

Apart from the support grant that the Government gives to the outer island councils, Island Council projects are also funded by the government and donors most notably the Taiwan embassy in South Tarawa who gives out AU\$10 million every year to fund these island council priority projects from all over Kiribati. The table below shows the Butaritari Island Council priority projects since 2004 that have been approved and funded:

Table 10: Council priority projects 2004-2007

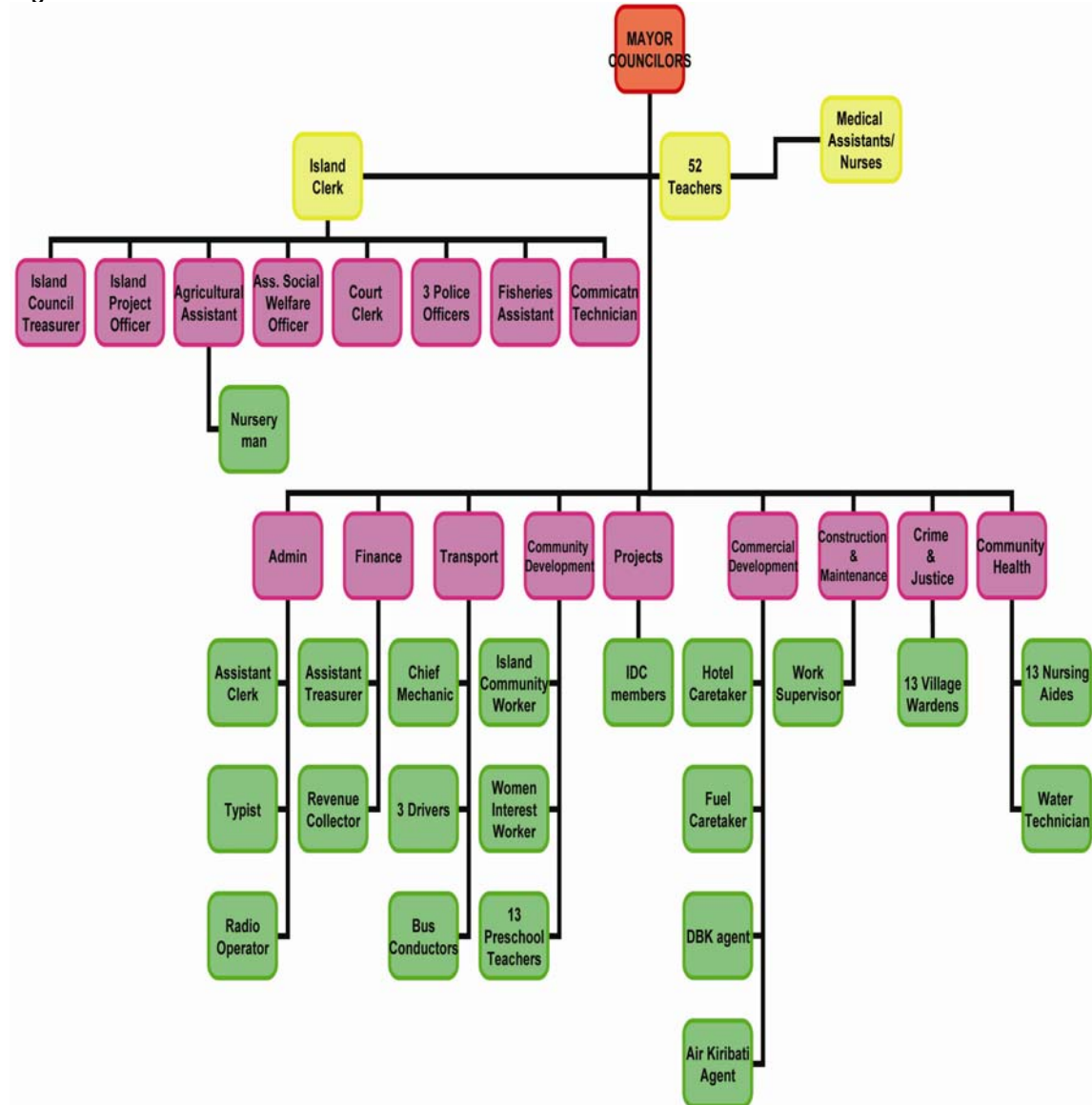
| Year | Project Title | Approved funds |
|------|------------------------------|----------------|
| 2004 | Upgrading of Teibo Causeway | \$198,609.00 |
| 2005 | Council Maneaba | \$109,832.33 |
| 2006 | Namonrua bwabwai pit seawall | \$203,115.00 |
| 2007 | NA | |
| | | \$511,556.33 |

Besides these annual council priority projects that the council submits to the Rural Planning Division (RPD) within MISA for further procession through the normal project procedures, there are other projects carried out for the island community through funds accessed from donors such as AUSAID, NZAID, Canada Fund, etc. These projects are normally processed and monitored through the Island Project Officer (IPO) seconded from the RPD to individual island councils. Following is a table of some of the projects that have been implemented from funds other than those meant for island council priority projects.

Table 11: Butaritari projects 2008

| | Project | Location | Imp. Date | Donor | Status |
|----|--|-------------------------------------|-----------|---------------------------------------|---|
| 1 | Water tanks for Butaritari JSS | Temwanokunuea | May 2005 | NZAID small grant | Completed |
| 2 | Kings Wharf maintenance | Temwanokunuea | 2005 | GoK Disaster Fund | Completed |
| 3 | Water tanks for Ukiangang (4) | Ukiangang | 2006 | NZAID small Grant | Completed. 3 tanks shared between the two wards of Ukiangang while 1 was given to the parish priest at Vaticano village |
| 4 | Water tanks for Te Miterio | Temwanokunuea | 2007 | NZAID small grant | Completed |
| 5 | Water tanks for Vaticano | Taubukinmeang | 2007 | NZAID small Grant | On going – 10 water tanks have been received but without materials for water system fittings i.e. gutters, cement etc. One of these 10 will be given to Ukiangang to replace the one earlier given to the parish priest at the Vaticano |
| 6 | Solar Powered water system | Bikeewa | 2007 | NZAID small Grant | Completed |
| 7 | Ainen Karawa Pri. Sch. Furniture | Temwanokunuea | 2007 | NZAID small Grant | On going – 80% of furniture constructed but work has now ceased due to the breakdown of tools used i.e. rivett gun and drill. |
| 8 | Butaritari JSS Furniture | Temwanokunuea | 2007 | NZAID small Grant | On going – work just started but require more materials such as nails, varnish and glue |
| 9 | Pre-school teaching facilities | Temwanokunuea | 2007 | NZAID small grant | Completed |
| 10 | Pre-school teacher training and attachment | St. Anne Pre-school, Bairiki Tarawa | 2007 | Council | On going – last lot will be sent at the beginning of the 2009 year |
| 11 | Tebikenaine namonrua (seawall) | Butaritari | 2008 | GoK (Island council priority project) | Completed but community not confident of the assistance the seawall will give as the work seemed to have not been done properly according to prodoc instructions as laid out by the MPWU. The work supervisor did not carry out the work according to the project document as reflected in the difference between the work completed to that designed in the project document. A lot of cement bags were not used and there is still about \$40,000.00 of the funds remaining for use in the project. |
| 12 | Council mwaneaba Fig..... | Temwanokunuea | 2008 | GoK (as above) | Completed |

Fig 18: Butaritari Island Council Staff Structure 2007



Source: GoK Island Council Estimates 2007 & ICOP 2006

4.2.3 Interface between Local Government and Traditional Political System

In general, the societies of the southern Gilbert Islands were strongly egalitarian, with governance in the hands of 'mwaneaba' councils of elder males ('unimwane'); these traditions were much weaker in the northern and central Gilberts where 'mwaneaba' councils were more firmly imposed on a local chiefly structure, and land was less evenly distributed. Within the 'mwaneaba', each clan had its own sitting-place, or 'boti' and, for formal occasions, each 'boti' or clan had a senior male as its designated spokesman. 'Mwaneaba' councils resolved disputes, many of them over land boundaries and ownership, controlled and maintained community assets (like the 'mwaneaba' itself), provided hospitality for visitors, and acted as a community court and social centre. In effect, the maneaba was arbiter over all relationships within the community.

However, even though there were chiefs and kings in Butaritari in the early days, the role of the 'unimwane' was still one of advisor that was still greatly respected by the individual communities, and later, central government, after the island councils had been established in the late 1960s.

The modern legal system is however 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 ('unimwane'), who had administered the islands long before the white men came to Kiribati, it was resolved that the 'Unimwane' association would be represented in local government, not as an elected councilor but as a nominated member. Their role is to assist, advice and in many instances instruct Council to make decisions that will not contradict local traditions of individual islands.

Generally, 'unimwane' roles in the Southern islands are taken seriously with men only called 'unimwane' at the age of 50 onwards and 60 onwards in North Tabiteuea. Membership of the 'unimwane' association vary from island to island but they have been the decision making body for the islands especially the Southern islands before they were proclaimed as a British protectorate in 1892 by Captain Davies of the '*Royalist*' and are still respected as such. Where the Island Councils role is understood as administration of all island development as central government wants and sees fit, the 'unimwane' oversee that the island is administered as dictated by their traditions and that their traditions are upheld as necessary.

Councils and other institutions cannot disengage themselves from the 'Unimwane' who basically hold the power to community support and/or resources. The Councils on the other hand hold the power to Government funds and technical support in island development.

4.2.4 Crime and Justice System

The judicial branch of the government includes a court of appeals and a high court, as well as a magistrate's court on each of the outer islands including Butaritari. The jurisdiction of the magistrates' courts is unlimited in land matters but limited in criminal and civil cases. A Court Clerk from the Judiciary in Tarawa is also stationed on the island 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 small police forces on all the islands with three police officers on Butaritari who are responsible for keeping the peace and order on the island and supported by 13 village wardens located in the 13 wards of the island. These village wardens are responsible for keeping the peace in their respective villages but can seek assistance from the other villages and the residing police officers when needed.



There is only one single Island Magistrate who presides over two courts, namely, the Island Lands Court and the Magistrate Court which deals with criminal and civil cases. Appealed court cases on the island are processed to central headquarters in Betio. The High Court Judge later visits individual islands to further judge appealed cases or delegates it to other judges as necessary.

Concurring with the rest of the islands in the country, the most re-occurring crime in Butaritari is cycling without a light at night or driving motorbikes without driving licenses. Other emerging substantial problems include embezzlement, child and domestic abuse, often linked to alcohol use.

The rest of crimes included that of having no motorbike nameplate, cycling without a bell, criminal trespassing and drunk and disorderly among others. These crimes are all taken to court with fines accordingly handed down as decided by the local magistrate.

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. The concept of wealth does not exist in its pure form hence there is a high degree of sharing and reliance on existing natural resources, development and maintenance of the natural environment and skills to harvest and maintain these resources. The nature of the subsistence economy is reflected in the social organization of families, who join together to form clans (*kaainga*) that function, according to a set of rules and roles. Household chores are divided by gender, with men fishing and collecting toddy and doing heavy construction tasks, while women handle child care and chores, cooking and keeping house, basically controlling domestic chores. While women may fish and often collect shellfish in the lagoon, only men may collect toddy and go out fishing in the ocean or lagoon. There is a clear status of ranking in each household, usually headed by the oldest male unless he is too elderly or too sick to be active in which case the next oldest male then heads the family. It is important for the survival of the group that each member fulfils the roles and responsibilities assigned to him/her and this forms their daily livelihood.

Typical subsistent activities include fishing, toddy cutting, cultivation and harvesting of food crops mainly coconut, pandanus, breadfruit and bwabwai, weaving mats, making thatches, rolling string, fetching water, collecting firewood, making fish traps and hooks, cleaning and washing, cooking and house construction amongst others. Most of these activities are performed by the adult members of the family, while it falls upon the younger members to collect firewood and fetch water, clean the dishes, the compound, and assist the adult members to do the easy part of their chores. Unfortunately, subsistence living is slowly disappearing and being replaced by a cash economy where most subsistence activities are now not only catered towards subsistence living but also to generate income to pay for the basic necessities such as food and sanitary needs.

Where most of the fishing was done for subsistence, it is now sold when there is a surplus or given freely to relatives, preserved for later consumption or sale to others. Due to the increasing dependence on imported goods that are sold to the public by small stores, the importance of cash as a medium of exchange, has now dominated bartering and sharing that were once strong traditions of Kiribati.

Monetary institutions such as the Bank of Kiribati and Development Bank of Kiribati (DBK) are not available on the island and thus the availability of money can be affected, setting the way for the existing customs of borrowing (*tangobwai*), asking (*bubutii*) and or bartering (*raibwai*). Special skills are kept in the families and can only be given to sons and daughters, adopted sons or daughters and at times are given as gifts especially when the parent is being looked after by another family. They can also be gifted to others when the specialist feels it appropriate otherwise; these skills are kept in the families. These skills exist in various forms and are part of the subsistence living and include fishing, agricultural and weaving skills amongst others.

Consequently, the Village banks were introduced to the outer islands (See Village Banks P.....) to provide a means of micro-financing to the village communities which the IPO monitors. The Island Council Treasurer on the other hand also acts as the Bank of Kiribati outer island focal point for passbook financial transactions as the Bank of Kiribati/ANZ bank do not have branches on the outer islands as yet.

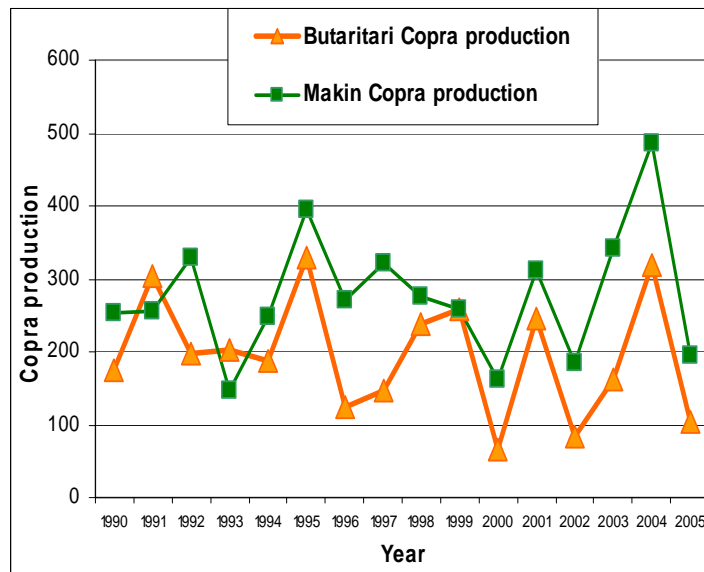
5.1.2 Copra cutting

Where copra cutting is the mainstay of the people on most of the outer islands, it is not so for the people of Butaritari. This is due mostly to the rainy climate of the island that does not allow sun drying of the copra (but instead has to be roasted/baked in an oven), the damage to coconuts by rats and the land tenure of family owned lands as against individually owned lands. Oven drying of copra was popularly used by the islanders until bananas became a popular income generating activity that replaced copra cutting. However, copra cutting is carried out on the island but not to the same extent as copra cutting in the southern and central islands.

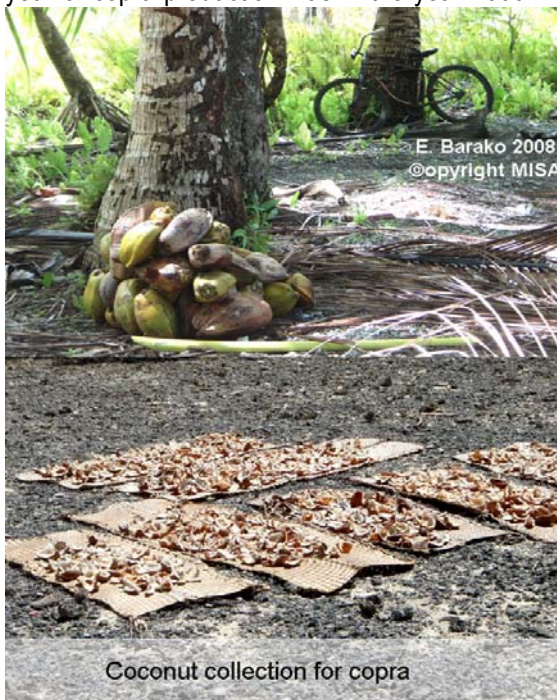
Statistics showed that 517 coconut trees are accessed by the 561 households including 661 toddy trees that are cut for subsistence living as well as for fermented toddy, a local brew. These figures however, only count the number of coconuts that are nearby or ones that are in the village areas and not counting the ones that dominate the bush/island.

Portrayed in the right chart is the copra production of Butaritari as against that of Makin since 1990.

Fig 19: Copra production



The best year of production for Butaritari was in 1995 when their production reached a tonnage of 330 bringing in an income of \$132,000.00. On the other hand, its worst year of copra production was in the year 2000 when its annual production was a mere 66 tonnes that brought in an income of \$29,700.00. Copra prices by the year 2000 had all risen to \$0.60/lb whereas it was \$0.40/lb in 1995. If droughts were the only reason for the decline in copra production, the copra charts would have provided good indicators for times of drought.



Coconut collection for copra

Copra prices have also been slowly increasing from AU\$0.30/lb in 1990 to AU\$0.60/lb in 2005. The most recent copra production for Butaritari on record was 105 tonnes in 2005 that brought in an income of \$63,000.00 which would give the 561 households an income per day of \$0.20, way below the international poverty line of US\$1.00 per day. However, Butaritarians are not affected one little bit by this very low income that they get from copra as they now have bananas and marine resources to utilize for consumption and income generating activities.

However below the international poverty line their income from copra is, it should be remembered that people on the outer islands of Kiribati do not rely

100% on money to live but actually rely mostly on their skills to fish, cut toddy and utilize existing food resources. This daily income of AU\$0.20 is so little to even get a household a pound of anything except maybe two pieces of chewing gum. As already stated, Butaritari is the lushest of the islands in the Gilbert group, has an abundance of tree crops, an abundance of marine resources and a very convenient climate for agricultural activities.

5.1.3 Employment

The Island Council serve as the biggest employer for the people of Butaritari, employing about 53 islanders as village wardens, village nurses, drivers, hotel keeper, and office (typing, treasurer, clerk) assistants etc (See Council staff structure Fig.....). Depending on the need, Council may from time to time engage contractors and laborers to undertake short carpentry or auto-mechanical and construction jobs. Seasonal employment is usually available when Government or large Council projects are undertaken, especially those which require the service of casual laborers.



Manual labor is also regularly needed in the stevedoring of visiting supply ships, which make monthly or more regular runs to Butaritari carrying food, fuel, timber, and other general goods. These are offloaded on reaching the island by casual laborers. On the return trip, these ships are loaded with copra, empty fuel drums and some local produce like salted fish, mats, 'bwabwai' and 'kamwaimwai' for relatives in South Tarawa or by the ship officers themselves. Stevedoring provides an alternative way to earn income and the seaport as it is can prove quite a challenge to those not used to hard labour, something that is child's play to those on the outer islands. Stevedoring is not organized or taken in turns by villages like that in most of the southern islands but is open to the general public. Most of the time, it is the male youth who engage in stevedoring as the older family members are always busy fishing, mending nets, preparing meals or weaving and not strong enough to engage in the back breaking work required.

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. The Cooperative also employs a few other people to run its only branch situated at the Council quarters. There are Government positions for other services on Butaritari such as teachers, medical nurses, clerks, Island Project Officers, police officer etc that are not available to the islanders due to most islanders not meeting the minimum qualification requirements that these jobs entail. The Island Council can only recruit a typist, assistant treasurer, assistant clerk, village aides, drivers, mechanics, and carpenters, to name a few.

To solve the high unemployment problem in the country Government is now increasing its effort to look for and exploit overseas employment markets especially the Pacific-rim countries of Australia, New Zealand, Japan and the United States. Casual work such as fruit picking, elderly homecare attendants, peacekeeping and sailors are some of the employment markets being explored. To this end, Butaritari, like the rest of the islands in the country can only await the outcomes and decisions of the Government as they come and go. The lack of opportunities to generate income in order to be self-reliant is a far off goal as all Island Councils including Butaritari Island Council rely heavily on central Government to support their administration, which is provided annually in the support grants and donor funded council projects.

5.1.4 Trade and Commerce

Commercial/cash trading is an introduced concept in Kiribati society and has become an important part in the lives of the people of Butaritari or any other island in the country for that matter.

To carry out any business activity involving trade on the island, requires that one purchase a business license from the Butaritari Island Council of which the cost varies depending on the type of business activity to be carried out and likewise for establishing and registering organizations. The most common business/organisational registration licenses on record are those of wholesaling, retailing, hawkers, agricultural and fishing organizations as portrayed in the following table.

Table 12: Businesses and fees

| | Business/Organisation | License/Annum |
|----|--|--------------------------------|
| 1 | Stores | \$70.00 |
| 2 | Boats (fishing) | \$60.00 |
| 3 | Hawkers (local cigarette and candy) Yagona (1 sale and 1club) | \$10.00 \$50.00 |
| 4 | Fuel depots | \$70.00 |
| 5 | Trucks | \$100.00 |
| 6 | Motorbikes | \$18.00 >50cc \$12.00 50cc< |
| 7 | Pushbikes | \$2.00 |
| 8 | Bakery | \$10.00 |
| 9 | Sour toddy | \$3.00 |
| 10 | Video entertainment | \$60.00 |
| 11 | Resthouse business | \$100.00 |
| 12 | Canoe hire | \$60.00 |

Source: Butaritari Island Council 2008

The island council is also engaged in commercial activities and generates a small portion of its yearly revenue from these sources such as rest-house, truck, boat, motorbike and venue charges apart from the taxes and registration fees.

Butaritari lies 199.29 km from the mainland of South Tarawa and experiences more ship and air visits when compared to those in the southern islands. As a small island with undeveloped infrastructure and a dualistic economy characterized by a growing dependency on imported consumables, trade and commerce on Butaritari has become a very important activity. The bulk of supplies that are normally shipped to the island by scheduled or chartered island trips consist of rice, sugar, flour, tinned food, tobacco and fuel. Most of the times, these are transported as ordered from the island and also come in the form of floats otherwise, all of these are transported whenever there is a scheduled trip to Butaritari by the Kiribati Shipping Company Ltd or any other vessel from Tarawa and to a smaller extent, by Air Kiribati. As an island nearer to the main flying centre in Tarawa, airfares and air cargo charges/fees are generally lower than those further away from the mainland.



Cargo ships from overseas bring imported products only to Betio in South Tarawa that are then distributed to the rest of the islands all over Kiribati. Product prices in Butaritari are the same as those in the Gilbert group, which contrast to product prices in the Line group that generally tend to be higher due to the cost of having to re-transport them from Tarawa to Kiritimati Island over a greater distance compared to the outer islands in the Gilbert group. Lack of cargoes is not a big bother to the islanders as most on the island grew up on breadfruit, bwabwai, bananas and marine resources which can still be found in abundance all year round.

The following Table 13 displays the fees for some of the services that can be provided on the island:

| | Service | Fee (AUD) |
|---|---|--|
| 1 | Body tax | \$1.00 (18-55 years) |
| 2 | Airport taxes | \$10.00 Government officials \$3.00 adult locals \$1.50 children |
| 3 | Seaport tax | Nil |
| 4 | Resthouse charges | |
| | Full accommodation (includes washing And meals)/day | \$30.00 |
| | Accommodation only | \$15.00 |
| | Food only | \$15.00 |
| 5 | Truck charges: | |
| | Hire | \$20.00 |
| | Per kilometer | \$1.00 |
| | Overtime/hour | \$2.15 - \$2.40 |
| 6 | Motorbike hire/day | \$20.00 |
| 7 | Canoe/boat hire to islets/day | \$180.00 |
| 8 | Generator hire/day | \$20.00 |

Source: Butaritari Island Council 2008

5.1.5 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 villages, 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 (IPO) based at each 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.

Each village bank has their own set of rules for their loan schemes which have improved from the initial rules when the village banks were first introduced. Auctioning off an individual's equipment, pushbike or anything of value used to be a popular way of ensuring that loans were repaid by the members. Members failing to repay loans on time would have their things taken by force and auctioned so their loan could be repaid. This rule has however been abolished and now, people are taken to court if they have not repaid their loans as agreed and signed.

Most of the loans from the village banks were initially for small businesses but the loans have now expanded to include loans for purchase of pushbikes, motorbikes and also commonly for children's school fees, especially those in high school.

Table 14: Distributed grant to village banks on Butaritari:

| | KIRIBATI GOV'T FUND OF 1\$MILLION | | | | | | UNDP GRANT OF \$90,000 | | |
|---------------------|-----------------------------------|----------|--------|---------------|-----------|---------|------------------------|----------|--------|
| | 1ST 75% SHARE | | | 2ND 25% SHARE | | | 3RD SHARE | | |
| BANK NAME | PAID | DATE | DW NO: | PAID | DATE | DW NO: | PAID | DATE | DW NO: |
| Tetakenuea | \$3,653.69 | 26/05/99 | 74/99 | \$1,217.90 | 15/03/00 | 38/2000 | | | |
| ATK BK | \$2,495.69 | 26/05/99 | 74/99 | \$831.00 | 10/9/2004 | 85/04 | \$329.10 | 22/10/01 | 368/01 |
| Ueen Tabuki | \$2,925.50 | 26/05/99 | 74/99 | \$975.17 | 15/03/00 | 38/2000 | \$385.75 | 22/10/01 | 368/01 |
| ARB BK | \$4,381.32 | 26/05/99 | 74/99 | \$1,460.44 | 15/03/00 | 38/2000 | \$577.75 | 22/10/01 | 368/01 |
| Taubukinmeang | \$4,755.67 | 26/05/99 | 74/99 | \$1,585.22 | 15/03/00 | 38/2000 | \$627.10 | 22/10/01 | 368/01 |
| Temwanokunuea | \$5,837.13 | 26/05/99 | 74/99 | \$1,945.71 | 1/6/2004 | 62/04 | \$769.70 | 22/10/01 | 368/01 |
| Tereke Bangke | \$5,559.28 | 26/05/99 | 74/99 | \$1,853.09 | 1/6/2004 | 62/04 | \$733.05 | 22/10/01 | 368/01 |
| Tamoieta Bank | \$4,368.01 | 26/05/99 | 74/99 | \$1,456.00 | 10/9/2004 | 85/04 | \$576.00 | 22/10/01 | 368/01 |
| Tenanorai | \$2,335.96 | | 88/99 | \$778.65 | 15/03/00 | 38/2000 | \$308.00 | 22/10/01 | 368/01 |
| Kakiantaken Onomaru | \$7,043.38 | 11/06/99 | 88/99 | \$2,347.79 | 1/6/2004 | 62/04 | \$928.80 | 22/10/01 | 368/01 |
| Nikabubuti | \$4,228.80 | 11/06/99 | 88/99 | \$1,409.60 | 1/6/2004 | 62/04 | \$557.65 | 22/10/01 | 368/01 |
| Bangken Keuea | \$3,854.45 | 11/06/99 | 88/99 | \$1,284.82 | 15/03/00 | 38/2000 | \$508.25 | 22/10/01 | 368/01 |
| Bikaati | \$2,759.12 | 11/06/99 | 88/99 | \$919.71 | 1/6/2004 | 62/04 | \$363.80 | 22/10/01 | 368/01 |
| | \$54,198.00 | | | \$18,065.10 | | | \$6,664.95 | | |

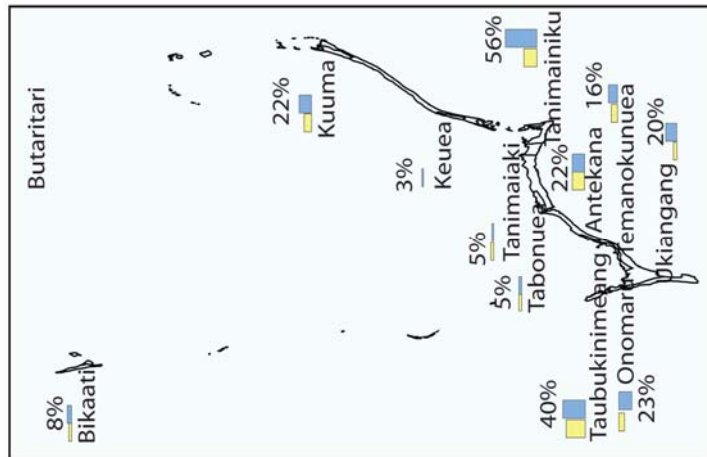
Source: Rural Planning Division, MISA 2007

5.1.6 Remittances

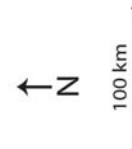
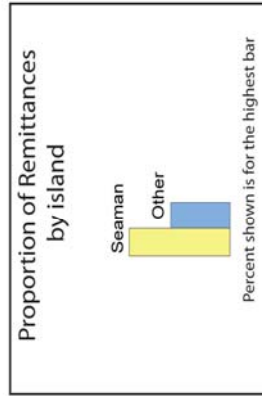
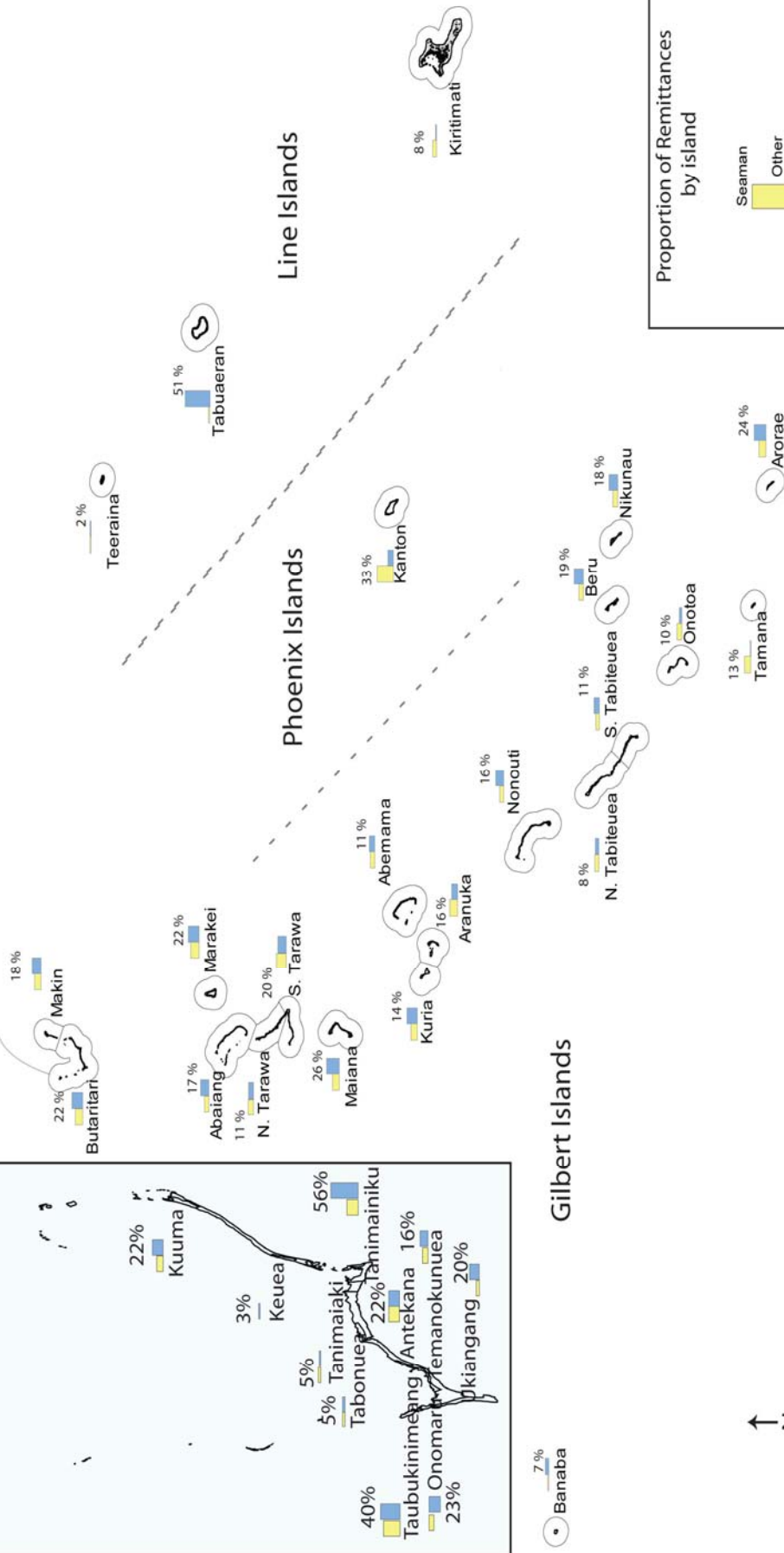
The general flow of seafarer's remittances into the country is continuous and has increased over the years with more engaged in seafaring employment. There are now two major employers of seafarers from Kiribati; 1. South Pacific Marine Services (SPMS) and; 2. The Kiribati Fishing Services (KFS)

Seafarers are employed as general deck workers on German ships through SPMS while Japanese employees are employed to be fishermen on the Japanese fishing vessels through KFS. The seafarer's salaries are paid straight into the individual accounts in Kiribati or family accounts. Money is also sent back to churches depending on individual seafarer obligations. Families are dependent on decisions made by their seafarer husband or son on how much remittance they will receive (M. Borovnik 2006).

Whitley (1980) reported that the amount of remittance sent back to Kiribati in 1974 was AU\$800,000 with an additional AU\$200,000 brought back in the form of leave pay at the end of contracts. Remittances grew to \$1.3 million in 1979, \$9.7 million in 1998 and \$12.29 million in 2003 (MFED 1987). Of this \$12.29 million, 86% came from those employed by SPMS while 14% came from those employed by KFS. Remittances sent to parents and wives differ. Parents usually receive more money from their son when he is not married yet but once married, the son generally sends more money to his wife and family than his parents. There is also a tendency for smaller amounts being sent to the outer islands as most families tend to move to South Tarawa especially the wife and children while the parents are more happy to stay back home. Remittances can be sent directly to families or they can be given after a special request (bubuti) to other extended family members for sudden needs such as 'botaki's (feasts) or for school fees. These kinds of requests usually vary and directed to straight to the members of the family employed by SPMS or KFS. A lot of these remittances have also been invested in homes (permanent buildings), cars, motorbikes businesses, home equipment (TV, media players, instruments) and to a big extent, school fees.



Proportion of Remittances by Island, Kiribati 2005



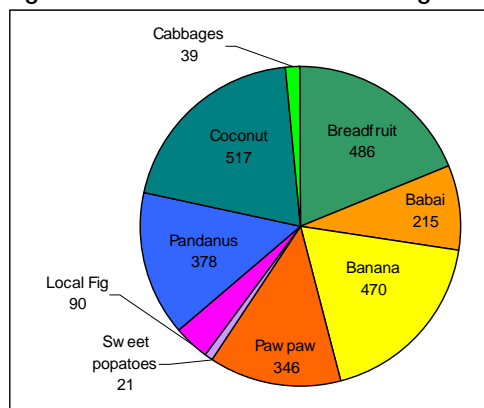
Map created by MISA with data sourced from 2005 Kiribati National Census of Population and Housing

5.2 ECONOMIC ACTIVITIES

5.2.1 Agriculture

There is an Agricultural Assistant and a Nurseryman on the island whose responsibilities are to carry out the Agricultural headquarters outer island plans in agricultural and livestock development. Agricultural activities are greatly hindered by drought at times restricting activities to teaching home gardens, provision of pigs and chickens, animal health schemes, provision of seeds, seedlings (coconuts) and breadfruit cuttings, and coconut replanting schemes. The latter scheme (coconut replanting) however is not fully supported by the islanders as it is deemed a waste of time and effort due to most of the replanting schemes not bearing as much fruit as one would love them to bear. Besides, people have their own traditional cultivation methods that are most of the time linked to phases of the moon and considered more successful than the agricultural methods of spacing amongst others that only result in a lot of wasted space according to the islanders. However, the islanders most of the time, are happy to turn their barren lands over to the Division of Agriculture to be replanted in this scheme.

Fig 20: Access to food trees and vegetables 2005



Statistics displayed in the chart (left), shows that of the 561 households on Butaritari, 517 (92%) have access to coconut trees, 378 (67%) pandanus, 486 (87%) breadfruit, 346 (62%) pawpaw, 470 (84%) bananas, 215 (38%) bwabwai, 90 (16%) local fig, 39 (7%) cabbages and 21 (4%) sweet potatoe trees/crops. 'Access' is defined as those food trees that are located near households or in the villages thus easily accessed by household members. The numbers of coconut and pandanus trees therefore, are limited in the census to those that are near households or in the villages excluding those in the bush.

Pawpaw throughout Kiribati has generally been popular in nutritional value and also in providing a variety of color to the normal food especially when feeding guests or visitors. 'Te bero' (local fig) is another of the tree crops in Kiribati that is hard to cultivate and propagate as it can only be grown from cuttings and generally, is rare on all islands in the country. Where 'bwabwai' is kept solely for ceremonial occasions in the southern islands, it is a staple household food on the island. Pandanus trees are abundant in variety and amongst these, like the rest of the islands, there are certain pandanus varieties that have assigned uses such as for pandanus paste ('tangaui' and 'tua'), pandanus powder ('kabubu'), weaving and cigarette paper. The former two uses, pandanus paste and powder are rarely done if at all in the northern islands but a common feature of household products in the southern islands.

There are no strict inspection codes as yet for transport of foodstuff, plant materials and animals on the ships and planes that visit the island and thus agriculture is vulnerable to introduced pests. The threat from 'bwabwai' beetle has been solved through strict regulations of 'bwabwai' being taken from South Tarawa to the outer islands. It falls upon the Agricultural Assistant and his nurseryman to inspect all visiting aircrafts and sea vessels to check that 'bwabwai', bananas and exotic plant life are not brought to the island without proper quarantine clearances and certificates. Given that Butaritari is a fertile and rainy island, proper quarantine measures and routine should be put in place if the island is to maintain its vegetation without threats from potentially introduced pests and diseases.

To promote agricultural gardening, the Agricultural Assistant carries out gardening when prizes are available from the Agricultural headquarters in Tarawa. Prizes for these gardening competitions comprise agricultural equipment such as shovels, spades, wheelbarrows, picks and seeds. Points are

given for garden vegetable varieties, layout/landscape, performance of plants, availability of other needed gardening needs such as composting heaps and watering holes.

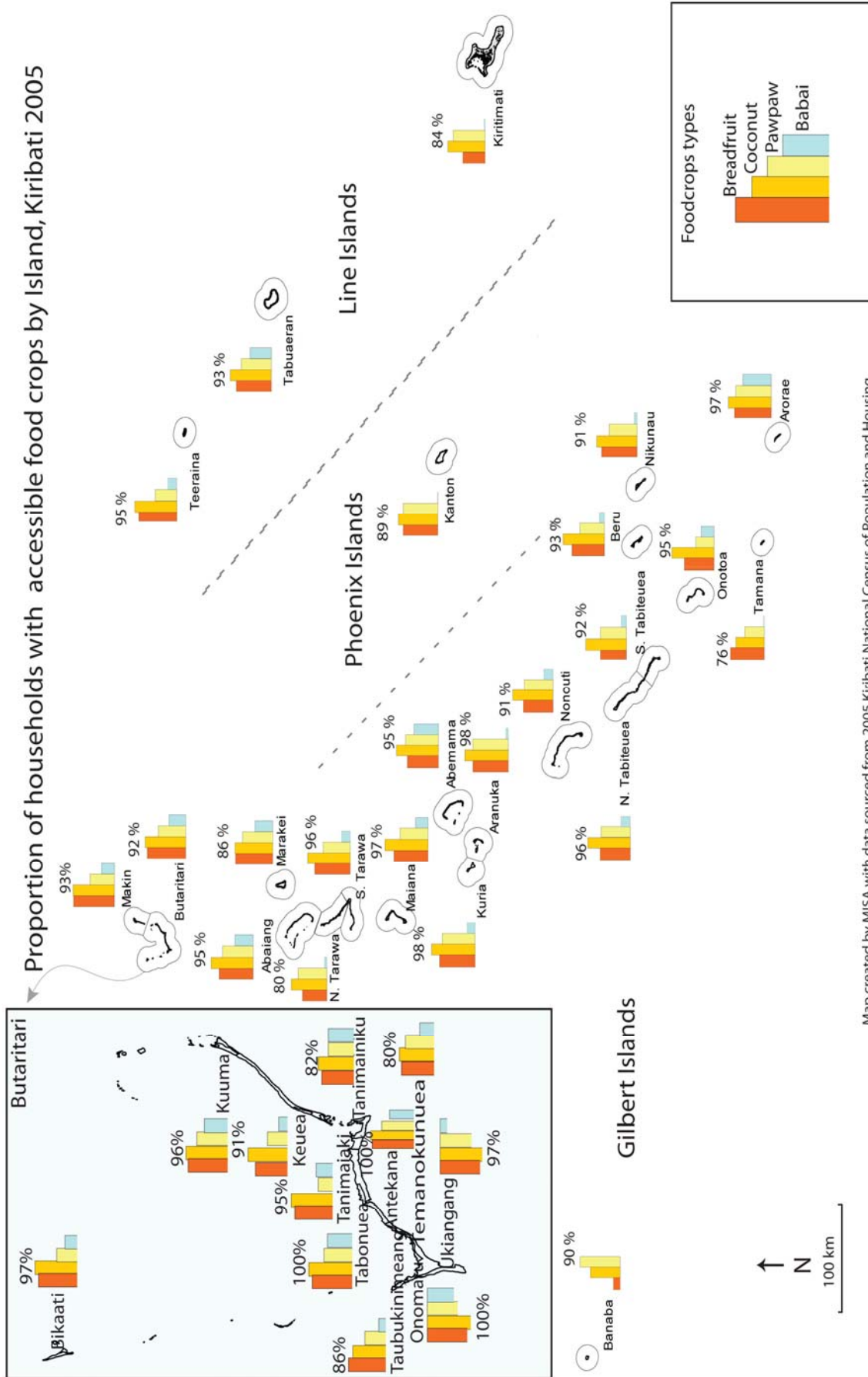
An agricultural group organization called 'Maiu reirein Tebungirooroo' was established in 2005 whose objective was to promote and maintain agricultural activities in the villages on the island. It initially had members from all over the island with gardening seeds provided by the Agricultural department and the Taiwan mission in Tarawa. Gardening motivation and activities dwindled to neglect when seed supplies from the mainland stopped. However, where vegetable gardens are still being carried out, the produce are sold to the general public at the following costs:

Table 15: Agricultural products and cost

| | Agricultural Product | Cost |
|---|----------------------------|-------------|
| 1 | Pakchoi (Chinese cabbage) | \$1.00/unit |
| 2 | Saladeer (Chinese cabbage) | \$2.00/unit |
| 3 | Cucumber | \$0.50/unit |
| 4 | Pumpkin | \$0.80/kg |
| 5 | Bookeekee (Breadfruit) | \$0.50/unit |
| 6 | Motiniwae (breadfruit) | \$1.00/unit |
| 7 | Banana | \$1.00/kg |
| 8 | Tomato | \$0.10/unit |
| 9 | Lime | \$0.10/unit |

Some of the pests and diseases that can be found on the island include the following:

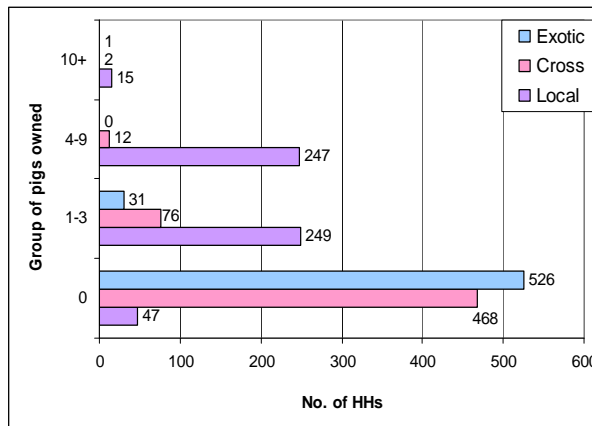
- Scale insect
- Slugs
- Rats
- Breadfruit rot



5.2.2 Livestock

Livestock on the island is limited to pigs and chickens of both local and exotic breeds. The local pigs and chickens were documented as having been introduced in the early days before Kiribati became a British protectorate and later exotic breeds were introduced as part of the Division of Agriculture's plans to develop agriculture and livestock on the outer islands of Kiribati. Local pigs vary in color and sizes and are very short, rarely reaching a height of 1 meter whereas the introduced local breeds if managed properly grow higher than a meter and are actually nicknamed as 'horses' by the locals who never cease to marvel at the height and size that these exotic breeds can grow to. Crossbred with a local breed, the progeny are normally faster (than local breeds) growing, taller pigs with higher food conversion rates and good breeding qualities e.g. more piglets per litter. The pigs are either penned or tethered while the chickens are free ranged.

Fig 21: Households and pigs owned



Exotic breeds of pigs and chicken have been introduced for cross-breeding with the local breeds. The idea of owning a great big pig such as the introduced breeds resulted in initial high demand for the exotic breeds of pigs. This however lost popularity when the exotic breeds were found to be unable to perform well on a local diet that consisted mostly of coconuts and household leftovers. Through lessons learned, locals are now happy to own exotic breeds only so they can cross them with their own local pigs to get better progeny.

Generally, pigs are more popular as domestic animals because they are the major source of meat during family, church and island feasts. It is extremely rare in the whole country for one to kill a pig solely to eat pork as they are kept specifically for important feast and functions when whole baked pigs grace these feasting tables and is the most sought after food at such times.

As portrayed in the above chart, the majority of the households do not own crossed and exotic breeds as these breeds are initially dependent on the Division of Agriculture supplying the exotic breeds. 249 (44%) households owned 1-3 local pigs while 76 (2%) households owned 1-3 crossed and 31 (6%) households owned more than 10 exotic breeds. Another 247 (44%) households owned 4-10 local pigs while a very few households owned more than 4 local pigs.

A total of 2,233 pigs were recorded during the 2005 census of which 1,998 (90%) were local breeds, 186 (8%) were crossbreeds and the rest 49 (2%) were exotic breeds. Evidently, a total of 235 cross and exotic breeds exists on the islands which, given time, would presumably increase the number of more cross bred pigs on the island that are expected to perform better than the local breeds in terms of growth and litter amongst others.

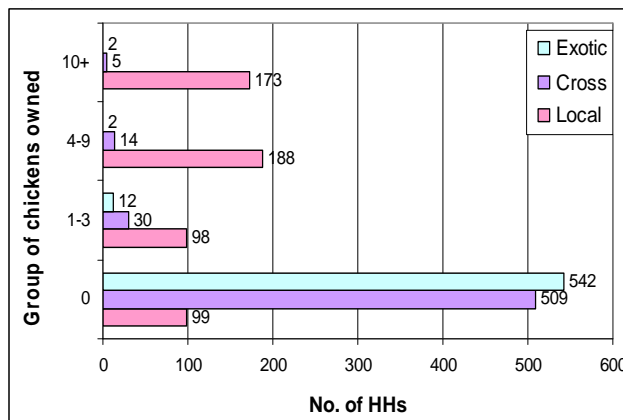
Five (5) exotic breeds have been imported into the country by the Division of Agricultural that has been distributed throughout Kiribati for



crossbreeding purposes. These breeds include the Duroc, Landrace, Berkshire, Large White and Tamworth. Pictured above is a progeny of an exotic Berkshire that has been introduced to Butaritari.

Chickens on the other hand totaled 3,259 chickens from which there were 3,029 (93%) local, 179 (5%) crossbred and 51 (2%) exotic chickens. As portrayed in the chart (below), the majority of the 561 households do not own cross or exotic breeds of chicken with more than half the households owning local chickens.

Fig 22: Households and chickens owned



Chickens are free-ranged and like pigs, are also kept domestically for household own meat protein supplements and for special occasions. As free range chickens, they inter-mingle with chickens from other households resulting in higher incidences of crossbred chickens. Where the hens are kept for laying eggs to produce more chickens, the roosters are kept to breed with the hens as well as for their feathers that are popularly used for fish lures and handicrafts. As is quite prevalent in the islands, the free-range management of chickens on the outer

islands has impelled marking of chickens to declare ownership of the chickens. These markings include chopping off certain claws of the chickens or tying certain colored pieces of cloth to the feathers or legs. Eggs are rarely eaten unless important guests/functions are present or when it is required as part of a medicinal ingredient.

Unlike pigs, free ranged chickens are not liable to fines or confiscation by Island Councils whereas free-ranged pigs on the other hand are considered an offense against the law, liable with fines and confiscation of the pigs. The confiscated pigs can be released to owners at a fee of \$10.00 (give or take) and where they are not claimed, they are auctioned off to the public. Pigs are kept in pig pens or tethered under shades of trees as is common throughout the islands of Kiribati.

Even though, both pigs and chickens are kept for own consumption, sale opportunities to supplement meager incomes are never passed by especially when one has a lot of pigs or chickens and does not have an upcoming family or village function. Pig prices on the outer islands are generally negotiable but most of the time the Agricultural price of AU\$3.50/kg live-weight is used. Most would rather buy them live due to pig blood at slaughter being a local delicacy plus the fact that there are no abattoir services or butcher shops yet available in the country.



There are no known diseases specific to Butaritari livestock and factually, the pigs and chickens alike are free from infectious and dangerous diseases such as the well known avian influenza in chickens or

trichinella in pigs. They are however vulnerable to worms and skin parasites. Exotic breeds of chicken are prone to 'botulism' once released to the outer islands making it hard for exotic chicken breeds to live long on the islands. Crossbreeding eventually does happen resulting in more disease resistant crossbreds (a characteristic of local breeds) with higher laying characteristics, tender meat and faster growing rates, characteristics of exotic breeds.

Other than providing cultivation and gardening services to the public, Agricultural Officers also castrate pigs and carry out routine injection of pigs on the island for worms and mange, the common pig ailments in Kiribati. Sterilization of cats and dogs are carried out from the Animal Health Division within the Agricultural Department who visit individual islands should the need to sterilize the domestic animals arise, as reported by the Agricultural Assistant.

5.2.3 Fisheries

Fishing is at large, a routine activity for the men which they carry out when the seas are calm, and whenever home fish reserves have run out while others fish whenever they can as a hobby and to pass the time away. Fish jerky is still a common product throughout the island and is provided as gifts to guests, sold to others and exported to relatives in other parts of Kiribati mostly to those in South Tarawa. There are many different kinds of fishes that serve as food for the I Kiribati and special methods are utilized for certain species or groups of species. These methods are standard amongst the fishermen but individual variation does exist (*Preston E. Cloud Jr. 1952*) which are most of the time kept within families.



As islands, households have been harvesting the sea in one way or another, initially to satisfy their own subsistent needs. The Ministry of Fisheries and Marine Resource Development supports 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 (ice plants), etc.)
- the provision of affordable fishing gear.

Unlike some of the outer islands, there is a technical fisheries assistant on the island who assists with fishery government projects on the island as delegated from the Fisheries Division in Tanaea. The Fisheries Division in Tanaea is also carrying out many breeding projects on some potential marine resource developments such as breeding of pearl oysters, white teat-fish and the 'bwaraitoa' to improve the income generating alternatives to the outer islands and to improve product exports.

Pearl oysters are part of the Fisheries trial projects presently in Butaritari, Abemama and Onotoa where they are providing young pearl oysters to these islands for trial purposes to see how they would fare. The white teat-fish are also bred in the tanks and then dispersed in the waters on the outer islands of

Kiribati where they are most likely to breed. Buttons (shirts etc) are made out of the 'bwaraitoa' which according to Fisheries is not that abundant in the country and thus they are also breeding this shellfish for dispersal in the country waters.

Butaritari was one of the initial islands where an iceplant was established in the 1990s which unfortunately was vandalized after it was closed awaiting repair of some parts. Some people have however resorted to buying deep freezers and running them on generators which are costly and thus not that sustainable. The common practice is to turn the freezer on during a big function whence all fish catches are stored while contributions are made towards expenses for the fuel or fuel is paid for from contributions if it is a family function.



Young men of Butaritari night fishing with a fishing net and 'riena'

The most common fishing method is net fishing in the lagoon for those on the mainland while there are more fishing opportunities for those living on the islet of Bikaati and the end villages of Ukiangang and Kumaa. Ocean and dive fishing are common in the latter three villages as they are conveniently located near the ocean for catches as the common tuna etc and the popular diving catches, seaworm (*Sipunculus indicus*) and clam (*Tridacna maxima*). There are other marine resource catches apart from the above stated ones but they are the most popular

catches that are generally known from the islet of Bikaati and the two end villages of the mainland. The 'kimokimo' (*Grammatoroynus bicarinatus*) on the other hand is caught in the lagoon. Those on the mainland could just as easily access the ocean and islets but it would mean more fuel and thus more expensive.

5.2.4 Handicrafts

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.

With well growing pandanus, Butaritari is rich in weaving materials from pandanus and these are always put to good use by the women for assorted handicrafts including the following:-

- Mats of different sizes
- Baskets of assorted sizes and makes
- String
- 'Rauara' (Cigarette paper made from peeled pandanus leaves)
- Fishing hats



5.3 INFRASTRUCTURE

The establishment and maintenance of development infrastructure on the island is the responsibility of government and thus the Butaritari Island Council. 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 the stated "Support Grant" to enable them to perform this role. The project funds from donors and Government for island council priority projects have also assisted greatly in the development of infrastructure on the outer islands including Butaritari.



Government schools and medical facilities are all the responsibility of the Government including staff living quarters. Where working facilities are maintained by Government employees through the Ministry of Works & Energy, government employee living quarters are maintained by the Councils with funds provided by the Government.

'Nan Teibo' causeway has been the subject of erosion charges by those living in nearby Mwakin who reason that erosion problems did not happen on their island before the causeway was built. Considering that these two islands were one island long ago (Makin (Butaritari) and Little Makin), such an idea could be seen as feasibly possible. However, expert technical research and opinions would be required for this to be confirmed. Teibo causeway was initially constructed without culverts and later in 2005, after the 2004 council priority project to upgrade the causeway, culverts were installed (pictured above) by the Ministry of Public Works and Utilities after grants were released. The upgrade according to the locals has allowed the return of the 'kimokimo' which had disappeared when the causeway was initially constructed.

5.3.1 Land Transport

Island Council trucks provide the main transport for Primary and JSS students to and from their schools and general use by the Council.

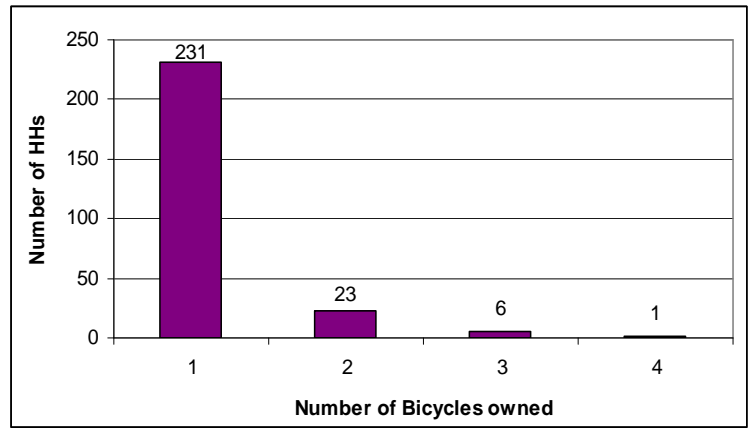
The most common form of land transport is the pushbike followed by motorbikes and trucks. Motorcycles ranks second in popularity, as they are generally more expensive than pushbikes. Due to the high cost of truck vehicles, difficulty in transportation, there is only one truck on the island, the JSS truck owned by the Island Council. Council does charge a small fare for pupils and inter-village travelers in order to raise funds to meet the truck's operational cost and maintenance.

Even though pushbikes are the main means of

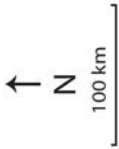
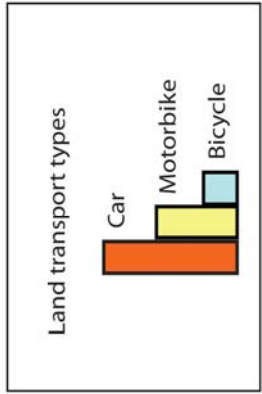
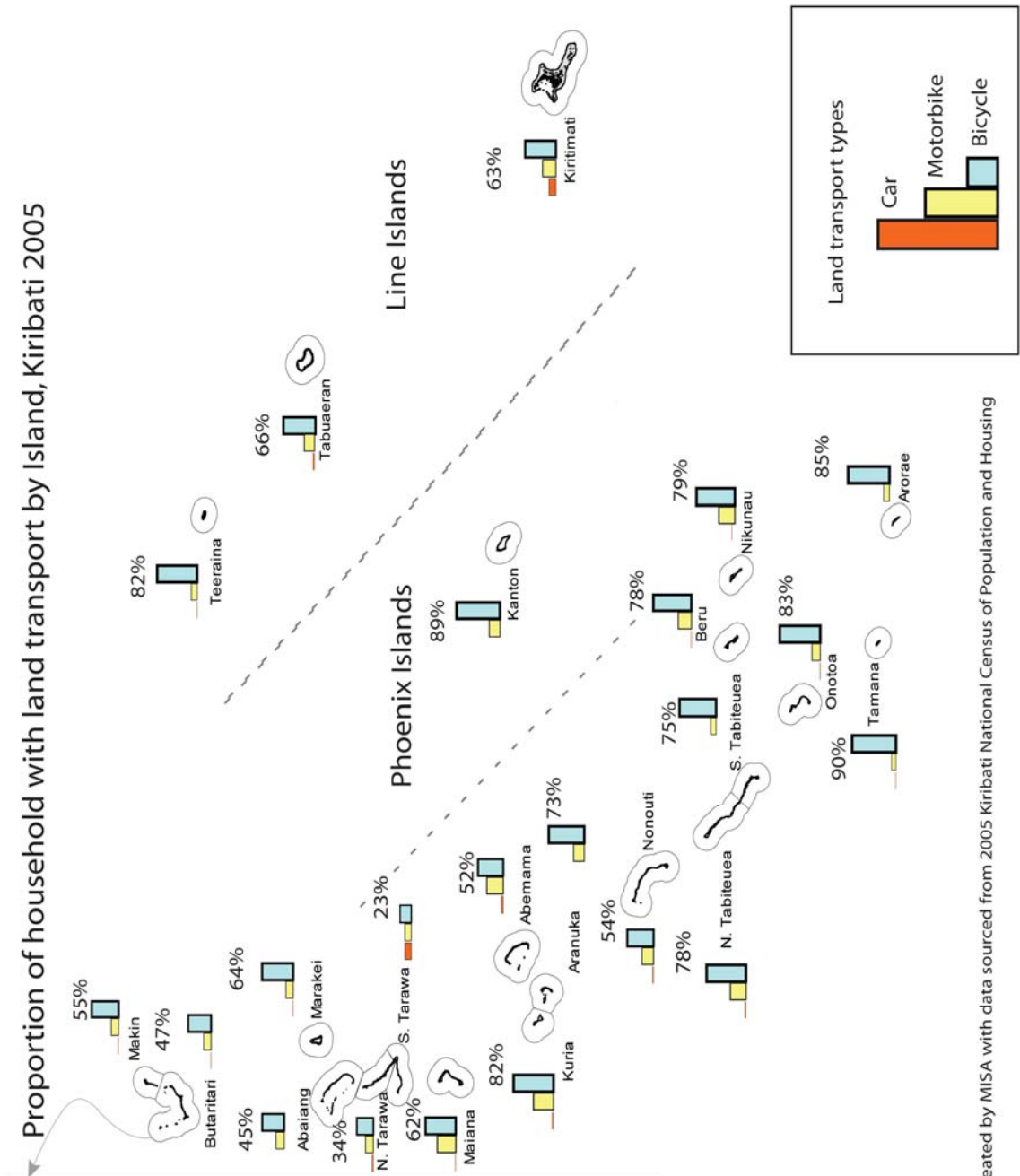
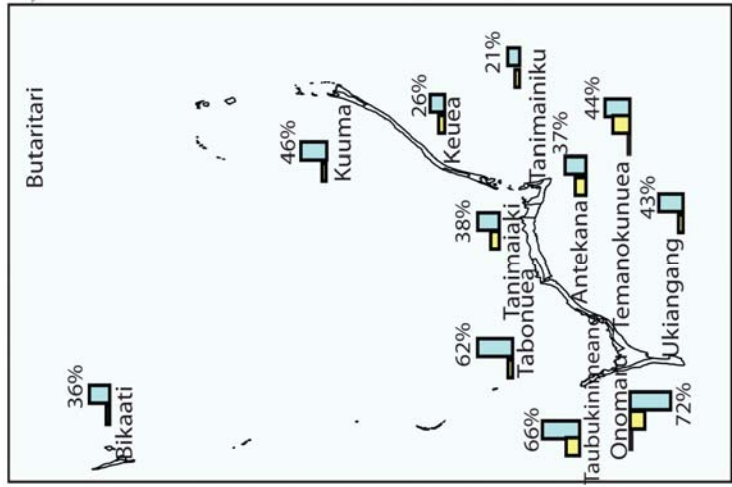


transportation for the islanders, motorbikes are however also popular as they make traveling a lot easier plus they can also be hired out to visiting officials at a cost of \$20.00 per day. Pushbikes can also be rented out but most of the time, visiting officials do not have the time to go cycling around the island to carry out their work thus most prefer motorbikes or trucks as their transportation during their visit. Trucks are hired when there are island functions requiring most of the communities to attend at which time trucks can be hired. In other cases, a truck is hired to transport coconuts, wood, gravel or sand from the bush or other parts of the island to the villages.

Fig 23: Households and bicycles owned



297 (53%) of the 561 households according to the 2005 statistics have no bicycles or pushbikes, 231 (41%) have one pushbike, 23 (4%) have two bicycles while the rest have two or more bicycles. A total of 299 bicycles were recorded and unfortunately, statistics did not record the number of motorbikes as owned by the households on the island for the same year.



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

Proportion of household with land transport by Island, Kiribati 2005

5.3.2 Sea Transport and Shipping

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 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 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.

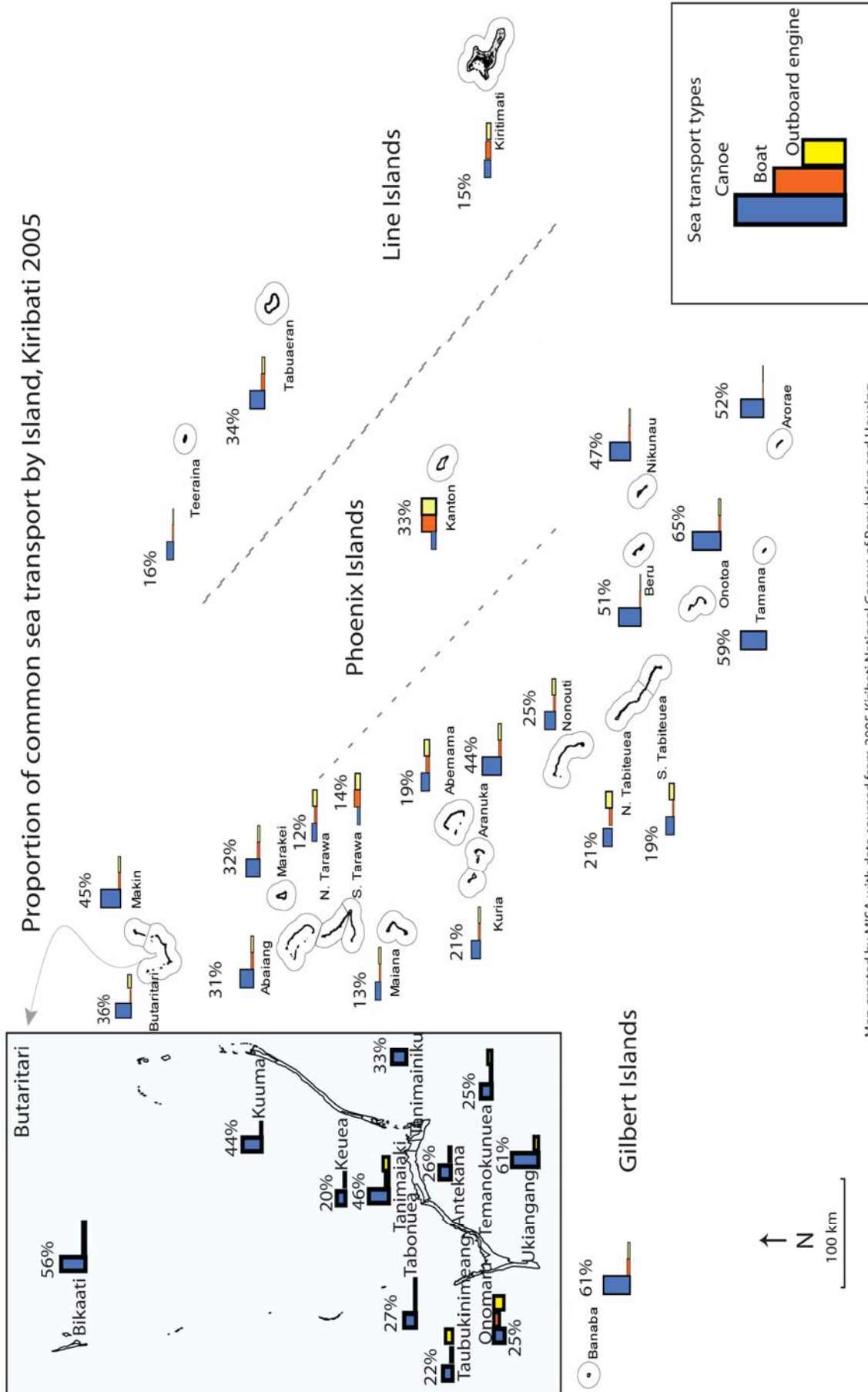


The Kiribati Shipping Services Company Ltd. (KSSCL) is a Government company that provides the basic shipping services to all the outer islands of Kiribati. However, there is also an increasing number of privately owned boats that are also providing shipping services to the outer islands including 'Bwaan te Tangira' owned by the Onotoans, 'Te Ataana' privately owned by a Philippine resident, and others.

Boats and canoes are used for inter isled transportation on Butaritari as it is also a fragmented island on itself. Most

of the islets except for Bikaati are not habited but provide good hunting grounds for land and coconut crabs as well are camping and picnic sites.

Statistics showed that there are 216 local canoes on the island in 2005 with 190 (34%) households owning a canoe while 13 (2%) households own two canoes. 355 (63%) households do not own canoes and 3 household canoe ownerships were not stated in the records. Boats on the other hand totaled 15 and owned by 4 households only.



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

5.3.3 Air Service

There is only one air service to the outer islands of Kiribati provided by the 'Air Kiribati', a Government owned company. Flight schedules to the islands differ as well as airfares.

This air service does not include the islands in the Line & Phoenix group.

Due to their remoteness, the Southern islands excluding Tabiteuea North, have only one flight a week while there are more flights to the central and northern islands in a week. The Southern flight schedules comprise flying to two islands at a time. The Butaritari flight is in conjunction with Makin every Tuesday and Sunday thus passengers on these twice a week flights include passengers to and from Makin and Butaritari. One of the other reasons for weekly flights to the Southern islands was the lack of weekly passengers to these islands. This lack of passengers is attributed to the airfare that was deemed high by the islanders and recently in 2007, the fares were cut to nearly half the rate they used to be and the Southern island flights have been full since resulting in more passengers and not enough airplanes. However, even with the cut in airfares and increased passengers, the local airline was still at losing money and thus airfares were again increased in 2008.

Table 16: Air tariff

| AIR KIRIBATI TARIFF | |
|----------------------------|----------|
| Effective 1st July 2009 | |
| Makin | \$90.00 |
| Butaritari | \$72.00 |
| Marakei | \$36.00 |
| Abaiang | \$30.00 |
| Maiana | \$30.00 |
| Kuria | \$55.00 |
| Aranuka | \$55.00 |
| Abemama | \$55.00 |
| Nonouti | \$100.00 |
| TabNorth | \$120.00 |
| TabSouth | \$135.00 |
| Onotoa | \$150.00 |
| Beru | \$160.00 |
| Nikunau | \$170.00 |
| Tamana | \$210.00 |
| Arorae | \$230.00 |

Table 17: Flight Schedules (effective 17th August, 2009)

| Day | A/C | ROUTE | ETD | ROUTE | ETA |
|-----------|------|------------|------|------------|------|
| Wednesday | Casa | Tarawa | 1000 | Butaritari | 1040 |
| | | Butaritari | 1100 | Makin | 1110 |
| | | Makin | 1130 | Tarawa | 1215 |
| | | | | | |
| Sunday | Y-12 | Tarawa | 1100 | Butaritari | 1150 |
| | | Butaritari | 1210 | Tarawa | 1255 |

Source: Air Kiribati Bairiki 2009

Peak flights are generally during the school holidays, Easter, Independence celebrations, Christmas, and New Year holidays. Airfares to Butaritari are now at AU\$146.airfare that was recently cut to \$80.00. There is a 15kg baggage passenger allowance and a 5kg hand carriage allowance while excess baggage during flights costs double the normal freight (air cargo) cost of \$1.75.

5.3.4 Issues facing Transportation

Land and sea transportation on the island is not an issue as the Butaritari Island Council has a truck and people have their own pushbikes and motorbikes. The Kiribati Protestant Church and the 'Boboti' CS Ltd also have their own trucks for their own use and for hiring out to the general public. The council and individuals also have their own canoes and boats which are used for fishing and for transportation between the villages.

The issues of transportation include the following:

- a. Insufficient transport services to and from the island
- b. High cost of pushbikes, motorbikes and boats
- c. Lack of properly equipped mechanical workshops

Transport hire costs on the outer islands like Butaritari have been geared towards the local community being able to afford the hire of a truck especially for transporting of coconuts and other materials from the bush or other parts of the island. It is therefore quite common throughout the islands for hire service charges being generally higher to Government officials than the local communities.

5.3.5 Communication

Until a few years ago, the main mode of communication between the islands was with 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 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 accessed by anyone with such a radio, 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 or awaits a technician from South Tarawa.
- 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 decided to slowly introduce a new technology, a satellite-based telephone system which connects directly to the telephone system in Tarawa. The new system also supports the use of facsimile and internet, and therefore was considered a major accomplishment as far as progress is concerned. This system on the outer islands is powered by 450 solar panels that harness this solar to 1000 amp. batteries (Turabu pers. comm.).

This communication has already been installed on Butaritari and generally 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. Nonetheless, it provides more privacy when talking to relatives on other islands especially South Tarawa and with Butaritari being a big island, traveling to the Council is an issue for those living in the far villages of Kumaa, Keeuea, Tanimaiaki, Tanimainiku and the islet of Bikaati.

Like the rest of the islands in Kiribati, Butaritari is equipped with several CB radios at the different sectors on the island:

- Police quarters
- Island Council office operated by the radio operator employed by the Council
- Health Centers
- Butaritari Boboti Co Ltd.
- Air Kiribati

The radio operator operating the communications on the island is paid by the Butaritari Island Council while the technician for communication technical problems in the centre is paid by TSKL. There are 4 telephone lines that are shared by Butaritari and Makin. Phone cards are not yet programmed to be used for communication from the public pay-phone on the island but the payphone is used instead for transferal of incoming calls to the island.

Cost of out calls from the island is \$0.90 if the call is to another landline in Tarawa and \$1.25 if the call is to a mobile phone. The average income or revenue from the use of the telephone is \$700.00 per month and this income has recently been agreed to be shared between the Butaritari Island Council and TSKL as further elaborated in the following table:

Table 18: Telephone costs

| Telephone calls | Cost | Council share | TSKL share | Ratio % |
|-----------------|--------|---------------|------------|---------|
| Landline | \$0.90 | \$0.35 | \$0.55 | 39:61 |
| Mobile | \$1.25 | \$0.55 | \$0.70 | 44:56 |

Services include telephone and fax only. The internet service still has to be provided from the communication centre on the island as the facilities and equipment are not yet equipped to provide this latter service.