

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

### A. ISLAND ECONOMY

#### 5.1 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 survive 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 gender 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, 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 that are now found in the shops/stores.

Most of the fishing is done for subsistence but where there is a surplus, it 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 practiced but are however limited to those called family or close relatives. This contrasts to the northern custom of borrowing where the people are more interdependent and out-going compared to those in the southern islands. The sharing of wealth and property is still highly practiced especially among close relatives.

#### 5.2 Production

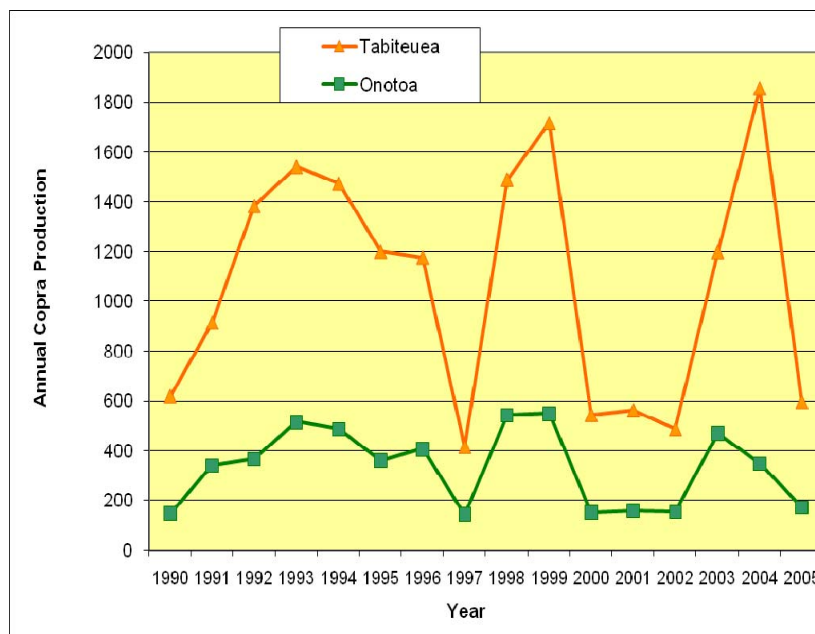
##### 5.2.1 Copra cutting

Copra production remains the most important commercial activity on TabSouth that has provided a reliable and sustainable source of income for many of the islanders. It was the major source of income before seaweed farming was introduced and recently, sea cucumber export.

The volume of copra produced and the total earnings derived from copra cutting for all the islands vary from year to year due to a lot of reasons including, fluctuations in the world copra prices, change in economic activities and particularly climate change for southern islands such as TabSouth. Like the other outer islands of Kiribati, other than fishing, copra cutting is the mainstay of the people on the island. Seasons of drought and rain are greatly reflected in the copra production for the islands that has been fluctuating over the years.

Available copra data does not separate copra productions for TabNorth and TabSouth thus the following chart shows the annual copra production for Tabiteuea against Onotoa for the past 16 years, showing that in general there have been great fluctuations in production. These are the result of several factors among which are the changes in copra price and climatic conditions that affect production. As an example, production soared to a record high of nearly 1,855 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.

*Figure 20: Copra Cutting*



At \$0.60 cents per pound the total revenue from copra was approximately \$245,700 in 2000, \$253,800 in 2001, \$220,050 in 2002, \$599,500 in 2003, \$927,500 in 2004 and \$358,800 in 2005. Accordingly the copra production in 2005 that brought in an income of \$358,800 would in effect have generated an average annual household income for Tabiteuea (North and South) of \$429.70. In turn, this annual average means that in 2005, the households on Tabiteuea were able to generate \$1.28 from copra alone.

*Source: Statistics Office, MFED, 2007*

There is a discernible relationship between price and production, just as there is between climate and production. It could therefore be concluded that in general that copra production have been fluctuating over the years due to the changes in both climate and copra prices. However, there are also other factors relating to the changes in production but would require further research to see how they have affected the production.

*Table 15: Tabiteuea Copra production and revenue 2000-2005*

Year	2000	2001	2002	2003	2004	2005
<b>Production</b>	546	564	489	1199	1855	598
<b>Copra price</b>	0.45	0.45	0.45	0.5	0.5	0.6
<b>Income</b>	\$245,700.00	\$253,800.00	\$220,050.00	\$599,500.00	\$927,500.00	\$358,800.00
<b>Income/HH</b>	\$294.25	\$303.95	\$263.53	\$717.96	\$1,110.78	\$429.70
<b>Income/Day</b>	\$0.88	\$0.91	\$0.79	\$2.14	\$3.32	\$1.28

*Source: National Statistics Office, 2007*

The total copra production of Tabiteuea over the span of 5 years (200-2005) was 5251 tons and assuming that each of the North and South produced the same amount, would have given each an average production of 2625.5 tons. This still outweighs production from nearby Onotoa whose production for the same years totaled 1469 tons. The highest production for the Tabiteuea came about in 2004 when it reached a tonnage of 1,855. This increase is most probably due to the increase copra prices that



the new elected Government in 2007 had set. The lowest production occurred in 1997 when the production was 418 tons. However, the nationwide lowest production for the same year was from the island of Tarawa (North Tarawa), whose productions have been the lowest throughout the years.

Copra production is done on a large scale and is well organized by a special government agency, the Copra Board, who oversees its nationwide operation. However, long periods of drought have very

drastic effects on copra production when coconut trees and thus copra production dwindle when coconut trees eventually die.

### 5.3 Employment

The Island Council serve as the biggest employer for the islanders, employing about 70 islanders as village wardens, village nurse aides, pre-school teachers, 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 TabSouth include construction of buildings and road and other large infrastructure.

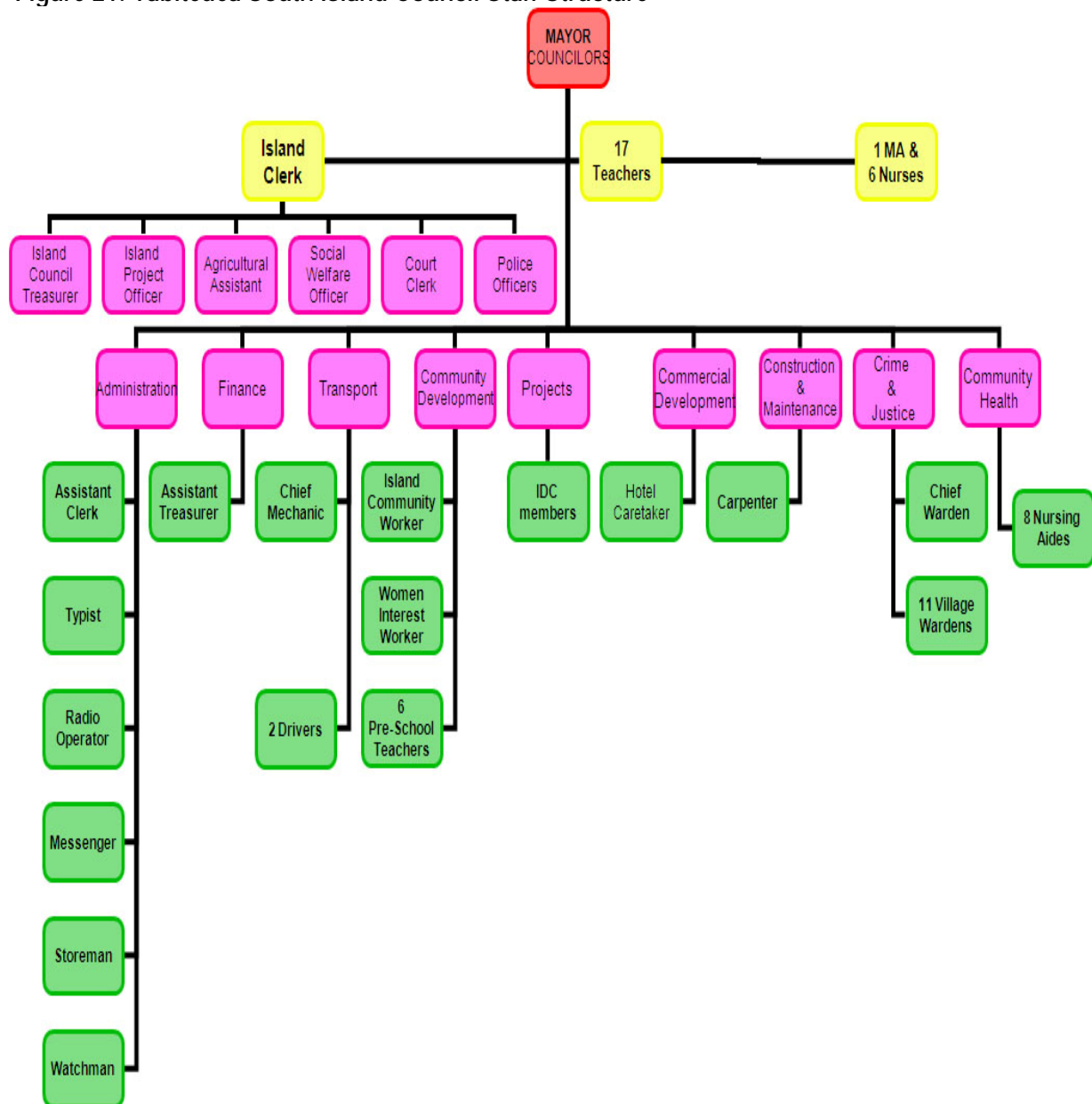
Manual labor is also regularly needed in the stevedoring of visiting supply boats, which make monthly or more regular runs to the island carrying food, fuel, timber, and other general goods. On their return, they are loaded with copra, empty fuel drums and some local produce like fish jerky, dried sea worms and mats. 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 the island 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 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, Tab North, like the rest of the islands in the country can only await the outcomes and decisions of the Government as they come and go. Sailors/seamen are annually recruited from all over the country including Tab North requiring that young men pass the required test to undergo further training at the Marine Training Centre (MTC) or Fisheries Training Centre (FTC) in Tarawa for their preparation to board German and Japanese ships. The lack of opportunities to generate income in order to be self-reliant is a far off goal as all Island Councils including TabSouth Island Council rely heavily on central Government to support their administration, provided annually in support grants.

Figure 21: Tabiteuea South Island Council Staff Structure



Source: Island Council Estimates 2009, LGD Misa

## 5.4 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 Tabiteuea South and the rest of the islands in the country. As small islands with undeveloped infrastructure, under-utilized resources, and a dualistic economy characterized by a high dependency on imported consumables, the size of trade and commerce on TabSouth is quite small but a very important part of life on the island.



The most common form of imported items consist of food, tobacco and fuel, which are normally shipped to TabSouth on boats. Among the imported food rice, flour, sugar and tinned food make up the bulk of these frequent supplies.

Tariffs are an important source of revenue for TabSouth Island Council as with the rest of the outer island councils. To carry out any business activity involving trade on the island requires that one purchase a business license from the Tab North Island Council of which the cost varies depending on the type of business to be carried out. The most common business licenses on record are those of wholesaling, retailing, hawkers and fishing. The following table describes the kinds of taxes and business licenses that the TabSouth Island Council seeks and receives each year for the different trade and commercial activities on the island.

Table 16: Trade and Commerce

	Revenue Description	Tariffs Per Annum
1	Body/Head tax	\$5.00/18-49 year old
2	Airport taxes	\$15.00/trip Government employees \$10.00/trip Local adults \$5.00/trip school children
3	Seaport tax	\$15.00/trip Government employees \$10.00/trip Local adults \$5.00/trip school children
4	Registration fees: Pushbikes Dog	\$2.00 \$2.00
5	Store licenses	\$50.00 private retailing \$150.00 Wholesale bulk stores – BKL, Groups, Church \$80.00 Fuel depots \$500.00 Fuel Wholesaling
6	Hawkers	\$5.00/day Food-stands during independence or other \$10.00 Local cigarettes and candy



		\$10.00 ice-blocks
7	Entertainment	\$50.00 Film shows
8	Marketing of fish	\$15.00
9	Rentals to allow motorbike or car to be hired: Trucks/Cars Motorbikes Boats Venue	\$100.00 \$50.00 \$50.00 \$10.00 (meeting) \$20.00 (party) \$50.00 (workshop)
10	Bakery	\$40.00
11	Agents: Sea cucumber  Floats	\$500.00 (when using gas) \$250.00 (when skin diving) \$50.00/business trip
12	Yaqona	\$30.00
13	Resthouse: Accommodation and meals Accommodation only Stay with relatives	\$30.00 \$20.00 \$15.00
14	Truck fares: Adults Children Stuff	\$0.40 \$0.20 \$1.00
15	Truck hire: Government New visitor island tour Church groups Individuals	\$20.00/day \$30.00/round trip \$20.00 \$10.00
16	Motorbike hire: Government Church groups	\$20.00/day \$10.00/day

The island council is also engaged in other commercial activities however, revenue from the above table generates a big portion of its yearly income. Despite the income generated, it is not enough on its own for the annual administration and development of the island and thus the TabSouth Island Council also relies heavily on central government to assist in their annual budgets. These funds known as support grants vary from island to island, depending on not only the population but also other factors relating to the council workforce sizes and workload that the council has to carry.

## 5.5 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 enough money to start a small business or other income generating activities. 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 on each Island Council provides fund distribution, 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.

The table below illustrates the distribution of funds that have been made to TabSouth's Village Banks under this project. Altogether TabSouth has received to a total of \$28,169.01 (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 TabSouth in 2007 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.

TabSouth village banks, like those on the rest of the islands vary in their performances from poor to good performances while others have been closed down mostly due to misuse or a revolving village fund.

*Table 17: Village Bank share per village*

BANK NAME	KIRIBATI GOV'T FUND OF 1\$MILLION						UNDP GRANT OF \$90,000		
	1ST 75% SHARE			2ND 25% SHARE			3RD SHARE		
	PAID	DATE	DW NO:	PAID	DATE	DW NO:	PAID	DATE	DW NO:
Teitiawa	\$1,081.46	26/05/99	78/99	\$360.49	10/11/99	148/99	\$142.60	22/10/01	377/01
Iwate	\$4,298.10	26/05/99	78/99	\$1,432.70	10/11/99	148/99	\$566.75	22/10/01	377/01
Taina	\$2,675.92	26/05/99	78/99	\$891.97	10/11/99	148/99			
Tabwakeauea	\$6,447.16	26/05/99	78/99	\$2,149.05	10/11/99	148/99	\$850.15	22/10/01	377/01
Kairaken Nikutoru	\$2,717.51	26/05/99	78/99	\$905.84	10/11/99	148/99	\$358.35	22/10/01	377/01
Tebwaruaki	\$2,246.11	26/05/99	78/99	\$748.70	10/11/99	148/99	\$296.15	22/10/01	377/01
	\$19,466.26			\$6,488.75			\$2,214.00		

Source: RPD, MISA 2007

## 5.6 Remittances

With limited employment and income-generating opportunities, many people on TabSouth depend to some extent on remittances sent to them by relatives working in Tarawa or overseas.

Remittances from I-Kiribati phosphate miners working in Banaba and Nauru had dwindled to nothing when phosphate mining on Banaba went awry and Nauru ran out of mining areas. The general flow of seafarer's remittances into the country is continuous and has increased over the years with more and more engaging 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). The Norwegian Cruise Line (NCL) is also recruiting capable young men and women to work on cruise ships. However, data for this cruise line is not available as yet.

In the year 2000 the nearly 2,000 seamen working on foreign ships made remittance payments in excess of AUD10 million (USD7.6 million). At the end of 2005, 1,200 of the seamen were working for German shipping companies and making annual remittances of around USD5 million. NZAID supports the Kiribati Marine Training Center to ensure the competitiveness of Kiribati seamen in the international labor market. Seafarers are employed as general deck workers on German ships through SPMS while Japanese fisher employees are employed on 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).

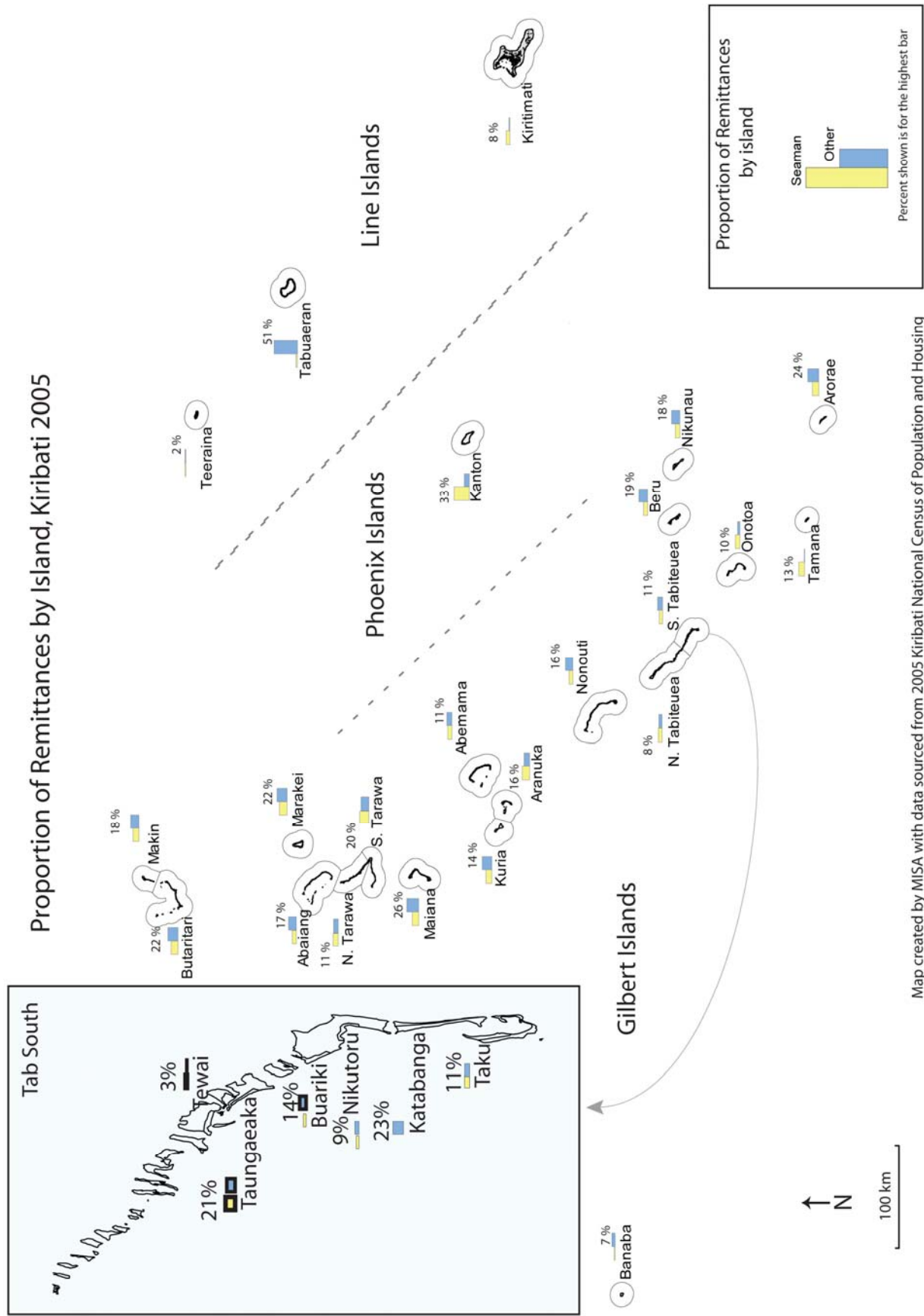
Whitley (1980) reported that the amount of remittance sent back to Kiribati in 1974 was AU\$800,000 with an additional AU\$200,000 brought back in the form of leave pay at the end of contracts. Remittances grew to \$1.3 million in 1979, \$9.7 million in 1998 and \$12.29 million in 2003 (MFED 1987). Of 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.

Overseas remittances to outer island folk are sent by the ANZ bank as initially sent by family workers on German, Japanese sea vessels or other parts of the globe. Not all remittances sent to the outer islands are from seamen. There are also local remittances sent in from relatives working for the Government of Kiribati in the capital of South or elsewhere on the other islands and whereas remittances from seamen are sent every month in a fixed amount, Government employed relatives send money whenever they can or when requested from relatives on the outer islands.

Transfer of money in and out of the island is done through telmo thus does not come or go in the form of cash. However, there are those bring in and take out cash but the main contributors to the flow of cash on the outer islands other than the Government and Council are the floats, big companies and wholesalers such as Boobootin Kiribati Limited (BKL) and Taotin Trading Company (TTC). TTC has its own shipping vessels that call at most islands supplying its branches on the island and taking back the cash profits sometimes leading to cash flow difficulties on the island. Councils are now putting in cash flow systems where such big earning companies have to also telmo out their earnings instead of shipping the cash back to headquarters.





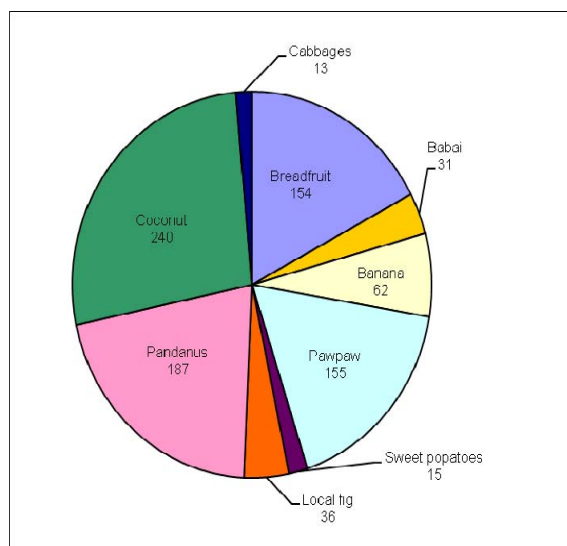
Map created by MISA with data sourced from 2005 Kiribati National Census of Population and Housing

## B. ECONOMIC ACTIVITIES

### 5.7 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 in TabSouth 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. Generally, the latter scheme (coconut replanting or rehabilitation) has not been 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. Still, the islanders are happy to turn their barren lands over to the Division of Agriculture to be replanted in this scheme.

*Figure 22: Access to food trees and vegetables 2005*

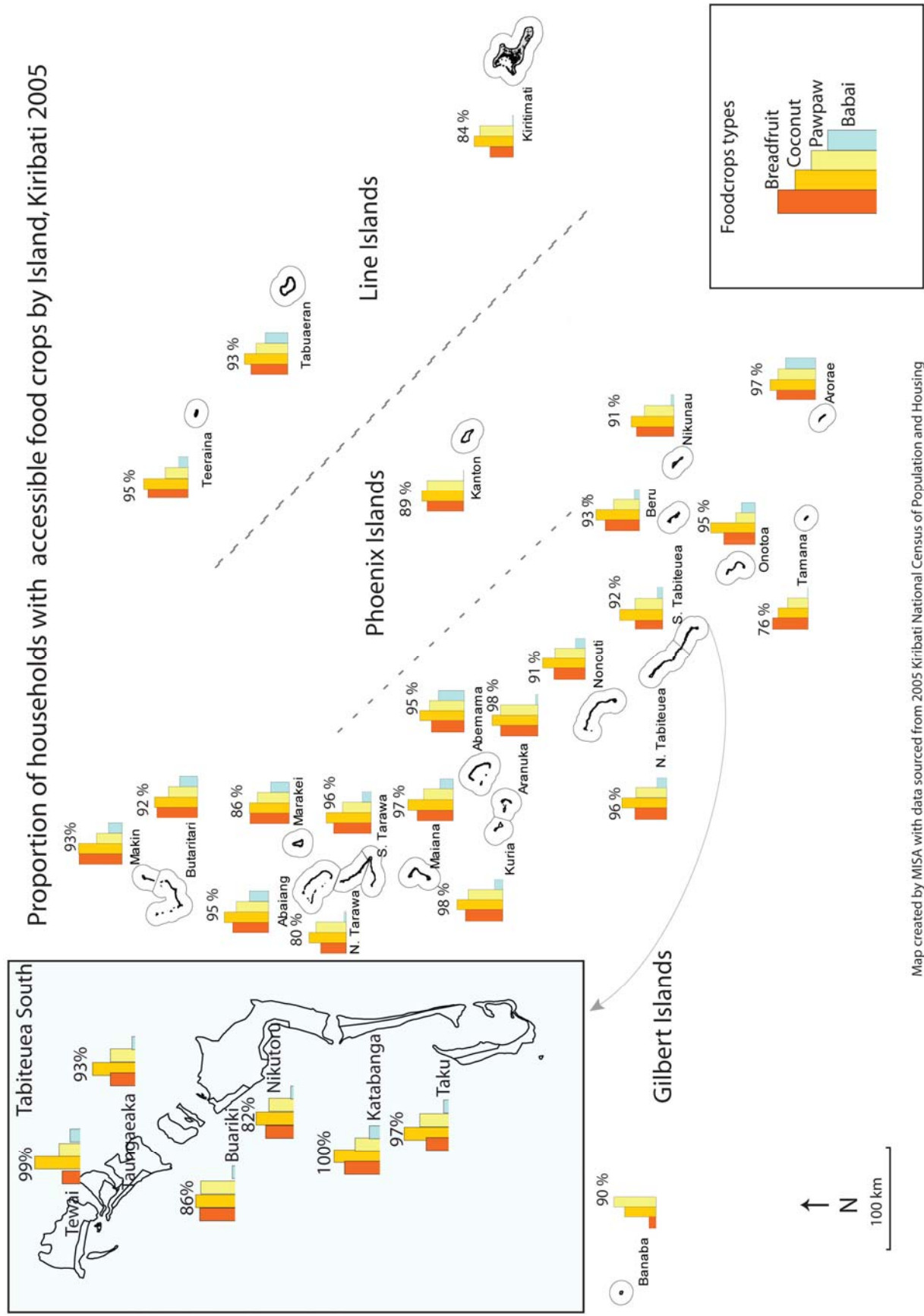


Statistics displayed in the chart (left), shows that of the 262 households on TabSouth, 240 (92%) have access to coconut trees, 187 (71%) pandanus, 154 (59%) breadfruit, 155 (59%) pawpaw, 62 (24%) bananas, 31 (12%) bwabwai, 36 (14%) local fig, 15 (6%) sweet potatoes and 13 (5%) cabbages. 'Access' is defined as those food trees that are located near households 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 or in other parts of the island. TabSouth, like TabNorth is made up of a lot of islets that makes access to other lands on the islets quite difficult. The fact that not all households have access to food tree and vegetables is mostly

due to not everybody owning a garden patch and others who are there as seconded island council staff or visitors. These normally do not have access to most coconut and trees on the island except for those that are next to their allocated homes/houses.

Pawpaw throughout Kiribati has generally been popular in taste, 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. 'Bwabwai' is strictly kept for ceremonial occasions, a tradition of the southern islands, and cultivation methods are also closely guarded secrets that are inherited from the parents or gifted from others. Pandanus on the other hand are abundant in variety and amongst these, there are certain pandanus varieties that have assigned uses for pandanus paste ('tangauri' and 'tuae'), pandanus powder ('kabubu'), weaving and cigarette paper.

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



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

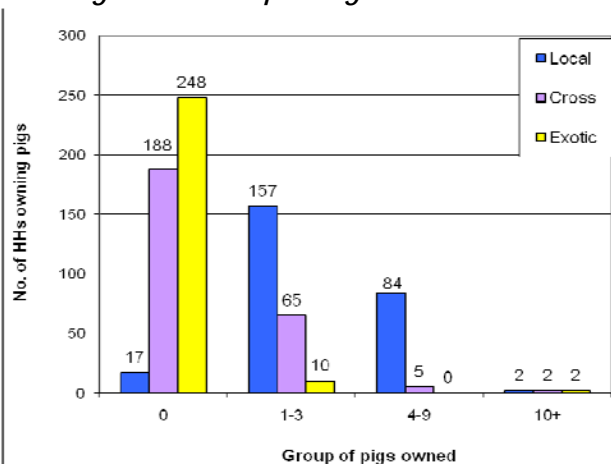
from 'bwabwai' beetle has been solved through strict regulations of 'bwabwai' being taken from South Tarawa to the outer islands. It falls upon the Agricultural Assistant and his nurseryman to inspect all visiting aircrafts and sea vessels to check that 'bwabwai', bananas and exotic plant life are not brought to the island without proper quarantine clearances and certificates. The Department of Agriculture is responsible for protecting the country and islands from introduced tree and animal pests and diseases. Recently in 2008, promotions have been broadcasted for strict quarantine measures regarding avian influenza and red ants and swine influenza in early 2009.

Due to the physical make up of the islands, traditional agricultural activities are limited to cutting toddy, cultivation of bwabwai, planting of breadfruit, bananas, pawpaw, 'te bero' and pandanus, production is far too limited for export. The cultivation of bwabwai used to be and still is, one way of maintaining traditional status in the community. They form an important symbol that has to be included in social functions. Pandanus paste or 'tua'e' and pandanus flour of 'kabubu' are traditional food reserved particularly for visitors, community functions and before traders came, for long periods of drought. Breadfruit on the other hand, is planted and fruits are used as part of the daily diet when it comes into season. Unlike coconuts and other tree crops, breadfruit is the most vulnerable to drought and thus has to be kept near homes for management during drought times.

## 5.8 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.

*Figure 23: Group of 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. Five exotic breeds (Duroc, Landrace, Berkshire, Large White and Tamworth) have been imported into the country by the Division of

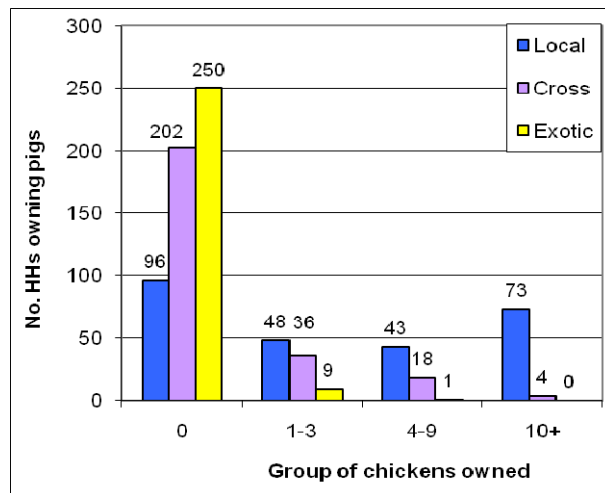
Agricultural, bred and distributed throughout Kiribati for crossbreeding purposes.

920 pigs comprising 753 (82%) local, 133 (14%) crossbreds and 34 (4%) exotic pigs existed on the island in 2005. A few 17 (7%) of the 262 households did not own any one local pig at all while a great more number of households also did not own the cross and exotic breeds. These exotic breeds are initially



dependent on the Division of Agriculture supplying them to the outer islands and the exotic breeds to thrive and succeed in mating with the small local female pigs.

Figure 24: Group of Chicken owned



Chickens on the other hand totaled 1,290 and comprised 1,071 (83%) local, 203 (16%) crossbred and 16 (1%) exotic chicken. When compared to households owning pigs, the left chart shows that a lot more households do not own chickens particularly cross and exotic breeds.

Chickens are free-ranged and are also kept domestically for households own meat protein supplements and, like pigs, for special occasions. As free range chickens, they inter-mingle with chickens from other households resulting in 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. 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 and liable with fines or confiscation of the pigs. The confiscated pigs can be released to owners at a fee of \$10.00 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 their 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.

There are no known diseases specific to TabSouth livestock and factually, the pigs and chickens alike in Kiribati are free from infectious and dangerous diseases such as the well known avian influenza in chickens or swine influenza in pigs etc but local pigs 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 to for exotic chicken breeds to live long on the islands. The local breeds are however immune to botulism. 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, gardening and livestock 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 – and only when the number of animals to be sterilized justify the expenses to be incurred.

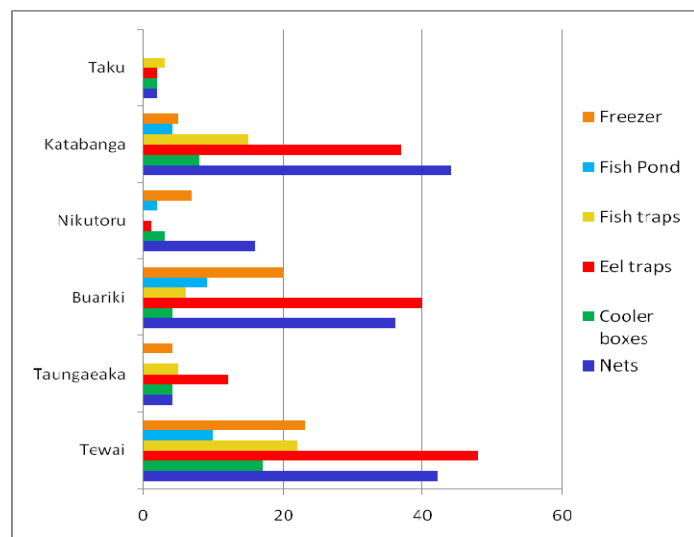
Needless to say that were there available markets for pork in South Tarawa, the people on the outer islands including TabSouth would be the richer by pig exports.

## 5.9 Fisheries

The ocean is Kiribati's most valuable resource that is full and rich in marine resources, some of which still have to be explored. As a country with more ocean than land, it is not surprising that marine resources have never ceased to provide for the people. Over the years, alternative income generating means have been introduced to the islands of which the most recent is sea cucumber export. In 1986 seaweed farming was taken up as a commercial activity on lagoon islands of Kiribati including TabSouth but just as all good things come to an end, this too came to an end when the Seaweed Headquarters was moved from South Tarawa to Kiritimati in 2007. Pearl farming, initiated in Abaiang is also now being tried in other islands such as Butaritari and Onotoa.

*Figure 25: 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 IKiribati and special methods are used for certain species or groups of species. Fishing 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. The



above chart shows the number of households and fishing items owned for the varied fish catches.

Nevertheless, adjoined with TabNorth, TabSouth also has a diversity of marine resources in the lagoon and reef that allows the women and even children to engage in fishing activities especially net fishing, collecting of shellfish and sea worms in the reef and lagoon flats during low tide.



Fishing is a daily activity for the men. Council fishing byelaw on Makin prohibits fishermen from catching flying fish in the offshore waters close to land.

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, etc.)
- the provision of affordable fishing gear.



In an 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 later transportation to markets in South Tarawa.

## 5.10 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.

Handicrafts are generally the same for the islands of Kiribati with differences here and there. These handicrafts comprise:

1. Mats
2. Fans
3. Baskets
4. Assorted models (swords, canoes, 'buias', eel traps etc)
5. Canoes

## C. INFRASTRUCTURE

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.

The most predominant infrastructures on the outer islands are the churches, mwaneabas and schools

(primary, junior secondary and senior high). Nevertheless, TabSouth also has two bridges, one of the longest causeways in the country and is also accommodating the Southern Gilbert Hospital. Construction of the hospital has been completed and handed over to the Government, however, there are still minor improvements and adjustments to be made before it is opened. A prison once existed on the island during colonial times but this is not used anymore and in dire need of renovation.



All inhabited atolls apart from Banaba and Kanton, have runways that are not paved except for the Bonriki International Airport in Tarawa and Cassidy Airport in Kiritimati. Seaports on the other hand are of poor standard on the islands and generally comprise a blasted channel and a concrete platform otherwise, it is just a channel by itself.

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 the "Support Grant" to enable them to perform this role.

There are 7 causeways on the island as follows:

1. Buatua islet to mainland Tewai village
2. Tewai to Taungaeaka
3. Taungaeaka to islet to first big islet south of it
4. Islet south of Taungaeaka to smaller islet south of it
5. Small islet to Buariki
6. Nikutoru to Katabanga
7. Katabanga to Takuu (broken)

The Katabanga Takuu causeway has not been fixed since it broke and people wanting to access Takuu or Katabanga have to either walk during low tide or travel by canoe/boat. All these causeways are the responsibility of the Government as managed by the TabSouth Island Council.

## 5.11 Transportation

### 5.11.1 Land Transport

The main transport infrastructure on the outer islands including TabSouth is made up of long stretches of gravel roads that run all the way along the length of the islands. In some islands such as Tamana, Arorae, Nikunau, Kuria and Makin, the road also runs all the way around the island. To assist in the maintenance and repair work on the road, the central government has provided a small backhoe and dipper truck to the outer island Councils, but these have now become problems of the Councils to maintain. Most are not working already.



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 incur very high costs to transport people and

equipment from island to island. It has been quite a while now since the roads on the outer islands have been repaired.

The popular household means of land transport on the island are bicycles and motorcycles as these vehicles are cheaper when compared to car or trucks and most suitable in accessing other parts of the island that cars/trucks would otherwise not be able to get to. The main road that runs along the length of the island is wide enough for the bigger vehicles and the network of paths that run from it into the bush are too narrow for them. In a lot of cases, there are hardly any pathways thus making motorbikes and bicycles the most suitable.



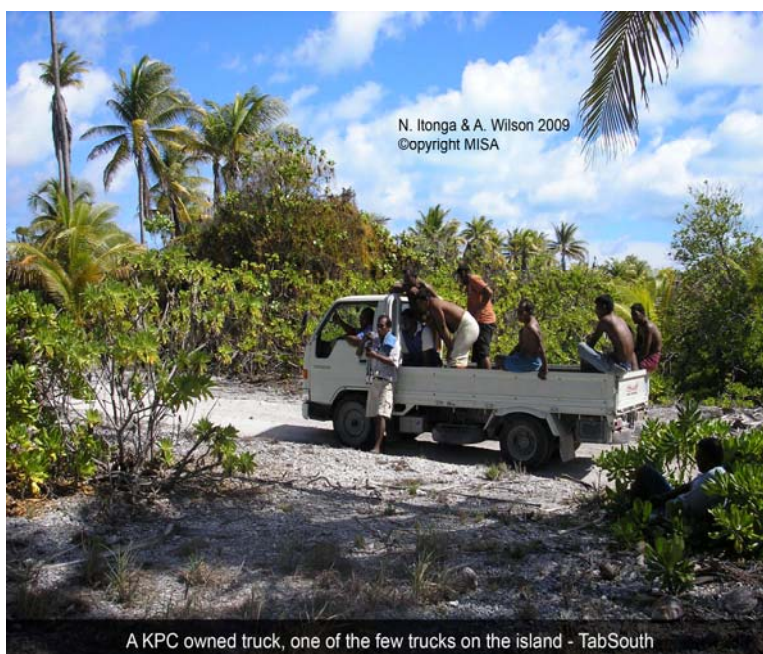
*Table 18: Distribution of household ownership per vehicle*

Villages	Total HH	Own Car	Own Motorcycle	Own Bicycle
Tewai	69	0	5	48
Taungaeaka	28	0	4	14
Buariki	84	0	13	69
Nikutoru	33	0	6	26
Katabanga	13	0	0	13
Taku	35	0	1	26
<b>Total</b>	<b>262</b>	<b>0</b>	<b>29</b>	<b>196</b>
<b>Percentage</b>		<b>0</b>	<b>11</b>	<b>75</b>

*Source: 2005 census, National Statistics Office*

The left table shows that the most common form of transport is the bicycle with 196 (75%) of the households owning bicycles while 29 (31%) own motorcycles. The total count however for bicycles on the island in 2005 was 241 meaning that several of the households owned more than 1 bicycle. Owing to the difference in costs, bicycles are more affordable or preferable for people on the island

while motorcycles, however convenient, are not that popular mostly due to the higher cost. Bicycles are also easier and cheaper to maintain compared to motorcycles. There are also trucks on the island that are owned mostly by the island council and to a lesser extent the churches. However, one car was seen on the island in 2009 so as lifestyles change, cheaper cars go on the markets and incomes increase, cars may soon increase on the island, though it may be a far off change.

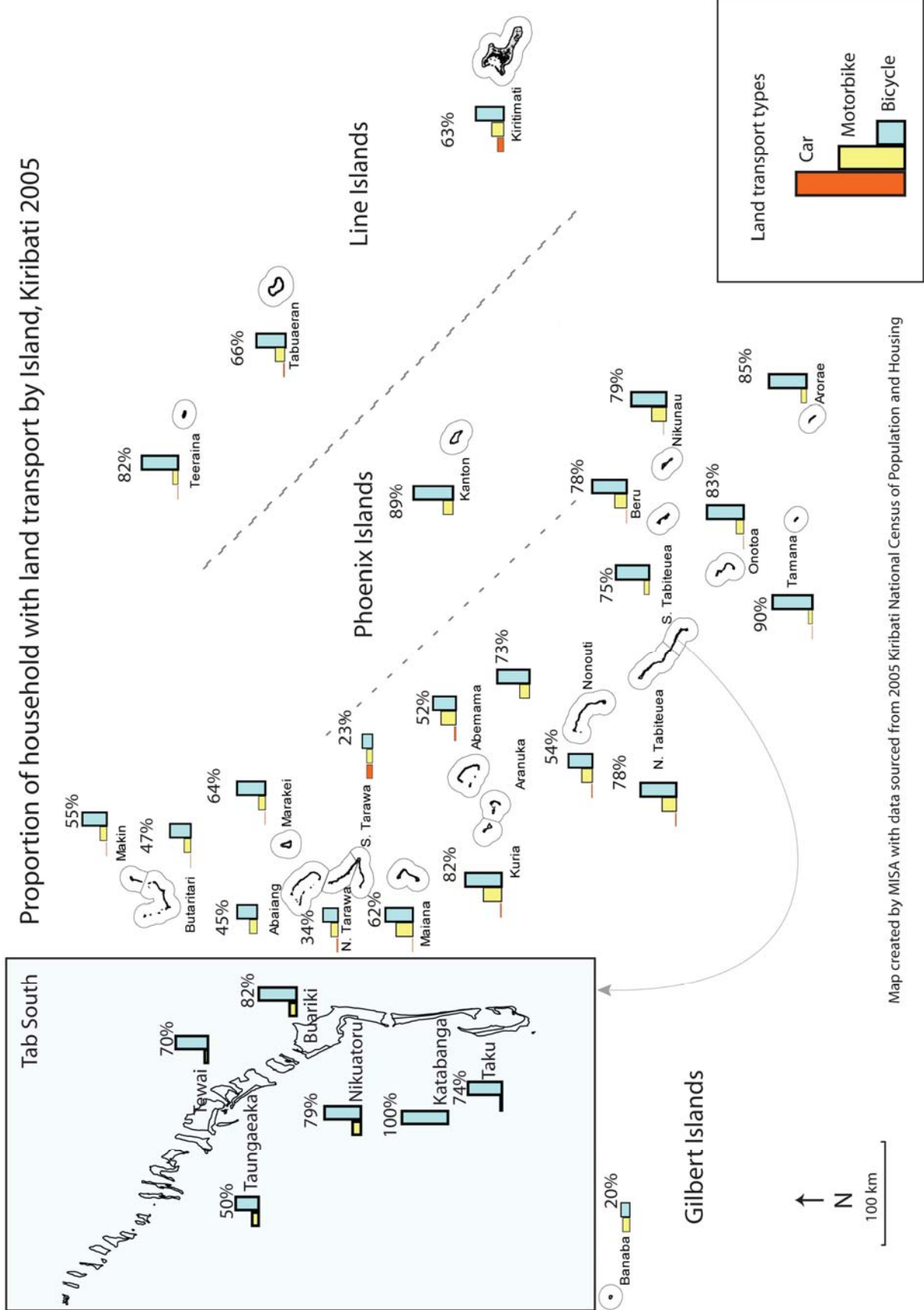


Council trucks include those donated by Taiwan to all the outer islands to transport JSS students. As such, the council transports the JSS students from all over the mainland to and from the school. Transport fares are also collected from the students or rather the parents and this goes into the funds to maintain the trucks.

As an island made up of several islets, TabSouth depends to a great extent on causeways to link these islets particularly the habited ones. Mainland TabSouth comprises the villages of Buariki and Nikutoru and the rest of the villages are all separated by channels and

sometimes with several islets in between accounting for the high number of causeways on the islands.

# Proportion of household with land transport by Island, Kiribati 2005



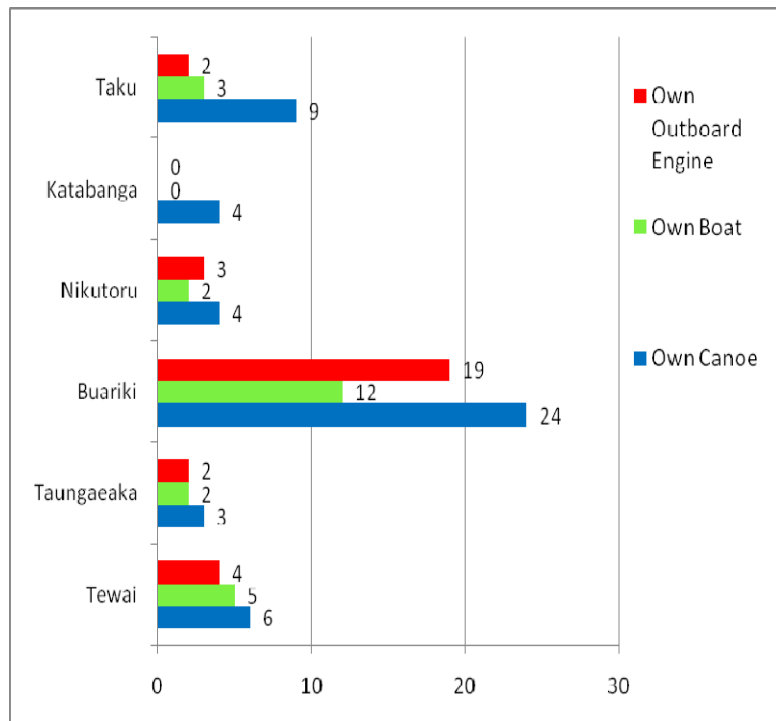


### 5.11.2 Sea Transport and Shipping

Kiribati is a country 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 food and material 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.

*Figure 26: Sea Transport and Shipping*

It is easy to travel to and from TabNorth from TabSouth and though it is also possible to walk between the islets during low tide, it would take hours and days thus canoes, boats or aeroplane are the main means of travel now between the islets of TabSouth and TabNorth. Still, there are those who still prefer to walk to the islets, camp there and return later. This is done mostly when one is going to cut copra on lands on the islets. Canoes and boats are therefore not only used for fishing but also provide the main means of inter-island transport between mainland villages and the islets not yet connected by causeways. Statistics further displayed in the above chart



and following table, shows that canoes are still more commonly owned than boats. The total number of boats matched the number of households owning such sea vessels while some households owned more than one canoe.

According to records shown in the following table, the total number of canoes in 2005 was 61. 43% of these can be found in the capital village of TabSouth, Buariki, 30% are owned in the village of Takuu while the rest can be found throughout the other 4 villages. Boats totaled 24, again, with most owned by those in the village of Buariki. There were also 10 more outboard engines than boats but then it is quite common for boat owners to have more than one engine to power their boats.

Table 19: Total number sea vessels in TabSouth

Villages	Total HH	Total Canoe	Total Boat	Total Outboard Engine
Tewai	69	6	5	5
Taungaeaka	28	3	2	2
Buariki	84	26	12	21
Nikutoru	33	4	2	3
Katabanga	13	4	0	0
Taku	35	18	3	3
<b>Total</b>	<b>262</b>	<b>61</b>	<b>24</b>	<b>34</b>
<b>Percentage</b>		<b>23</b>	<b>9</b>	<b>13</b>

### 5.11.3 Air Service

The need for inter-island travel is served either by oceangoing vessels or by small aeroplanes. Air Kiribati is the state-owned airline based in the capital Tarawa which provides domestic flight services to all islands in the Gilbert group with the exception of Banaba.

The airstrip is located on mainland TabSouth in the village of Buariki. The maintenance of the airstrip is the responsibility of the Civil Aviation Authority based within the Ministry of Transport. The Island

Council looks after the air-terminal while the agent for Air-Kiribati is responsible for reservations, ticketing, check ins and also maintains communications and safety for airline crew and passengers.

Due to their remoteness, the Southern islands including Tabiteuea South have only one flight a week while there are more flights to the central and northern islands in a week. The flight schedules comprise flying to two islands at a time and the TabSouth flight also carries passengers to the island of Onotoa. Owing to the high airfares to the remote southern islands, weekly flights to and from the islands are always not full compared to islands in the central and the northern.

Table 20: Air Service

Day	A/C	ROUTE	ETD	ROUTE	ETA
Tuesday	ATJ	Tarawa	0800	TabSouth	0900
		TabSouth	0820	Onotoa	0935
		Onotoa	1005	Tarawa	1115

Source: Air Kiribati, Bairiki 2008

Peak flights are generally during the school holidays, Easter, Independence celebrations, Christmas, and New Year holidays. During these times, the TabSouth flight can be full by students and Christmas



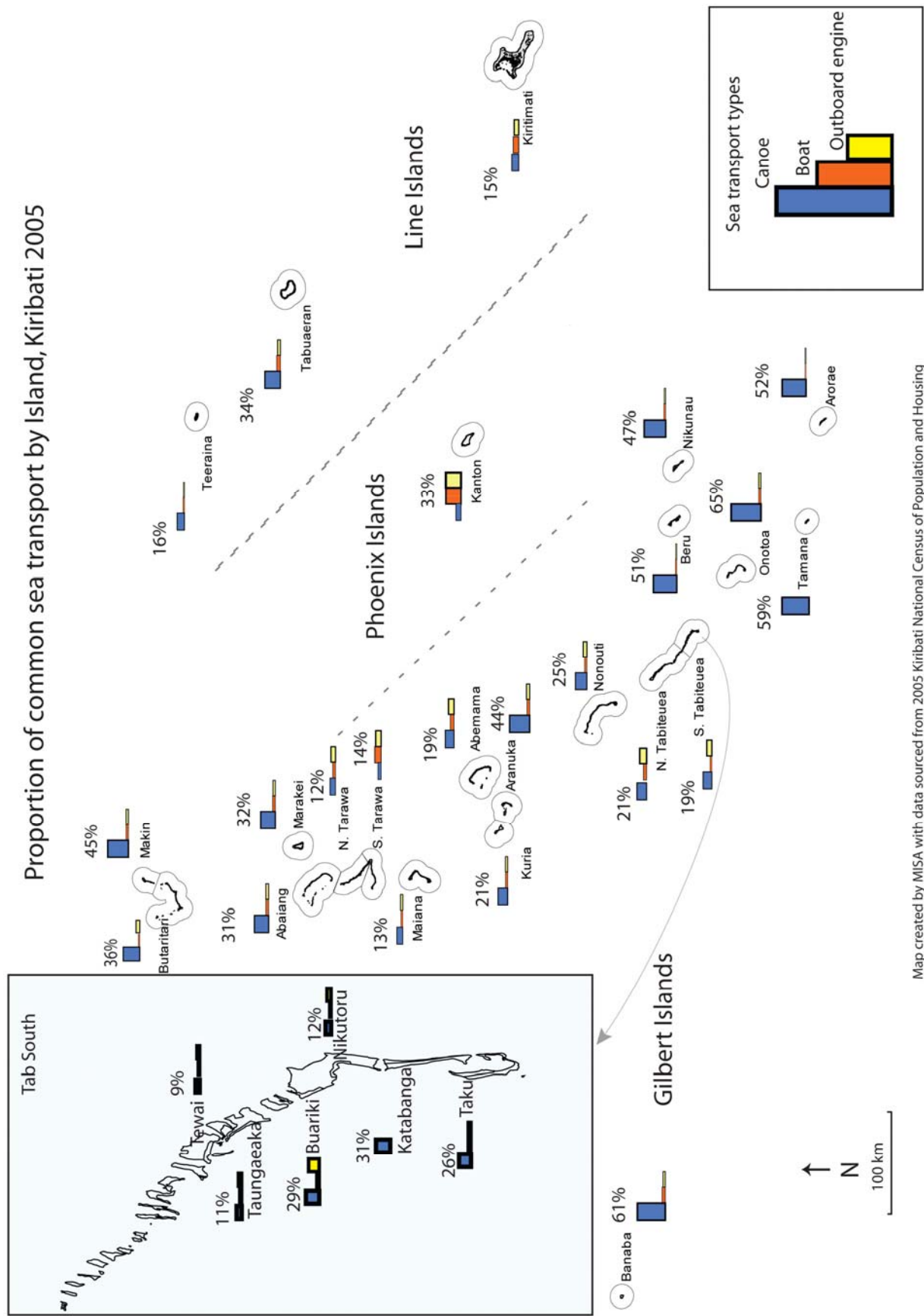
returning residents. There is a 15kg baggage and a 5kg hand carriage allowances while excess baggage during flights costs double the normal freight cost of \$1.65/lb. Air cargo baggage is generally cheaper (\$0.75/lb perishable goods and \$1.55/lb un-perishable goods) than excess flight baggage for all goods.

Infant, student and child airfares are excepted as they are still dependent on senior family members whereas tertiary/university students have reached independent age and therefore are included in the adult fare group. The fares vary, depending on the distance to the island. These airfares were recently increased in August 2008 after a trial of period of nearly a year of reduced airfares. During the trial period of reduced airfares, there was a definite increase in the use of the air-service but was not profitable in the long run for the airline and thus the airfares were again increased.

Early in 2009, a new private owned airline started operating initially with flights to the central and northern islands of Gilbert group. The *Coral Sun Airways* cannot as yet service the southern islands as it does not have a refueling point yet such as TabSouth for the Air Kiribati domestic line. The competition could be one that Air Kiribati needs to get back and running on its own feet.

*Figure 21: Air Fare*

AIR KIRIBATI LIMITED AIR TARIFF EFFECTIVE 15TH AUGUST 2008	
ISLANDS	ADULT
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
TAB NORTH	\$120.00
TAB SOUTH	\$135.00
ONOTOA	\$150.00
BERU	\$160.00
NIKUNAU	\$170.00
TAMANA	\$210.00
ARORAE	\$230.00



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

#### *5.11.4 Issues facing Transportation*

The scattered nature of the islands over a wide span of ocean has ever been a hindrance in inter-island travel that has been greatly assisted initially, with the introduction of canoes, bicycles, motorcycles, trucks, cars, and aeroplanes. The sea, land and air vehicles now provide the only means of travel transportation between and on the islands.

Issues fall more on the airfare costs to and from the islands that are deemed costly. Most would have travelled by plane were it cheaper but presently travelling by boat is more popular even though it would mean being seasick and in cramped conditions for the whole trip. Bicycles are also amongst the imported items/products whose prices are controlled by the Government besides flour, rice, sugar and tobacco. It would be a happy day for all on the outer islands were motorbikes and boats were to also be included in these items whose prices are controlled.

If there were to be any land transport issues on the outer islands, it would have to be the state of the roads and the cost of land vehicles, particularly motorbikes.

### **5.12 Communication**

The fragmentation of the islands 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 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. TabSouth, like other islands, is visited at least once a month by a KSSL ship, bringing replenishments of food, fuel and other assortments of supplies and loading copra etc.

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 especially when it comes to marine and to a lesser extent, land resources. The northern islands of the Gilbert group are fertile and have great potential for agricultural development while those in the central and southern including TabSouth have the great potential of being the greatest fishers of men.

Half of the outer islands can be reached by integrated VHF links while the remaining islands have no permanent telephone links. 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 based at the Island Council headquarters on the islands. 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:

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

3. 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.
4. 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. The Government however has not wavered from trying to upgrade the systems on the outer islands.