuaeran in the year 2006 was 115 % ($100\% + 13/86 \times 100$) provided the fact of adding the extra percent of 13 pupil who compromised total value of 99 instead of 86. Using the same method for JSS we observe that there were 63 pupils in Form 2 in 2005, same number is expected to Form 3 in 2006. However in 2006 the difference between the numbers is 77 showing a variance of 14, again assuming that no major changes occurred before the end of that year, the percentage of pupils who completed JSS in 2006 was 122% ($100\% + 14/63 \times 100$).

The aforementioned method is also used in analyzing the enrolment rate for even higher education example Senior Secondary School such as Meleangi Tabai Secondary School. Unfortunately the data for form 6 and 7 were not included or updated due to unforeseen matters and other certain constraints the assumption on the amount of completing senior secondary is critically impossible to determine.

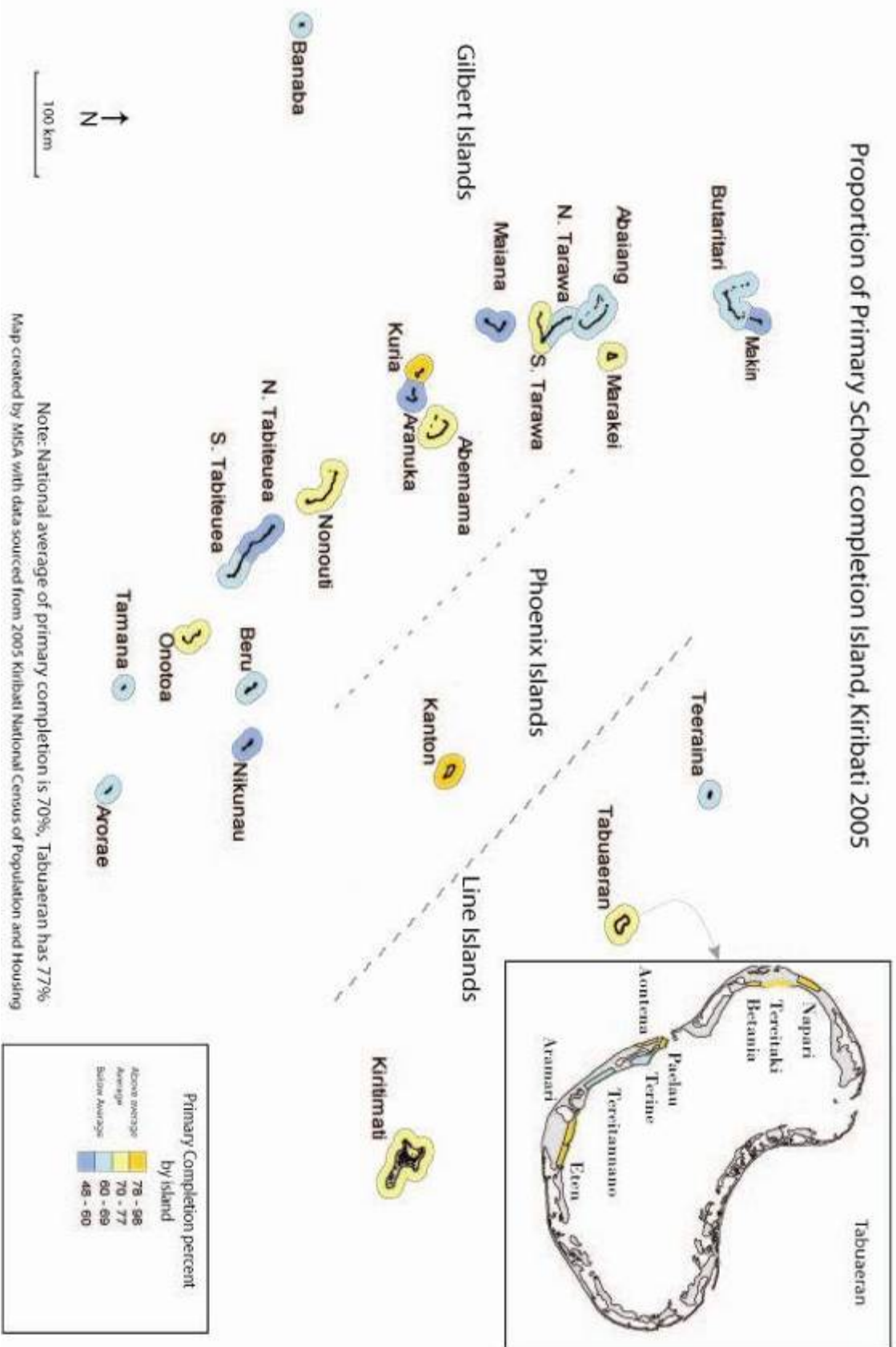
Table 5: Enrolment in Primary and Junior Secondary Schools, Tabuaeran 2005 and 2006

Primary School								Junior Secondary School			Senior Secondary		
Year	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	TOTAL	Frm 1	Frm 2	Frm 3	Frm 4	Frm 5	TOTAL
2005	89	83	86	80	86	77	501	67	63	77	84	46	337
2006	72	81	91	65	82	99	490	67	63	77	84	46	337

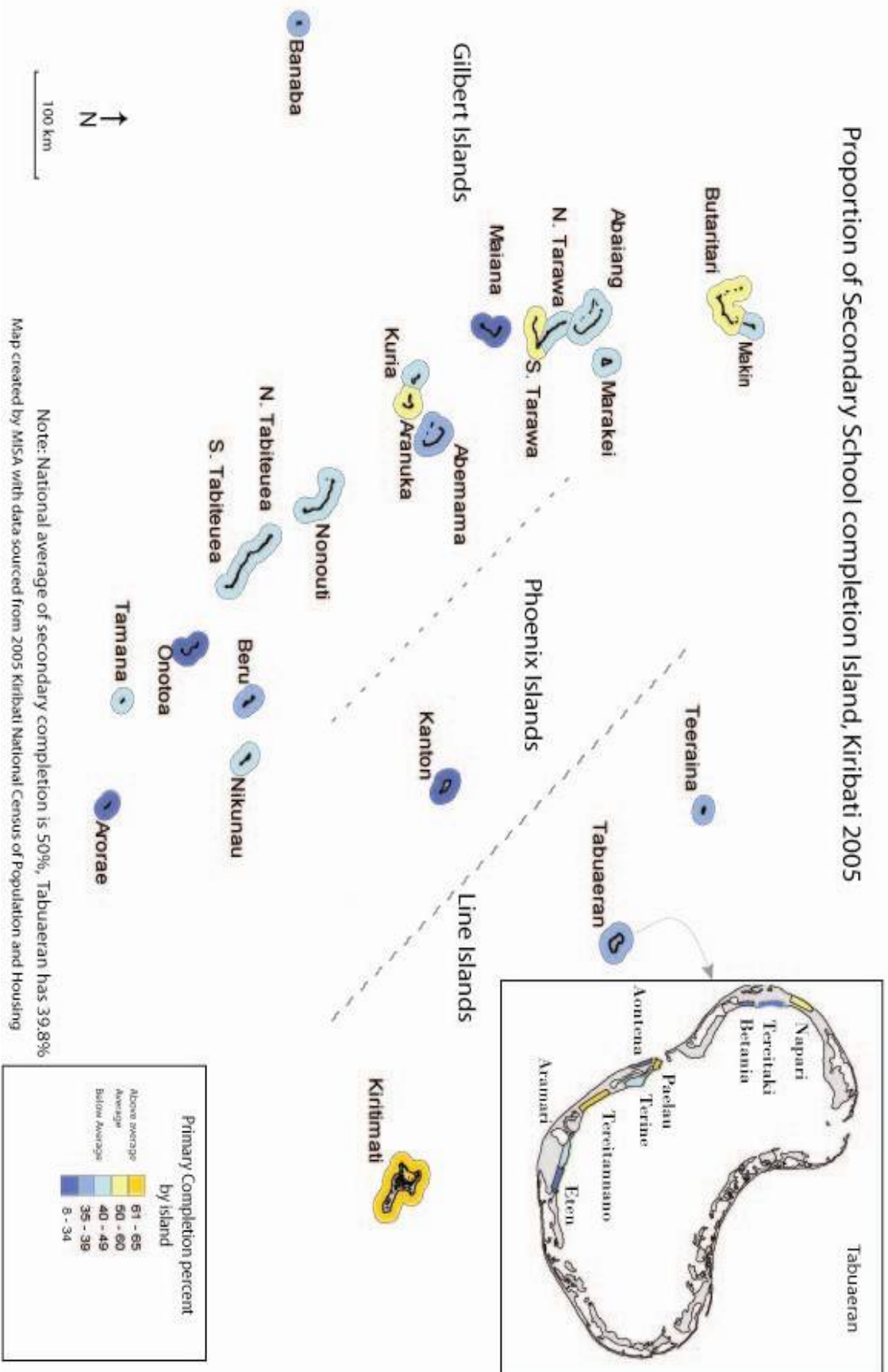
Source: Compiled from the Digest of Education Statistics, MOE, 2005 and 2006.

The surplus in enrolment at the higher levels of primary and JSS may be attributed to the transition between different levels of schools, prompting some pupils to repeat either Class 6 or Form 1 in order to improve their performance especially in national-level examinations. It is also likely that some pupils changed schools sometimes in 2005 without their movements recorded in the school report when it was submitted to the Ministry of Education. As a result their presence was noted but could not be explained.

Proportion of Primary School completion Island, Kiribati 2005



Proportion of Secondary School completion Island, Kiribati 2005



3.5.6 Number of schools, type and state of facilities

Tabuaeran Island has 5 schools comprising of 3 Primary Schools and one Junior Secondary School and one Senior Secondary School. Allocation of schools were taken under very predefined plan, whereas the 3 primary schools have been widely dispersed as of one on the South (Eden), the other in the north(Napari) and the last placed right in the center(paelau) of the island. Junior Secondary School is located on Paelau village as for easy and fair access for both north and south people. Apart from that Senior Secondary School is located at the north end of the island (Tereitaki).



A collapsed classroom at Ara Eden Primary school, Meleangi Tabai classroom with holes in the roof and windows! - photo by Ruta Ioata, 2007

The condition of classrooms, teacher living quarters and other school buildings is generally poor. School buildings are of the local and permanent type and, as such, one would expect that local buildings will be better serviced due to the availability and low cost of materials. While repair and maintenance work on local buildings is more frequent, there is often insufficient funding to address full maintenance requirements at any one time. On the other hand, permanent buildings (see above photograph) have not received any maintenance work for many years. As a result some permanent buildings had deteriorated so badly that local authorities are forced to use local materials to patch up damaged walls. At Meleangi Tabai Secondary School, negligence of a simple repair work to the roofing, window of a classroom complex will result in the collapse of full sections of the building – the cost of which may now run in tens of thousands dollars. At the time of review, Government is still looking for funds to undertake major repair works on permanent buildings all across the country.

School furniture is generally lacking, and it is not unusual to find pupils learning while sitting or lying on the ground. To try to provide much needed funds the school administration and parents sometimes launch fundraising activities in order to generate income to meet the cost of teaching materials and stationery.



Photo shot by Ruta Ioata (interior of classrooms, Meleangi Tabai Secondary School)

3.5.7 Number of Teachers and Teacher/Pupil Ratio

In 2006 Tebonnano Primary school had 175 students with 5 teachers while Ara Edem Primary School had 90 students with 3 teachers, Norwegian Cruise Line Primary school had 225 student with 9 teachers. Basically the ratio of 1 teacher is understood to be extracted from total number of student in a particular school divided by the total number teachers, yet every school has different proportion of teachers and student as it shown in the table that follow. Unfortunately, many staff or teachers complaint that working and teaching student requires a lot of tension and patience, they have found themselves teaching 1-3 classes in which have hereby experienced it very challenging, also propose if there is a possibility in increasing the number of teachers so that one teacher is able to focus one class for better management and discipline.

Table 6: Number of Pupils, Teachers and Ratio

School	Pupils	Teachers	Ratio
Tebonnano Primary School	175	5	35
Ara Eden Primary Sch	90	3	30
NCL Primary School	225	9	34
Keina Tiito Secondary School(Junior)	207	11	20
Meleangi Tabai Secondary School (senior)	130	15	22

Source: Digest of Education Statistics 2006

3.5.8 Performance of Pupils in national tests/exams

In the formal education sector, children at pre-school and primary school levels transit to primary and JSS respectively without having to sit entrance examinations. This policy supports the concept of compulsory and accessible education for every child, especially at the early stages of formal education. However at the end of JSS pupils must compete with each other for the limited places available in one of the few Senior Secondary Schools in the country and for winning scholarship awards for higher education in higher institutes. Therefore pupils of Keina Tiito JSS and Meleangi Tab'ai Secondary School on Tabuaeran must compete every year to secure places in one of the 20 or so senior secondary schools, 3 of which are state owned while the rest are run by various religious denominations and as for senior secondary pupil, able to grab a chance of the available scholarships from various aids as such; AUSAID, NZAID, TAIWAN AID, JAPAN AID and even the government itself provide funds for students falling into the category or level standard to study abroad.

The Digest of Education Statistics does not provide information on the performance of pupils in national examinations; however the Ministry of Education has been requested to provide this important information for inclusion in the profiles when they are ready.

3.5.9 Community involvement to improve standard of education

Normally the community does not interfere with the school syllabus as it is the responsibility of Government to design them and ensure their effective implementation. However the community, through the school committee, often takes the initiative to address a wide range of other issues, such as children and teachers comfort, security, staffing, sports, and many more.

Over the past years the community had assisted both the primary, junior and senior secondary schools especially in performing critical maintenance work on classrooms, offices and teacher residences. These buildings are by right the responsibility of Government who, in many cases has been very slow in providing the financial support needed to keep school infrastructure in good shape. On Tabuaeran, the community had constructed new classrooms and repaired old buildings using locally available materials.



3.6 HEALTH

“The Ministry of Health and Medical Services will provide optimal level of health to the people of Kiribati using a Primary Health Care (PHC) approach that promotes both prevention and curative services to improve outcomes through accessible, affordable, integrated, and quality services at every level of the health delivery system” This is the mission statement of the Ministry of Health and Medical Services contained in its Operational Plan for 2004-2007, which reflects the overall responsibility of the Ministry of Health and Medical Services for the nation as a whole.

3.6.1 Health Facilities & Staff

There are two clinics and one health center on Makin. The clinics are located each in the villages of north side of the island (Napari), the other at the southern side of the island (Aramari) , while the health center is located in the island’s administrative center, Paelau. There is one Medical Assistant (MA) who is the highest ranking medical staff on the island. The MA is in charge of 2 nurses and 4 nursing aids. The MA and nurses are paid by the central government while the nursing aids are the responsibility of the Island Council of Tabuaeran.



The health center and clinics have facilities to accommodate patients who are admitted for medical supervision. These health facilities are as follows:

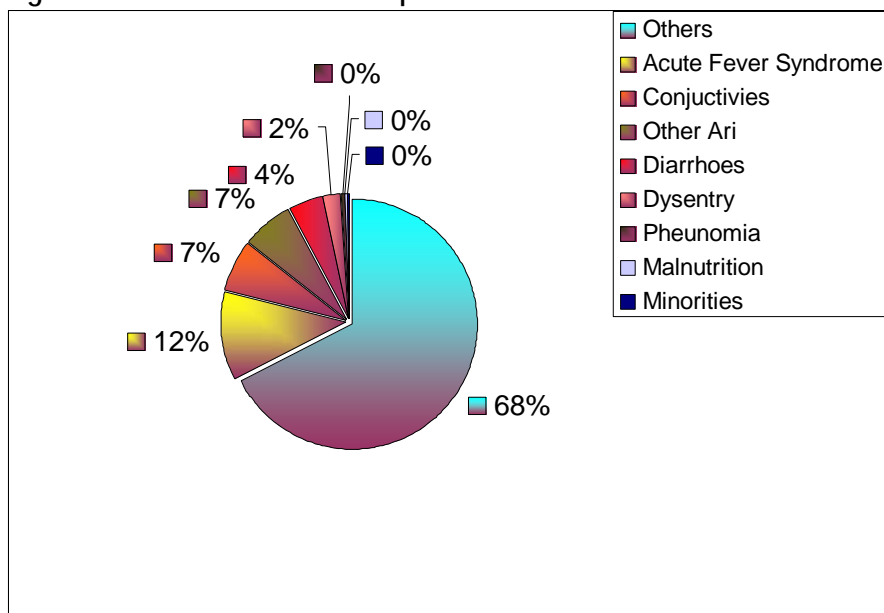
- *Paelau Health Center:* 1 health center, 3 wards, 3 cooking houses and 3 toilets
- *Aramari Dispensary/clinic:* 1 clinic, 3 wards, 3 cooking houses, and 3 toilets
- *Napari Dispensary/clinic:* 1 clinic, 2 wards, 2 cooking houses, 2 toilets and 1 maneaba.

The health center and clinics are built from permanent construction materials, while the wards, cooking houses and toilets are of local material. Various surveys on the condition of medical facilities undertaken over the course of the past few years show that maintenance of medical facilities on Tabuaeran have been neglected, resulting in the deteriorating condition of both local and permanent buildings. The main cause of this problem is the lack of maintenance funds.

3.6.2 Most Common Health Problems

Records show that the most common diseases on Tabuaeran Island are fever, cough, headache, stomach-ache and diarrhea. As Figure 12 shows, these diseases were the most prevalent among the patients who visited or were admitted to the clinics and health center on Tabuaeran in 2006. On the other hand, chicken pox, meningitis, scabies, fish poisoning and sexually transmitted infections (STI) were the least important cases of illness or minor cases over the island(have been classified as Minorities), for which less or even none cases were reported in 2005. In relation to sexually transmitted infections the Ministry of Health and Medical Services believes that due to fear of social rebuke STIs are usually difficult to detect since people keep them secret. Therefore while there may be no record of patients with such diseases, it is unlikely that there are no people who actually infected and living with unreported diseases on Tabuaeran.

Figure 7: Most common health problems



3.6.3 Cases of malnutrition, HIV/AIDS, TB, etc.

According to medical records from Tabuaeran Island, no cases of HIV/AIDS or Tuberculosis were reported or treated for the year 2006. However malnutrition as illustrated in the chart above there have been none reported for 2005-2006. Data have therefore been lacking with HIV/AIDS or Tuberculosis due to the fact that it has not been categorized by island of origin. Upon the interview with nurses and medical assistant, they have not encounter such cases of TB and HIV/AIDS sometimes have suspicion yet they

have no equipment to proof their suspicion. Such cases can therefore be determined easily only if medical equipment are available.

3.7 HOUSING

3.7.1 Total number of residential houses, type and status

There were 438 total numbers of private residences on Tabuaeran. The majority of homes are built from local materials using pandanus leaves for roofing, coconut fiber for lashing, pandanus trunks for posts and coconut frond stalks for floorings and walls. There are 193 homes which are locally built. A common type of traditional house is one with an elevated floor about three or four feet above the ground and has no walls. In terms of modern permanent buildings, there were 75 buildings with galvanized roofing, including the Island Council, health center, all of the maneaba, and a number of private houses and some churches. Most people prefer permanent building as it lasts for such a long time where maintenance work is less frequent. Other people prefer local buildings due to the climate and also amount of income they earn is not enough to afford to build a permanent home. Nevertheless, some have combined two methods of building, permanent and local materials together in building up their homes, there are around 169 homes on Tabuaeran according to the 2005 census.



3.7.2 Other issues

Local materials are the most suitable for the construction of residential houses, since they are cool and cost nothing. However local materials do not last very long annual rainfall is high, rough weather deteriorate them even before they known time of damaged where arrangements of maintenance is commenced well before. Eventually, most of the island local homes made their thatches or roofing out of coconut leaves, which has a very short lifespan in comparative to pandanus leave thatches/roofing. The underlying circumstance occurred as upon the limitation and few number of pandanus trees growing on the island. In the southern Gilberts where the climate is drier, pandanus thatch is normally used and coconut thatches are not obviously used in roofing the sleeping house but for the kitchen (te umwa) and toilets. Another problem is that run-off rain from locally thatched buildings is considered unfit for drinking because it is normally dirty and brownish in color.

3.8 WATER

3.8.1 Water Supply Sources

The main water sources for drinking and sanitary purposes are rainwater and groundwater respectively. The groundwater drawn out from open wells is also used for drinking purposes, but due to the close proximity of some open wells to pit latrines, people are often advised to boil water before drinking.

The 438 households on Tabuaeran have access to one or more sources of water, for drinking and other domestic uses. The 2005 census recorded that 144 households have access to rainwater, 2 to piped water, 418 to open wells, 29 to protected wells and 5 bought shop water.



According to records from the Rural Planning Division (2007), Tabuaeran has not undergone any various water development projects dated back to 2004. The island though has no recent situation in regards to water, however with the increasing number of new resettlers to the island can impose great threat to the supply of water and thus the resources of the island. Provided that issues are protected to outcome such threat or risks to people and the island itself, certain measures needs to be considered as in regards of increasing number of people on the island with potential threat that will impose on the environment, resource and the natural landscape of the island..

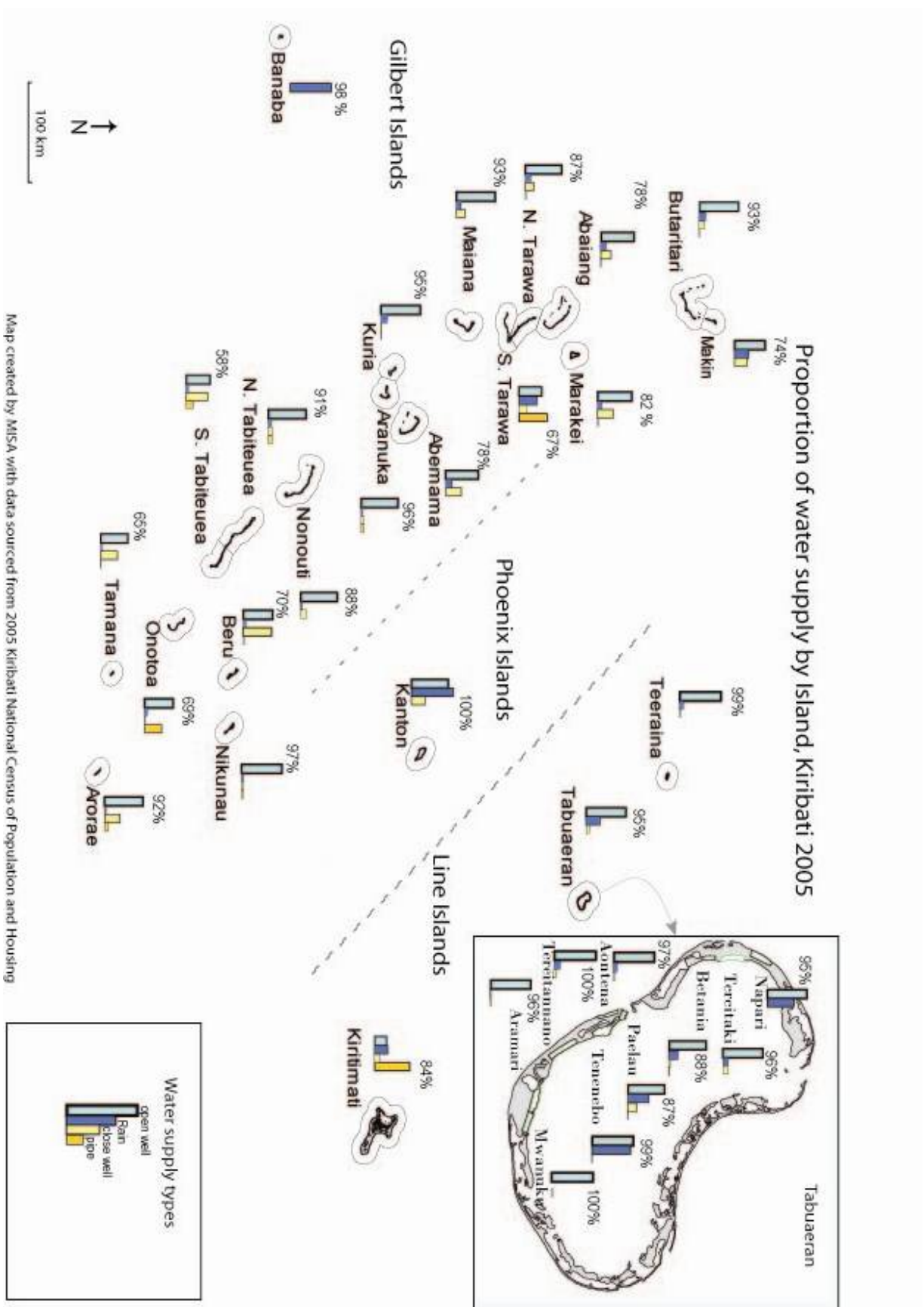
3.8.2 Status of Water Supply

The supply of water is dependent on a number of factors the more important of which are population, climate and topography. Fortunately for Tabuaeran island water shortage had never been a problem owing to the abundant water lense. Ground water serves as the major source of drinking water, which can be obtained by collecting it in buckets, basins or any sorts of container, rainwater serves as the second option of water supply. The taste of underground water is almost similar taste of rainwater, its really typical for people near seashore to have such low (not too deep) wells.

3.8.3 Other Issues

As far as water supply is concerned the groundwater reserve on Tabuaeran is threatened by saltwater pollution through surface intrusion. Thorough care needs to be considered about sustaining underground water. Pollution, overpopulated, increase in sea – level and many more all have to be consistently managed.

(Already the freshwater pond which serves as an important food-producing area for the largest village on Tabuaeran has been overflowed with seawater several times, causing destruction to *bwabwai*, banana, coconut and other food crops. Surface intrusion of seawater leaves the groundwater reservoir completely vulnerable to pollution, which slowly spreads out to affect the entire island water supply.)



3.9 ENERGY

3.9.1 Fuel

The traditional form of fuel is firewood, mainly in the form of coconut husk, dry coconut leaves and common wood. In the olden days dried coconut meat was burned to provide lighting in the homes at night, while woven coconut leaves were used in night fishing. Nowadays people are resorting to the use of modern technology to provide energy to meet their private and public needs. The new technologies however use fuel which must be imported from overseas through the Kiribati Oil Company Limited (KOIL).

KOIL imports fuel from overseas and distribute it to all the islands in Kiribati. Kerosene, benzene and diesel provide energy for cooking, lighting and transport. The 2005 census recorded that out of 438 households 3 owned power generators and 321 have pressure lamps. There were also 15 trucks, 92 motorcycles and 28 outboard motor engines. Electrical appliances include 73 radios, 1 computer and 50 CB radios. All these equipment and machinery require fuel or energy for their operation. Tabuaeran has its fuel share distribution upon the amount received from Christmas fuel share from KOIL. The branch just established around 2006/7 year.

In terms of volume, unleaded petroleum (commonly known as benzine) has been the most commonly used fuel on the island, followed by kerosene and diesel. The information acquired from the villagers indicate the increase need of a big volume of fuel sent by KOIL in Christmas to Tabuaeran Island, over the years has generally the increase in volume is by far hard to determine provided that Tabuaeran branch just initiated over 2 years..

To reduce dependency on fossil-based fuel Government has been promoting the use of solar energy on the outer islands, through its company – the Kiribati Solar Energy Company Limited (KSECL). Over the last 3 years KSECL, with funding from the European Union, has installed more than 2000 stand alone solar photovoltaic systems throughout the country. The objective of this “*Outer Island Electrification Project*” is to enhance economic activity and improve children performance in school through the provision of affordable and efficient lighting, as well as to provide an alternative environment-friendly energy source that does not pollute the air. From the 2000 solar systems made available under this EU-funded project as investigated Tabuaeran has not received any provided that it obviously one of the remote island. More similar systems are expected to be made available under the second phase of the project which is presently being negotiated with EU.

CHAPTER 4: TE RAOI – SOCIAL CAPITAL, COMMUNITY LIFE AND GOVERNANCE

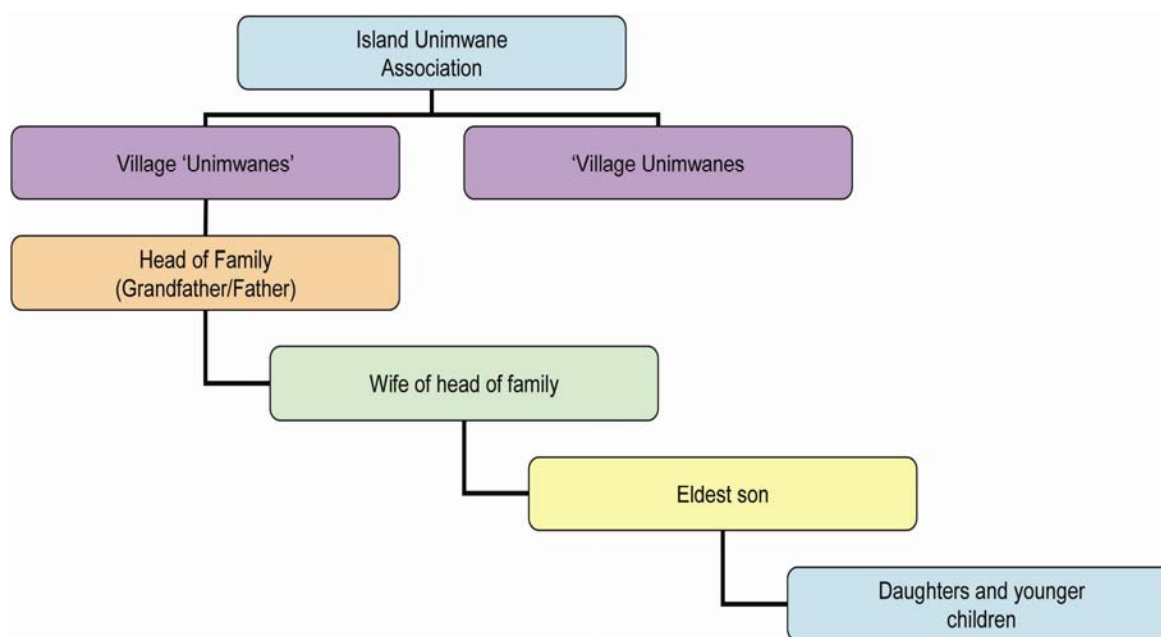
4.1 LOCAL INSTITUTIONS AND SOCIAL CHANGE

4.1.1 The Maneaba System and Unimwane Association

The *maneaba* was and remains the most important institutional symbol and foundation of community life in Kiribati. Its importance is related to its function as the center of social life, where matters pertaining to the social, economic and political life of the community are discussed and resolved with the leadership of the *Unimwane*.

Beside the traditional function as a community hall, court of judgment/reconciliation, and sanctuary for all, the purpose of the *maneaba* has considerably widened to include shelter for the sick, storage facility for copra, fundraising venue, and more. Despite the additional uses invented for this culturally important structure, the system of governance and leadership that developed with and revolves around the *maneaba* has remained largely intact. This was the result, first of colonial support, and later on of Government's recognition of the importance of traditional leadership vested in the *Unimwane*. In all Island Councils including Tabuaeran, there is a seat for a representative of the Unimwane Association, who embodies the highest traditional authority on the island.

Figure 8: Structure of traditional authority



The Unimwane Association on Tabuaeran has representatives from the different wards on the island, of which there are eight, being Tereitaki, Betania, Paelau, Aontenaa, Terine, Tereitannano, Aramari and Eten. The chairman for the Unimwane Association is elected on a rotational basis, starting from Tereitaki, for duration of 1 year. The Association meets once a month, also on a rotational basis among the eight wards of the island. Membership of the Unimwane Association ranges from 30 to 40 at any

time, and the Chairman represents the Association in the Island Council. The villages do not have their own elder association, yet the Island Unimwane Association governs all village affairs with respect that meeting is held at the particular village where such incident happens.

The Association discusses a wide range of issues relating to the welfare of the islanders. What is agreed in the Association is brought to the attention of the Island Council, for further advice and/or assistance. Normally the Island Council will return to the Association issues which it cannot resolve, but will provide assistance to those which it or central government can resolve. Some of the things that the Unimwane association has been influential in implementing include the banning of alcohol import and the enforcement of clear village boundaries beyond which people are not allowed to build homes.

The Unimwane association is more powerful and respected compared to the Island Council, due to the fact that they are the head of their community and command the respect of their people. Because of this the decisions taken by the Unimwane, though sometimes may not be legal, are usually followed without question since going against such decisions will bring bad luck (*maraia*). The central government appreciates the importance of the Unimwane as a powerful political institution which functions more according to customary rules.



(Church gathering hall (local & permanent material build), Maneaba rebuild: picture shot by Ruta Ioata during trip to Tabuaeran)

4.1.2 Women Organizations

There are 2 main registered women associations on the island, namely *Reitan Aine ni Kamatu* (RAK) and *Itoiningaina*. The “Seaweed” is the umbrella women organization on Tabuaeran with draws its membership from the two women associations named above.

Table 7: Women Associations on Tabuaeran

Name of Association	Membership	Coverage
Seaweed	577	All women organizations
Itoiningaina	309	Catholic women
RAK	268	Kiribati Protestant Church women

Source: Makin Island Council 2007

In general the women associations on Tabuaeran share the following objectives:

- To enhance their skill, capacity, capability and understanding of both traditional and new knowledge;
- To promote the sharing of ideas and knowledge of traditional art and craft;
- To promote healthy living for all families;
- To work together to generate income, and lastly
- To enhance integration among women.

Some of the problems facing women associations on Tabuaeran include declining membership due to financial difficulties, lack of funds to implement their development plans, and the need for training to better equip women to cope with family responsibilities and to enable them to contribute positively to the development of Tabuaeran.

4.1.3 Youth Associations

For Tabuaeran as a whole there is an umbrella body known as the *Tabuaeran Youth Association*. This association should represent various religious youth associations listed, with their membership and activities however there is in fact only one youth association who is registered within the council as shown below:

Table 8: Youth associations on Tabuaeran

Name of group	Members	Activities	Issues
KPC Youth Association	28	Thatch-making, weaving and grass-cutting, rubbish collectors	Lack of commitment by members, Incomplete executive members.

Source: *Tabuaeran Island Council, 2007*

There are other youth associations on Tabuaeran, however most of them have not the understanding of the benefits of registering under the island Council, yet share 2 common issues which would require assistance from concerned authorities. These issues are (1) lack of management capability by the association's executive members and (2) poor attendance due to heavy involvement in alcohol and yagona drinking. Despite the fact that most of the associations were church oriented drinking of alcohol is always common for the youths, individuals are nevertheless able to produce sour toddy (fermented coconut juice obtained by regular cutting of the coconut's spade) for home consumption and even ferment baking yeast to produce alcohol.

4.1.4 Sport Associations

The islanders are familiar with 4 types of sport – soccer, table tennis, volleyball and athletics. Of these soccer is the most organized, with various teams existing under the *Tabuaeran Football Association (TFA)*. In relation to the council records, none of them have register their association with the island council, where it is quite difficult to trace out certain obstacles in which they are currently facing. With the provision of information from church denominations and village members, there have been quite a slack over the years provided that sports materials and morale support is none.

Soccer is a male-dominated sport in Kiribati. As such all of the existing but unregistered (during time of visit to the island) clubs on Tabuaeran are male, however the island is planning to establish a female team for island and inter-island soccer competitions.

4.2 RELIGION

4.2.1 Main religious denominations

Chapter 2 also discusses the composition of population by religious denomination. According to the 2005 population census 46.12 % of Tabuaeran's 2,539 inhabitants are Roman Catholic followers, 45.45% belong to the Kiribati Protestant Church while 4 small religions share the remaining 8.16 %. It is clear that the population of Tabuaeran is predominantly Christian, and likely to remain so well into the unforeseeable future.

4.3 POLITICAL AUTHORITY AND GOVERNANCE

4.3.1 Traditional political system – description and status

The traditional ruling system differs from region to region, but based mainly on the chiefly ruling system and the Unimwane (maneaba) system. The chiefly ruling system was common in the central and northern Gilberts, while the Unimwane (maneaba) system was used in the southern Gilberts. In the chiefly system one person enjoys the powers and privileges over his subjects and resources. In pre-colonial times the islands from Makin to Abemama were ruled by families of "Uea" (high chiefs), who were based on Butaritari, Abaiang, Tarawa and Abemama. The southern islands from Nonouti to Arorae were ruled by councils of Unimwane who meets in the maneaba to discuss and address all kinds of social, economic and political issues. In this system the Unimwane, who consists of the head of each *kainga* (extended family), is the most powerful and sole decision-making body in the community. The decisions made by the Unimwane are believed to be the best because they are the outcome of careful deliberation among the oldest, wisest and most experienced members of the community.

However, Tabuaeran has no basis of its own traditional political system, provided that its former inhabitants were none where as it has just been occupied during 1890's due to the resettlement scheme made by the Government of Kiribati. Hence, Tabuaeran's traditional political system is of mixture from the south, north and central, in fact southern traditional system is believed to be currently practice through the existence and strong foundation of unimwane association.

The chiefly system of the central and northern Gilberts gradually disappeared because it was incompatible with the new Christian belief and democratic form of Government that were introduced into the country in the late 19th and early 20th centuries. On the other hand, the Unimwane (maneaba) system, due to its similarity with the western democratic model, was encouraged and has continued to be the dominant traditional form of authority throughout the country.

4.3.2 Local government system

The government system in Kiribati is made up of the central government, based in South Tarawa, and Island Councils based on each island. Tabuaeran Island Council was established on the year 2000 under a warrant which outlines the purpose, responsibilities, authority, powers and laws which governed the existence of Councils. The functions of the Island Council were spelled out in the Local Government Ordinance 1966 which had been revised a few times, the most recent being in 2006.

The Island Council is made up of representatives from each villages/wards who are elected every 4 years. There are also nominated and ex-officio members who, together with elected members meet every month to discuss matters pertaining to the operation of the Island Council and issues affecting the various wards and the island as a whole. Among its core functions as stipulated in the Local Government Act 2006, the Island Council is also responsible for the following general areas:-

- Agriculture, livestock and fisheries,
- Buildings and village planning,
- Education,
- Forestry and trees,
- Land,
- Relief of famine and drought,
- Markets,
- Public health,
- Public order, peace and safety,
- Communications and public utilities,
- Trade and industry

All Island Councils have management and support staff that are seconded by central government and stationed on the outer islands. These staff include the Council Clerk, the Treasurer, the Assistant Treasurer, the Island project Officer, and the Assistant Social Welfare Officer. In addition to this administrative and support team who work directly with Councils, there are also other government personnel who are placed on the islands to assist in other important areas, such as police officers, agricultural assistants, fisheries assistants, medical assistants, and teachers.

Tabuaeran Island Council has 8 elected members, 2 each from the eight villages. There are 2 special members who represent the *Unimwane*, women association and churches representative also.

The concept of “integration is fruitful” seems to work well with Tabuaeran, in the sense that the Island Council enjoys good relationship with communities and organized groups such as church or religion denominations, most importantly the *Unimwane* association. In performing the similar role of providing leadership to the people of Tabuaeran, both the Council and the *Unimwane* and not forgetting church or Christian leaders have worked together quite well, supporting each other. As a result the Island Council of Tabuaeran has so far been one of the progressing and steady growing Island Councils in the country.

The revised Local Government Act 2006 is aimed at transferring to Island Councils more autonomy and responsibility, to enable them to shoulder the burden of running the country with increased confidence and sense of stewardship. But the revision of the Act is just a part of the wider plan to improve services to people on the outer islands. In addition central government is committed to undertake, among others, the following:

- improve key development infrastructures (transport, communication, health, education, etc.) through sustained development financing,
- promote participatory planning and decision-making especially in relation to matters pertaining to the island as a whole,
- streamline operation and output of Island Councils through human resource development and stricter management where appropriate,

- Develop new income generation initiatives, and secure new employment opportunities overseas, etc.
- While Island Councils may welcome new initiatives of central government to assist them and their people, it may take a long time to build the financial capability of Councils so that they could operate with minimum support from central government.

Central Government still provides support to the Island Councils through what is known as “Support Grant”. According to sources from the Local Government Division of the Ministry of Internal and Social Affairs, central government provided a total of \$1.24 million to Island Councils in 2007. From this grant Tabuaeran was given \$23,618.89 (about 9.3% of total grant) to assist its recurrent budget.

4.3.3 Interface between Local Government and Traditional Political System

The leadership role of the *Unimwane* is well appreciated and continues to be respected by the society and hence central government. The modern legal system is indeed crucial to the maintenance of peace and order in Kiribati, but there are many instances where modern law fails to provide a solution to certain situations, and this is where the community under the leadership of the *Unimwane* intervenes to provide the solution. To avoid confrontation between central government and the traditional leaders, it is therefore resolved that the *Unimwane* association must be represented in local government, not as an elected councilor but as a nominated member who assists, advises and in many instances instructs Council to make the required decisions.

Councils and other institutions cannot disengage themselves from the *Unimwane* who basically hold the power in his hands when it comes to community support and/or resources. On Tabuaeran Island the *Unimwane* association is particularly strong and influential in decision-making. Although the *Unimwane* association is represented by a single member on the Council, such a member has the full support of the Unimwane Association of Tabuaeran.

4.3.4 Crime and Justice System

A Court Clerk from the Judiciary in Tarawa is also stationed on Tabuaeran to administer the court system on the island. Duties of the Court Clerk include recording minutes of the magistrate court proceedings, executing the order of the court, collecting court fees, and processing claims and appeals to the High Court located in South Tarawa. There are eight magistrates on Tabuaeran, including the presiding magistrate who must sit in all court sessions. The Chief Justice who is stationed in Tarawa visit the outer islands from time to time, to preside on cases which are beyond the ability of the magistrate court to resolve.

As mentioned earlier in this chapter the modern justice system sometimes fails to correct a situation, perhaps due to insufficient cause or because an act has not violated any law. This is where traditional authority may intervene to solve the issue, in many cases to the relief the whole community and the formal legal system have somehow find alternatively working consistently in areas that the other can not facilitate at a particular circumstance provided that it follows certain regulations and laws(formal legal system of justice). There are certain types of faults which usually exist within the justice record, the table below elaborates clearly.

Table 9: Crimes committed 2007

Justifiable Fault	No. Female	No. Male	Total
Riding vehicles without a light or torch	9	27	36
Lighting fire		1	1
Drinking Disorderly		18	18
Caught drinking under age		40	40
Riding motorbike & under age	8	8	16
Fault letting own pigs on the loose	10	4	14

There have been some of the aforementioned crimes jailed and some which happen at an unexpected event those include; 3 committed crime of assault, 1 insult challenge, and 2 disorderly drinking as acquired from the Justice Officer on Tabuaeran. Overall there are more men committing crime in comparative to women. It is a certain subject that men tend to commit crimes as from less serious to a very serious one as compared to women such cases are quite less serious in fact they too can commit such crime equal to men.

CHAPTER 5: TE TABOMOA – ECONOMIC ACTIVITIES, INFRASTRUCTURE AND UTILITIES

5.1 ISLAND ECONOMY

5.1.1 Subsistence Economy

A subsistence economy is one where people perform traditional activities to meet their individual and group needs for security, and have no reason to accumulate wealth except to ensure their future survival. In such a system, the concept of wealth does not exist hence there is a high degree of reliance on renewal and reproduction within the natural environment. The nature of the subsistence economy is reflected in the social organization of families, who join together to form large kinship groups (*kaainga*) which survives according to a set of rules and roles. Each member of a *kaainga* performs a different set of activities which are assigned on the basis of sex and age. It is important for the survival of the group that each member fulfils the roles and responsibilities assigned to him/her.

Typical subsistent activities include fishing, toddy cutting, cultivation and harvesting of food crops mainly coconut, pandanus, breadfruit and bwabwai. These activities are performed by the adult members of a family, while the younger members are expected to collect firewood and fetch water, clean the *kaainga's* compound, and assist the adult members to do the easy part of their chores. Most of the fishing is done for subsistence but where there is a surplus this is either given freely to relatives or sold to others. Due to the increasing dependence on imported goods which are sold to the general public by small stores, the importance of cash as a medium of exchange is well appreciated by the population. However the lack of infrastructure prevents most people from engaging seriously in selling surplus produce like fish in order to make money. Furthermore, as a subsistence economy everyone is expected to be well skilled and knowledgeable in many things in order to survive in the harsh island environment. While some people may be more skilled in one thing compared to others, the concept of specialization which is a strong feature of cash-based economies is absent on the islands.



The customs of borrowing (*tangobwai*), or asking (*bubuti*), are still very much alive, especially on Tabuaeran Island where people come from different districts of the Gilbert islands therefore have somehow integrated interdependently their cultural and way of living. The sharing of wealth and property is quite common, especially among close relatives. Nevertheless, the people from the south district have always been very reserved in ways of borrowing and asking, for whatever they borrow or asked for from whoever will surely return the favor to the person and with exact same or even bigger amount of the object borrowed.

5.1.2 Copra cutting

Copra production remains the most important commercial activity on Tabuaeran, which provides a reliable and sustainable source of income for many of the islanders. Figure xx describes the annual copra production for Tabuaeran for the past 16 years, showing that in general there has been a slow increase in copra production during that period.

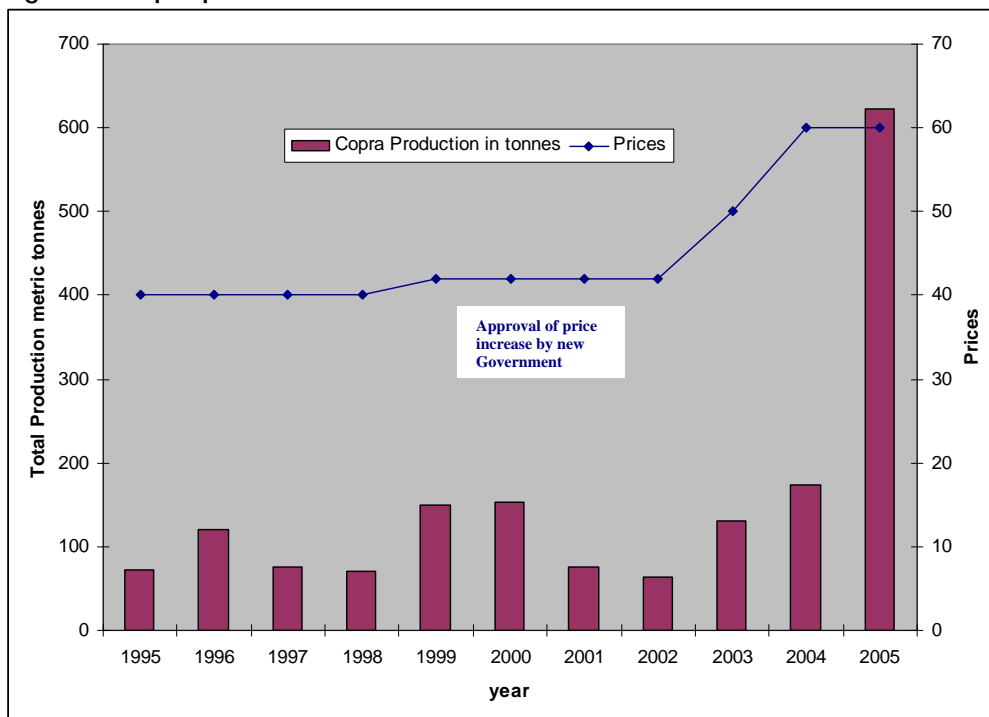
Looking back 16 years one could observe the marked fluctuations in production level. These are the result of several factors among which are the changes in copra price and climatic conditions which affect production. As an example, production soared to a record high of nearly 500 tons in 2004 when a new Government came to power and increased the price of copra to AUD\$0.60 cents a pound. In contrast, the sharp decline of production in 1993 was caused by a nationwide drought which lasted for more than a year.



A woman laying copra to dry in the sun – photograph by T.Teaero, 1989

Copra cutting is an important activity which provides a steady source of income for many people on Tabuaeran. At \$0.60 cent per kilogram the total revenue from copra was approximately \$373,200 in 2005, \$104,400 in 2004 and \$65,500 in 2003. This means that from copra production each household generates on average a total of \$232.27 in 2003, \$370.21 in 2004 and \$582.05 for 2005.

Figure 9: Copra production & Price as in 1995-2005



Source: Statistics Office, MFED, 2007

Out of 438 households on Tabuaeran (2005 census), 0% have rights to family-owned lands except on the issues on bought lease as already mentioned in the Land ownership section the land is entirely government owned. There are part of the island at which requires harvest license, purchasing that particular license is obvious to have the rights in cutting copra any necessary means of harvesting provided that it goes with specified regulations or condition. In reality however, neither the whole household have specifically rights in copra cutting in any place. By looking at the graph on copra production and price, there is a discernible relationship between price and production, for which it can be said in general that copra production fluctuates when price is low, but rises steadily when price increases. Over the years despite increase in copra prices, copra production still fluctuates, however 2005 production has dramatically increased up to 622,000 metric tons.

Table 10: Copra production and revenue 2003-2005

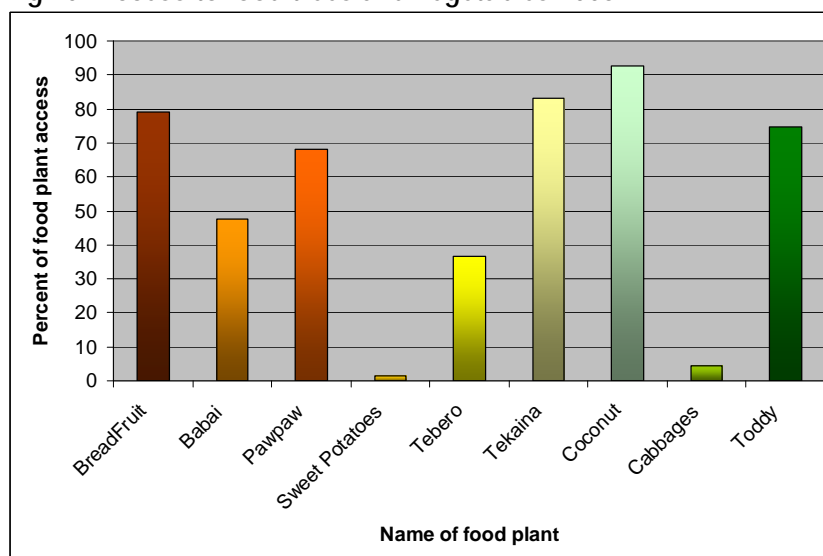
Year	Tons	Total income	Income Per H/hold
2003	131	\$65,500	\$232.27
2004	174	\$104,400	\$370.21
2005	622	\$373,200	\$582.05

Source: National Statistics Office, 2007

Although the land are typically state owned still Tabuaeran produces more copra compared to other islands example Makin, Butaritari and many more. The average annual copra production for Tabuaeran over the past 16 years from 1995 to 2005 was 309 metric tons, compared to 196 tons for Butaritari and 277 tons for Makin. The lowest production figure for Tabuaeran was 64 tons in 2002, and the most productive year was 2005 when it soared to 622 tons. The jump in production was caused by a rise in copra price introduced in 2003.

Nevertheless, Kiribati people have their own plants, vegetables which they rely on as their source of appetite. Tabuaeran have variety kind of plant food species that can grow on the island and nurture the daily needs of the people. Coconut has the highest proportion where most household have easy access to, pandanus, breadfruit, pawpaw, babai and tebero apparently have quite proportion, yet cabbages and sweet potato are not that common for people of Tabuaeran provided that it does not suit the soil of the low lying island.

Fig 10: Access to food trees and vegetables 2005



5.1.3 Employment

The Island Council serve as the biggest employer for Tabuaeran islanders, employing about 20 islanders as village wardens, village nurses, drivers, hotel keepers, and office assistants. Depending on the need, Council may from time to time engage contractors to undertake short carpentry or auto-mechanical jobs. Seasonal employment is usually available when Government or large Council projects are undertaken, especially those which require the service of casual laborers. The most common projects which generate jobs for the young men of Tabuaeran include construction of buildings and road and other large infrastructure.

Manual labor is also regularly needed in the stevedoring of visiting supply boats, which make monthly or more regular runs to Tabuaeran carrying food, fuel, timber, and other general goods. On their return from Tabuaeran they are loaded with copra, empty fuel drums and some local produce like banana. Stevedoring provides an alternative way to earn income.

Apart from a handful number of jobs offered by the Island Council in its limited service, the opportunity for paid employment for the islanders is otherwise non-existent. There are government employees stationed on Tabuaeran in the form of teachers and medical staff, but the number is small and the jobs they do are not available to the islanders. Even in South Tarawa jobs are very difficult to find due to the small size of the private sector. To solve the high unemployment problem in the country Government is now increasing its effort to look for and exploit overseas labour markets especially the Pacific-rim countries of Australia, New Zealand, Japan and the United States. Just recently the Ministry of Labour conducted a pre-selection process for potential fruit pickers who would be sent to work on fruit farms in New Zealand. The pre-selection exercise was conducted on Tabuaeran resulting in the selection ofyoung people to join a national work-ready pool who can be deployed after a request for laborers is received from farmers in New Zealand.

5.1.4 Trade and Commerce

As an island with necessity and capacity for tourist stopover, infrastructure and the number of tourist vary depending on weather, other factors that contribute to decline number of visits at Norwegian Cruise Line site on Paelau. Resources are abundantly coconut in other words copra and seaweed which made the island as a place for cultivating seaweed, yet certain circumstances; shortage of seaweed fund, have restricted the growing of seaweed for the island. There other available resources at which Tabuaeran can yield its standard in trading up heaving such includes; variety sea cucumbers, seaweed, variety of fish resource, good soil for banana, bwabwai, breadfruit all those resources are such goods that will provide good standard trade and commerce yet the island has a dualistic economy characterized by a high dependency on imported consumables, the size of trade and commerce on Tabuaeran is rather small but important.

The most common form of imported items consists of food, tobacco and fuel, which are normally shipped to Tabuaeran on boats. Among the imported food rice, flour, sugar and tinned food make up the bulk of the supply. The island as by far have 18 retail stores, as according to the vice treasurer's record for 2007. There has been a dramatic decline in retail store numbers as compared to the previous years, out of stock, late shipment of cargo, increase in license fee, people having the right to buy goods from wholesalers; unpaid debts and many more have great impacts on those people at business and those who intend to establish one.

5.1.5 Cooperative and Local Finance

In 1995, the Village Bank project was initiated by Government to serve as a micro credit facility for village communities in the outer islands. The objective of the project is to enable families to have easy access to a credit facility from which they could borrow money to start a small business. Funding for this project was provided by Government and shared among the islands and its village communities on a population basis. In the village a committee, consisting of a chairman, a secretary and a treasurer, is established to manage and administer the Village Banks funds. The Island Project Officer based at the Island Council provides auditing and monitoring services to this project to ensure proper use of funds and sustainability. The operations of the Village Banks are governed under the Village Bank Act.

Table 7 illustrates the distribution of funds that have been made to Tabuaeran's Village Banks under this project. Altogether Tabuaeran has received to a total of \$23,618.89 (total of the first, second, and third shares) between 1995 and 2007. A team from the Rural Planning Division of the Ministry of Internal and Social Affairs visited Tabuaeran recently as part of a national exercise to review the performance of the Village Banks. Based on this review Government will be able to decide what step(s) need to be taken next.

Table 11: Village Bank share per district

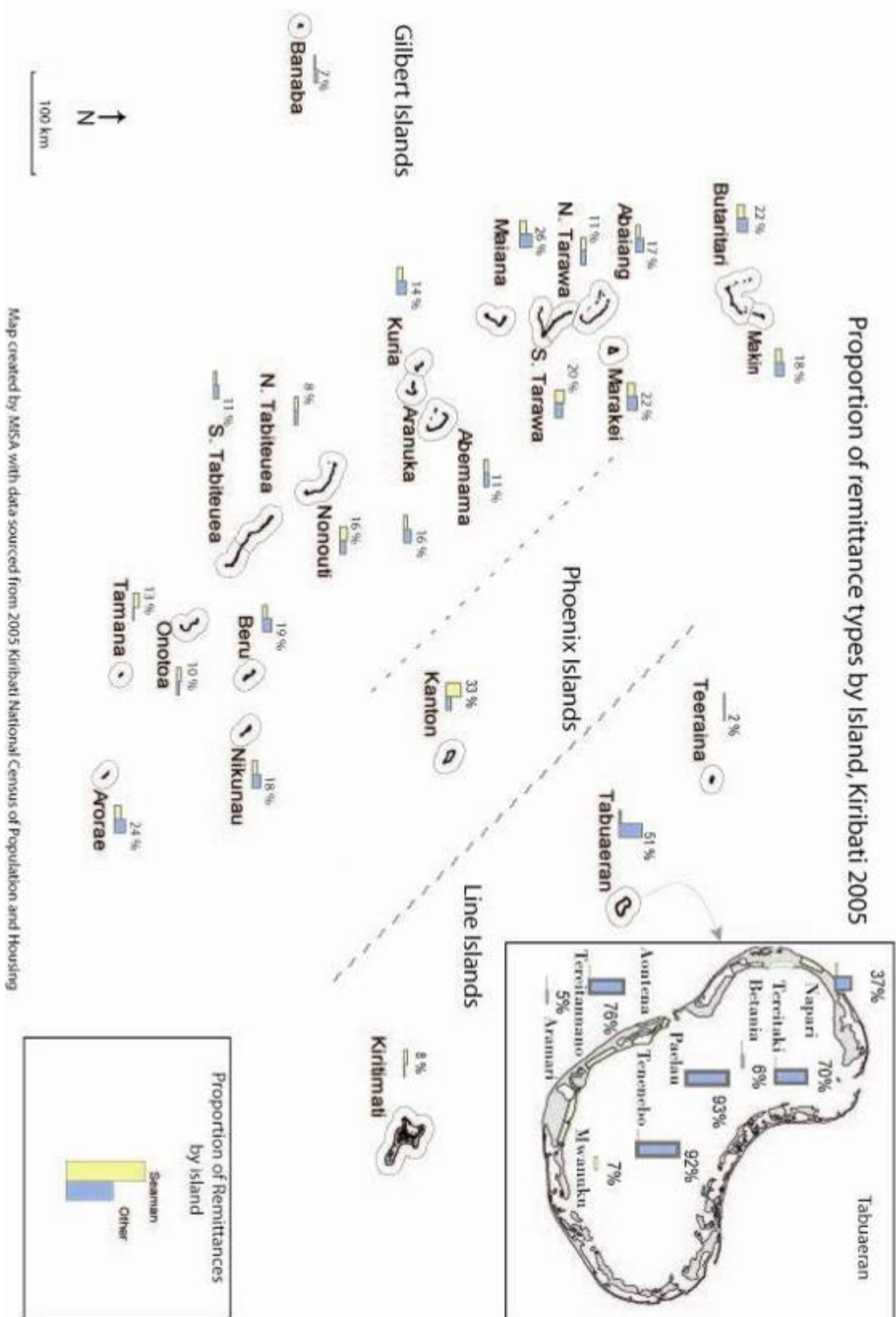
Village	Village Banks	\$2nd Share	Tot.Share
Paletulaina	Eten		
(Manuku)		1774.72	
Aramari	Mwanuku	1871.78	234.05
Tereitannano	Tereitannano	3466.25	246.85
Tenenebo	Terine	2190.67	
Aontena	Aontena	1358.77	288.9
Betania	Betania	5532.14	457.1
Tereitaki	Tereitaki	6197.66	

Source: RPD, MISA 2007

5.1.6 Remittances

With limited employment and income-generating activities, many people on Tabuaeran depend to a great extent on remittances sent to them by relatives working in Tarawa or overseas. According to the records of Kiribati Post Office on the annual money telegram for Tabuaeran receives about AUD\$960 (2006) as for allotments only, in 2007 it increases to AUD\$ 1,480. Other means of remittances and gifts, as according to the 2005 census, Tabuaeran has about 50.7% in average. this means that there are cash flows into the island's economy every year, from money and gifts sent back by families and friends living and working outside Tabuaeran.

Proportion of remittance types by Island, Kiribati 2005



Map created by MISA with data sourced from 2005 Kiribati National Census of Population and Housing

5.2 ECONOMIC ACTIVITIES

5.2.1 Agriculture

By Kiribati standard Tabuaeran is one of a small number of islands that have the greatest potential for agricultural development. This is due to the island's high annual rainfall and good soil. Beside coconut, a good variety of fruit and vegetable crops such as breadfruit, banana, pawpaw and bwabwai also grow well on the island.

Recent projects carried out on the island by the Agricultural Division include coconut rehabilitation and the cross-breeding of stud boar with local sows. The former met with little success but the later has an overwhelming demand by the islanders who have asked for more stud boars to the island to mate with their local sows. Pigs have cultural importance as they are the main dish in large family and village functions, where the size of a wholly cooked pig, predetermines the success of a function.

The predominant food crops on Tabuaeran are *bwabwai*, banana, pandanus, coconut and breadfruit. Each family has its own bwabwai pits, breadfruit and toddy trees. Home gardening is not common but some households have their own vegetable gardens where they grow tomato, cabbage, cucumber and eggplant mainly for home consumption. Some people sell their bananas to the neighboring villages or in small retail stores.

The main animals reared by the islanders are pigs and chickens, for home consumption. In 2005 the total number of pigs on Tabuaeran was 1410, with 89.7% of households owning at least 3 pigs on average. There were approximately 2901 local chickens. The people of Tabuaeran believe that they can produce more meat and vegetables for export to Christmas island and other Kiribati islands if the problem of transport, communication and marketing are resolved. They also believe that training on vegetable and livestock production is important if trade in these primary produce is going to be undertaken.

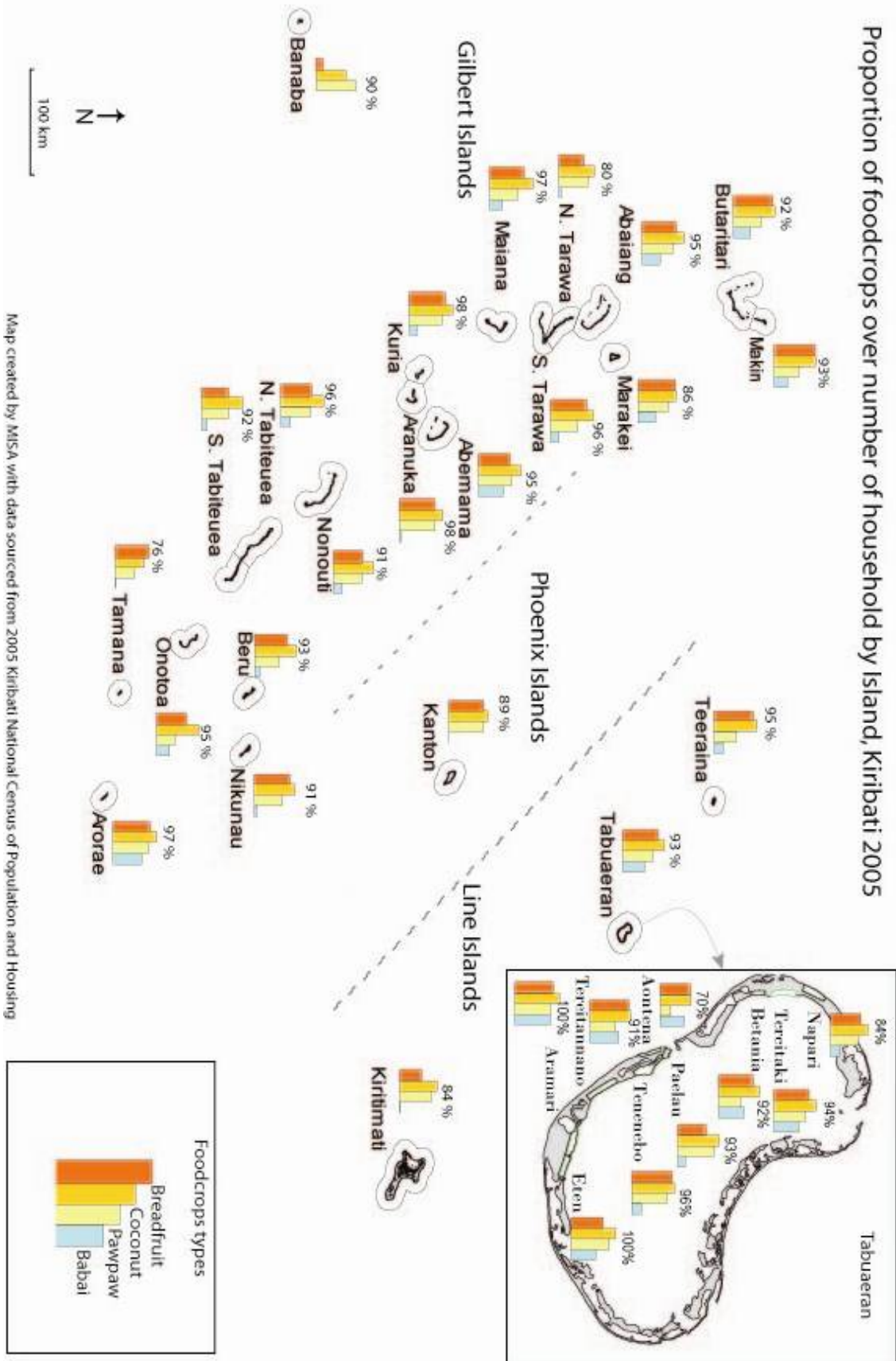


Banana Plantation



Bwabwai pit plantation

Proportion of foodcrops over number of household by Island, Kiribati 2005



5.2.2 Fisheries

Since Tabuaeran is medium large island with a very broad lagoon, fishing is of any sort can be found on the island. The 2005 census records show that out of 438 households on Tabuaeran 180 (41%) fish on the ocean flat while 270 (61.6%) venture in small canoes and boats to fish in the deep ocean surrounding Tabuaeran.



Traditional canoe (on the left).

A stainless boat conveniently used also for transferring passengers

Fishing is a daily activity for the men and sometimes for women. Council fishing byelaw on Tabuaeran prohibits fishermen from catching bone fish normally known with its scientific name as “*albula vulpes*” in the offshore waters close to land.

As mentioned earlier Tabuaeran has a distinct large lagoon and ocean area (land and reef) where it's offshore tuna resources are plentiful. A survey has however never been carried out by the Fisheries Division on Tabuaeran's households in relation to harvesting the sea in one way or another, both for domestic sale and to satisfy their subsistent needs. Isolation in distant, poor communication tools on the island, poor transport means are somehow the necessity means of missing landing data on total fish catches, declared fisheries officer in charge from Christmas Island and on Tarawa Island. The main issue also relate to the absence of fisheries officer on Tabuaeran Island.

Based on brief interview with the villagers, they indicated that in a day they barely can catch 10-15 fish in average as the necessity means for feeding the family. Marketing of fish is more less a habit provided that all go fishing themselves, a few will provide the necessity means of catching fish in a huge amount provided that the island does not have electricity barely no means of conserving the fish for a long time, whereby if caught many they will intend to sell it to people who wants to buy or by other means give it to the neighbors or close relatives as gift. In fact, these days the number of catch has decreased than the usual number of catch most fishermen normally have.

There have been several proposals concerning sustainability of fish resources which includes yet only one is brought forward among the ten priority projects of the island council (refer to current development chapter 2); Fishing Aggregating Device

There is a need for the Ministry of Fisheries and Marine Resource Development to consider the isolated islands as such Tabuaeran, Teeraina and other really isolated islands of the Republic of Kiribati in the process of their means in supporting fisheries development on the outer islands through:

- the provision of technical staff for training, advisory and resource monitoring/evaluation purposes;
- research and trialing of new fishery-related projects;
- the sourcing of funds for implementation of national projects (such as cold storage, etc.)
- the provision of affordable fishing gear.

Tabuaeran island is somehow very remote island where of which traveling is very expensive and even difficult provided that shipping services are apparently not that frequent or alternatively have a fixed schedule, all depends upon several factors. Fuel crisis, cargo, number of passengers all has variable vitality in the process of ship services/schedule. The island has quite a potential for such marine resources, whereas for future sustainability of marine resources also a stop over for tourist from Honolulu, consideration is indeed needed In another effort to develop fisheries on the outer islands MFMRD is currently building cold storage facilities on selected islands, with the objective of preserving fish for the market. Tabuaeran is not included in this phase of the project, but it is hoped that such a facility will be built on the island within the next few years, as the project expanded to cover other islands.

5.2.3 Handicrafts

The making of handicrafts for commercial purposes remains insignificant, mainly due to the lack of a market to sell them. Tourism, which is often the reason for handicraft production, is virtually non-existent. The most common handmade local products are those that have daily use, such as mats, strings, and various forms of baskets. These are normally given away as gifts to visitors, in particular mats made from pandanus leaves.



A few years ago Government established the Kiribati Handicraft and Local Produce Company (KHLP) to encourage people to make handicrafts and local products for commercial purposes. The company buys materials from the outer islands and then re-sells them to the urban population, as well as foreigners. However, despite the existence of KHLP, the level of production is still very small. Among other reasons, KHLP faces staffing and funding difficulties that results in its inability to adequately absorb production from the outer islands.

5.3 INFRASTRUCTURE

The establishment and maintenance of development infrastructure on the island is the responsibility of government. The central government normally takes responsibility of implementing new development projects while the local government is given the responsibility of maintaining such projects upon completion. Local government authorities are allocated some money every year under a "Support Grant" to enable them perform this role.

5.3.1 Land Transport

The main transport infrastructure on Tabuaeran is made up of 10.80 miles of road. The road is normally 3 to 4 meters in width, enough for the use of small to medium size vehicles. Roads on the outer islands are unpaved, with the surface overlaid with coral mud that dries and hardens in the sun. The same mud however quickly softens during heavy rains, resulting in the creation of small and large potholes on the road.

Nevertheless, roads situation are not as good as South Tarawa, it requires excessive labor work every time after a rainy season, even at dry season the roads are even worse, too many holes, dust and rocky or lumpy where most people find it unpleasant and uncomfortable when driving along it. It therefore not surprising as to the conditions of vehicles to need excessive reparation only after a few months, indicating that the structure of the road is as not good as it looks in the pictures below. The first picture indicates the big craters within the center of the roads where as the second depicts the narrowness of the road of which no other than two vehicles can only be accommodated, and the third provides facts of small projects like causeways with lumpy/rocky and jumpy surface.



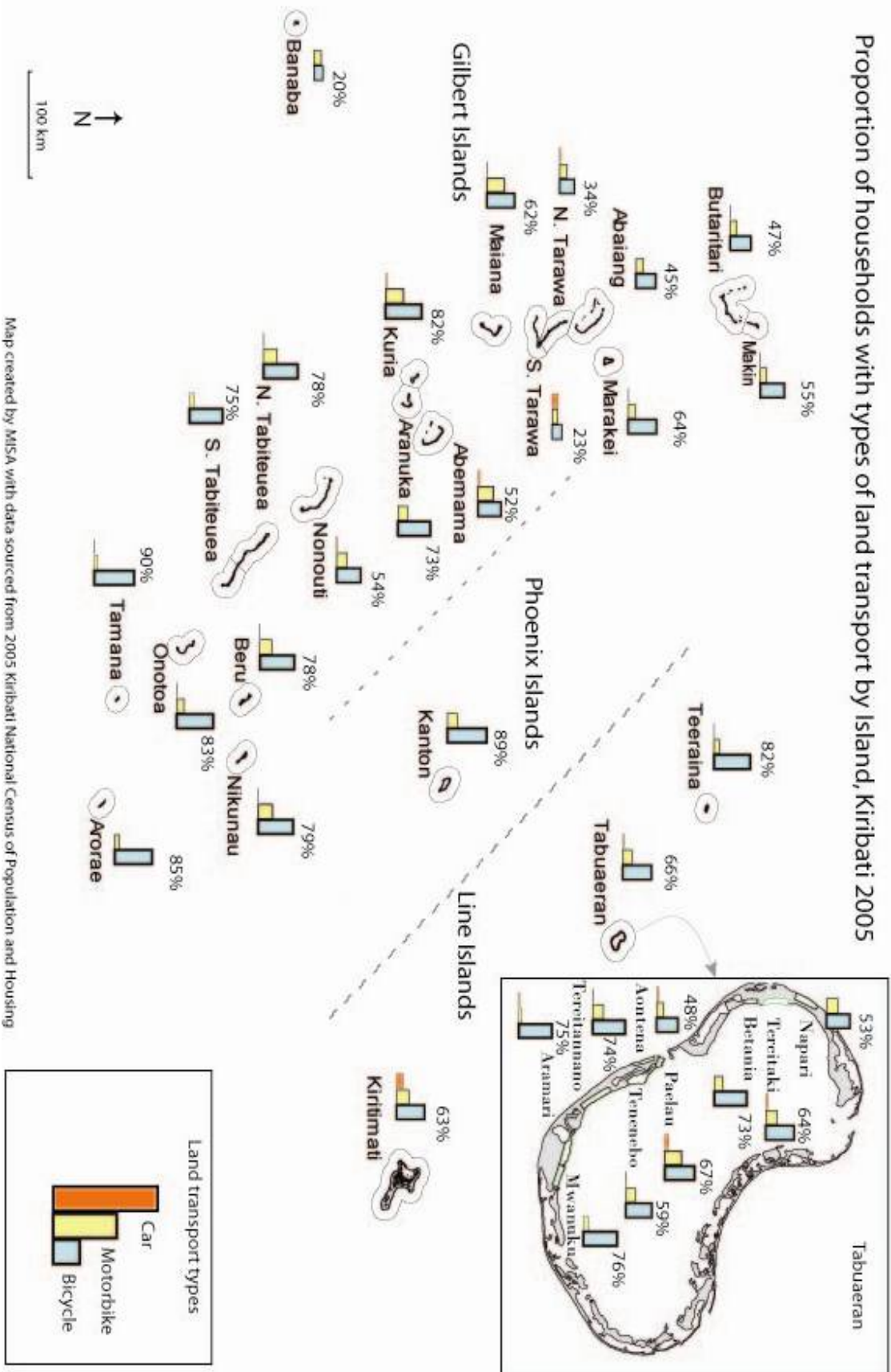
Tabuaeran road status: Photo shot by Ruta Ioata 2007

It is a huge burden to the Island Council to maintain it, especially without proper equipment and insufficient funds. To assist in the maintenance and repair work on the road, the central government have provided a small backhoe and tipper truck to Council, but these have now become the problem of Council to maintain.

Every few years the central government undertakes a national program to repair the roads on the outer islands. The way this is done is that a team of engineers, machinery operators and mechanics go around the islands with a set of heavy equipment. They remain on one island until their work is done, before they are transported with their equipment to the next island. The project is done this way to maximize the use of limited manpower and equipment; however it takes time and incurs very high costs to transport people and equipment from island to island. It has been quite a while since the roads on the outer islands have been repaired.

The most common form of land transport is the bicycle, of which there were 370 in 2005. Motorcycles ranks second in popularity, with a total of 92 motorcycles recorded in 2005. Due to the high cost of four-wheeled vehicles, there are only 15 cars on Tabuaeran during the census survey. Most of the cars are privately owned by Tabuaeran Island people while the Council has none (awaits it's 4-ton truck donated by the people of Tarawa Urban Council, for the purpose of transporting primary and junior secondary pupils to and from school). Hiring of any vehicle type is eligible for those who have business hire license and those who have not are therefore forbidden to lend their vehicles for hire purposes.

Proportion of households with types of land transport by Island, Kiribati 2005



5.3.2 Sea Transport and Shipping

Inter-village travel between Napari village (north end of the passage) and the rest of the village (located on the south end of the passage) is done through the use of canoes and small boats and a ferry, since the villages are separated by a passage. The separation of the villages affects children the most, in particular those who are old enough to attend junior secondary school and even senior secondary school. Whereas there is a primary school on the other side of the village but there is only one junior secondary school for the whole island which is located on the south side of the passage, where children must travel every day to attend school. Those who do not have access to transport either miss a lot of classes or just simply drop out of school.

Canoes, boats, and skiffs can be used both as transport and for fishing. According to the latest statistics, the proportion of household owning a canoe is apparently high compared to other types of sea vessels. Tabuaeran has 48% of the household owning a canoe. In comparison, those owning a skiff are typically low in number having a value of 1.14% while there are 8.45% that own boats.

5.3.3 Air Service

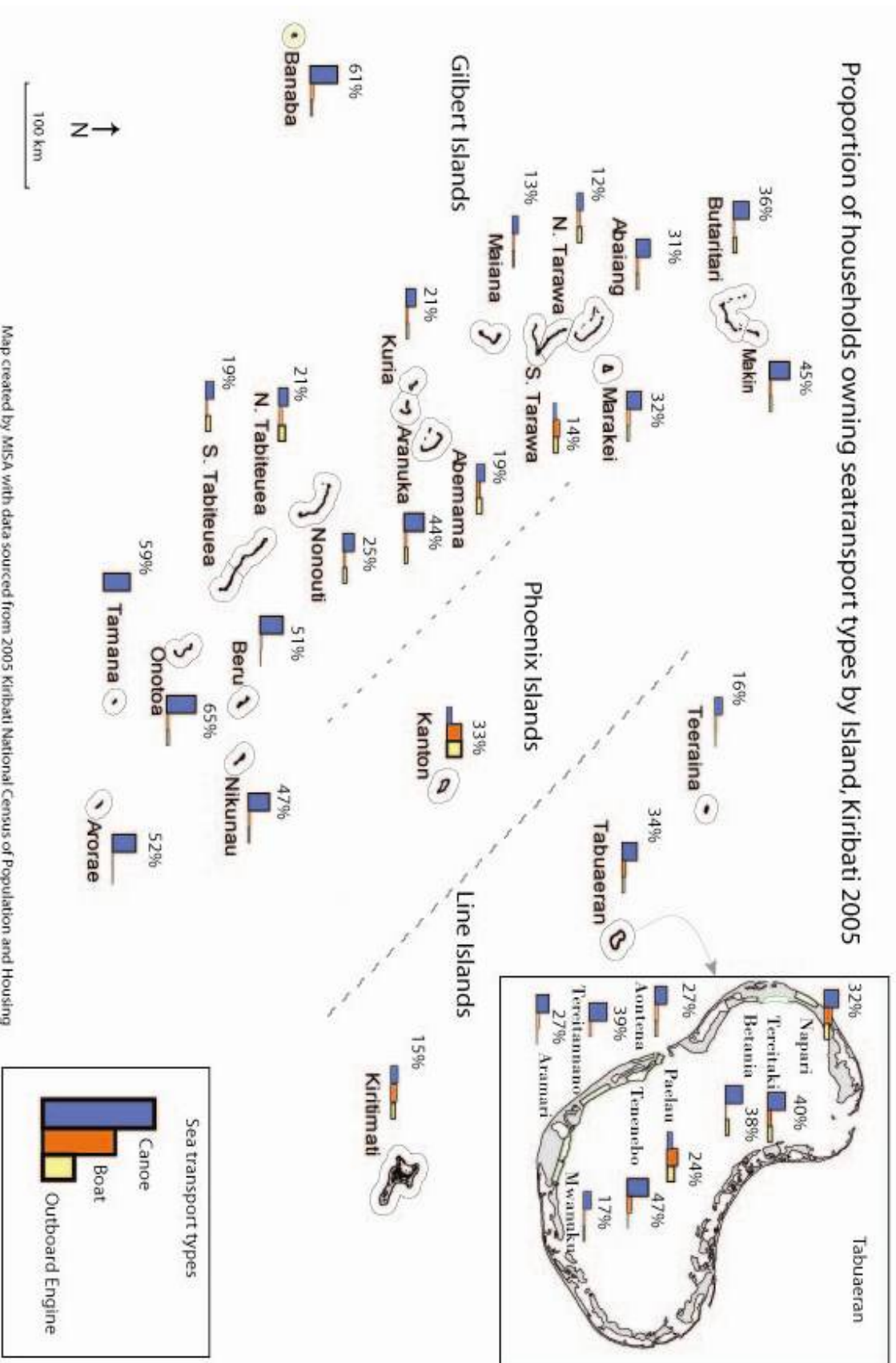
The need for inter-island travel is served either by oceangoing vessels or by small planes. Air Kiribati is the state-owned airline based in the capital Tarawa which provides domestic flight service to all islands in the Gilbert group with the exception of Banaba and those islands on the Line Islands such as Tabuaeran and Teeraina, Kanton from the Phoenix Islands. Evidentially Tabuaeran has its own airstrip which is located on the north end of the island (Napari), has a length of approximately 0.72 miles and is built from compacted coral mud. In fact it has not been used for many years. The airstrip was initially built during the establishment of Tide monitoring and recording stations by which were also set up on Washington Island, Christmas Island, Canton Island and Tarawa Island constructed which allowed for regular contact with Christmas Island. Due to inadequate support grants from the US Government, however, the University of Hawaii had to close the station in 1981.



5.3.4 Issues facing Transportation

Inter-village travel on Tabuaeran is hindered by the physical nature of the island, which is divided by open sea passages. The main mode of transport between 7 villages of the southern end of the island and the other two villages located on Napari is by small ferries or boats that are powered by outboard engines. It is difficult to walk since the passage cutting through the island is never shallow therefore one needs to wait for the ferry or other necessary crossing boats in order to cross the passages.

Proportion of households owning seatriansport types by Island, Kiribati 2005



5.3.5 Communication

Kiribati is a nation of fragmented islands dispersed over a vast ocean area that extends almost 3,000 kilometers across the central Pacific, bordering the Marshall Islands in the east and French Polynesia in the west. This fragmentation and vastness of ocean give rise to major communication and transport problems that have been, and will continue to be the greatest development challenge for the government. Shipping is a critical service that needs to be provided and maintained between Tarawa and the outer islands, in order to facilitate the transportation of supplies to and from the islands. Government has been the major shipping operator since colonial times, and still continues to dominate this service, although private businesses have secured an increasing share of the market. Still, central government attempts, through its shipping line – Kiribati Shipping Services Limited (KSSL) – to serve all islands in the country near and far. Tabuaeran, like other islands, is visited at least once a month, or even once in two months by a KSSL ship, which brings replenishments of food, fuel and other assortments of supplies. The schedules of shipping services are therefore not consistently fixed.

The improvement of airport and seaport facilities across the country is a priority development objective of central government, with focus to be given to islands which hold the potential for viable economic operations. The northern islands of the Gilbert group which include Tabuaeran are fertile and have great potential for agricultural development.

Until a few years ago, the main mode of communication between the islands was through the use of HAM radio communication systems operated by TSKL. Each island has one such system based at the Island Council headquarter on the island. Members of the general public normally use this for inter-island communication, as does the Island Council and central government in Tarawa. However, despite the fact that the system has been dependable and effective, there were a few problems relating to its use, among which are:

the system is not safe for sharing of private information, since the frequency used can be assessed by anyone, and the radio equipment is operated by a TSKL agent.

the use of the radio is dictated by a schedule, hence only available for 1-2 hours daily, and only from Mondays to Fridays.

the radio operator lacks the skill to undertake major repair works if the radio breaks down.

Communication with the island could be cut for at least one week during which the radio is sent to Tarawa for repairs.

since there is only one radio, people from distant villages must take long journeys in order to use it.

In order to address these problems TSKL has decided to slowly introduce a new technology, a satellite-based telephone system which connect directly to the telephone system in Tarawa. The new system also supports the use of facsimile and internet, and therefore was considered to be a major accomplishment as far as progress is concerned. After its installation the old radio communication system was decommissioned and removed, and direct telephoning replaced it. But it was not very long after the new system was in operation before new problems surfaced. First it was found that the new technology costs more to use compared to the radio; connection is vulnerable to rough weather conditions, and people still need to travel to Council headquarters to make a call. Basically Tabuaeran is one of the island at which the new system has not been introduced to, still with the old system of communication.