



# 14. Beru



OFFICE OF TE  
BERETITENTI

Phone: +686 21183

E-mail: [islandreports@ob.gov.ki](mailto:islandreports@ob.gov.ki)

Website: [climate.gov.ki](http://climate.gov.ki)

Updated 2012 by Office of Te Beretitenti & T'Makei Services

Based on a 2008 prepared by the Ministry of Internal & Social Affairs with financial support from The United Nations Development Program & the Kiribati Adaptation Project, and Technical Assistance from the Secretariat of the Pacific Community

# CONTENTS

14.	Beru	1
	SUMMARY OF MAIN SOCIOECONOMIC INDICATORS – BERU.....	1
	Physical features .....	2
	Population .....	2
	Land and marine resources .....	5
	Land resources .....	5
	Water resources.....	6
	Marine resources.....	6
	Environment.....	6
	Energy.....	7
	Education .....	7
	Health.....	8
	Island Economy .....	8
	Copra.....	9
	Agriculture .....	9
	Transport.....	10

SUMMARY OF MAIN SOCIOECONOMIC INDICATORS – BERU

	Beru					All other outer islands					South Tarawa including Betio					All Kiribati				
	2005	2010				2005	2010				2005	2010				2005	2010			
Population (Census)	2,169	2,099				50,053	50,777				40,311	50,182				92,533	103,058			
Percent of national population	2.3%	2.0%				54.1%	49.3%				43.6%	48.7%				100%	100%			
Land area, km <sup>2</sup>	17.65	17.65				692.93	692.93				15.76	15.76				726.34	726.34			
Population density, people per km <sup>2</sup>	123	119				72	74				2,558	3,184								
Population growth			2005-10					2005-10					2005-10					2005-10		
Annual rate of growth of population, %			-0.7%					0.3%					4.4%					2.2%		
	<15 years	15-30	30-45	45-60	over 60	<15 years	15-30	30-45	45-60	over 60	<15 years	15-30	30-45	45-60	over 60	<15 years	15-30	30-45	45-60	over 60
Population by age group	699	525	401	301	173	19,366	13,399	9,102	5,939	2,971	17,119	15,784	8,959	5,813	2,507	37,184	29,708	18,462	12,053	5,651
Population by age group, %	33%	25%	19%	14%	8%	38%	26%	18%	12%	6%	34%	31%	18%	12%	5%	36%	29%	18%	12%	5%
Number of private households	462	449				8,292	8,889				5,245	6,705				13,999	16,043			
Number of persons in private households	2,022	1,991				47,436	48,719				39,186	49,250				88,644	99,960			
Average household size	4.4	4.4				5.7	5.5				7.5	7.3				6.3	6.2			
	Labour market activity, people 15+					Labour market activity, people 15+					Labour market activity, people 15+					Labour market activity, people 15+				
	Cash work - formal	Cash work -market oriented	Voluntary or subsistence work	Unemployed	Not in labour force	Cash work - formal	Cash work -market oriented	Voluntary or subsistence work	Unemployed	Not in labour force	Cash work - formal	Cash work -market oriented	Voluntary or subsistence work	Unemployed	Not in labour force	Cash work - formal	Cash work -market oriented	Voluntary or subsistence work	Unemployed	Not in labour force
Labour force status	206	334	0	137	656	4,640	3,332	0	4,489	11,474	8,594	2,487	0	6,826	13,545	13,440	6,153	0	11,452	25,675
Labour force status %	15%	25%	0%	10%	49%	19%	14%	0%	19%	48%	27%	8%	0%	22%	43%	24%	11%	0%	20%	45%
	Education attainment, people 15+					Education attainment, people 15+					Education attainment, people 15+					Education attainment, people 15+				
	No school completed	Primary leaving certificate	Form 3 certificate	Senior secondary certificate	Post secondary study or qualification	No school completed	Primary leaving certificate	Form 3 certificate	Senior secondary certificate	Post secondary study or qualification	No school completed	Primary leaving certificate	Form 3 certificate	Senior secondary certificate	Post secondary study or qualification	No school completed	Primary leaving certificate	Form 3 certificate	Senior secondary certificate	Post secondary study or qualification
Education attainment	269	473	375	263	20	3,926	11,385	6,948	8,441	711	2,418	8,125	7,570	13,626	1,324	6613	19983	14893	22330	2055
Education attainment %	19%	34%	27%	19%	1%	12%	36%	22%	27%	2%	7%	25%	23%	41%	4%	10%	30%	23%	34%	3%
Literate in [te taetae ni] Kiribati %			2010					2010					2010					2010		
			90%					90%					93%					91%		

## PHYSICAL FEATURES

Beru is one of the southern islands in the Gilbert group. Its total land area is 17.63 sq.km, is 1.1 km at its widest point in the village of Tabiang, and 0.16 km at its narrowest at Weneete. It is about 13.7 km from end to end.

Beru has one main road that runs along the island that sidetracks into the bush and other areas of the island. These sidetracks are used for accessing lands and the side of the island if one so wishes, most of the reef/ocean side of the island as villages are placed along the lagoon side of the island.

The Island Council is located at Tabukiniberu with the medical centre next to it, along with the rest of the government facilities such as telecom, agriculture, fisheries, post office, banking etc.

There are four features of Beru that are of importance and interest:

- 'Nein Tabuariki': 'Tabuariki's lake' is located at the southern end of the island in the village of Taboiaki. This is where the edible algae can be found that accumulate and float in the lake and which the islanders harvest in mosquito nets for food.
- Te nei ni man: 'The lake of fauna' is located at the northern end of the island near the village of Autukia. During rainy seasons or when the climate is not that dry, the lake will be full of fish mostly the milkfish (*Chanos chanos*). During times of drought, the lake turns into a salt reservoir.
- Nuka causeway closes off the lagoon at the southern part of the island and joins the villages of Nuka and Teteirio. It has been standing for a couple of decades now resulting in quite a rich diversity of marine resources in the closed off lagoon.
- Kaariraia causeway closes off the lagoon at the northern part of the island and joins Tabiang with Weneete and Tebikeriki. This was a recent addition to the infrastructure of Beru and the closed off lagoon is now accommodating milkfish as introduced by the island council. Both closed off lagoons are under the control of the Beru Island Council.

## POPULATION

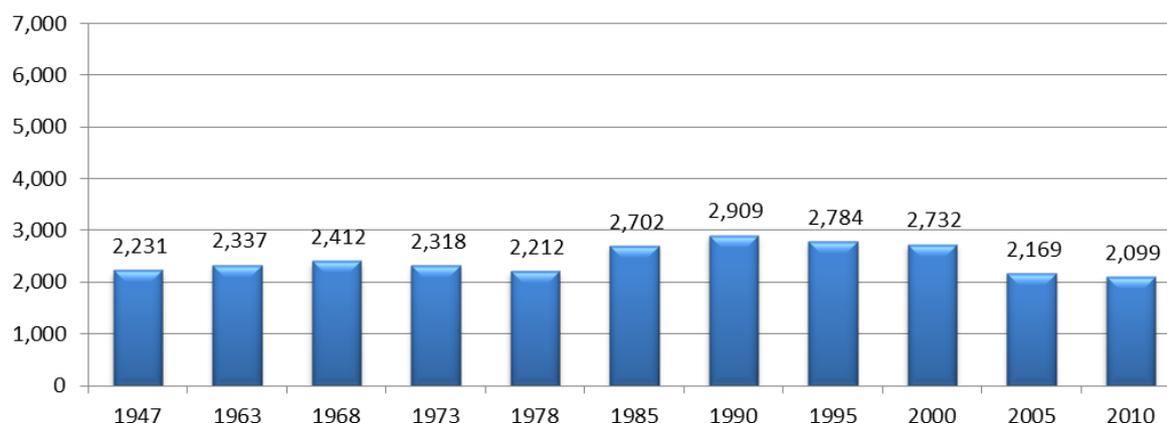
The population of Beru in the 2010 census was 2,099. Compared to the 2005 population of 2,169 and the 2000 population of 2,732, the population is declining. The population of Beru declined by -70 between 2005 and 2010, an annual population decline of 0.7%. Beru is one of nine islands in Kiribati with declining populations 2005-2010.

Beru has a combined land area of 17.65 square kilometers and a population (in 2010) of 2,099, giving a population density of 119 people per square kilometer. Compared with other islands in Kiribati, Beru is the 13th most densely populated island.

Figure 14-1: Map of Beru



Figure 14-2: Beru population 1947-2010



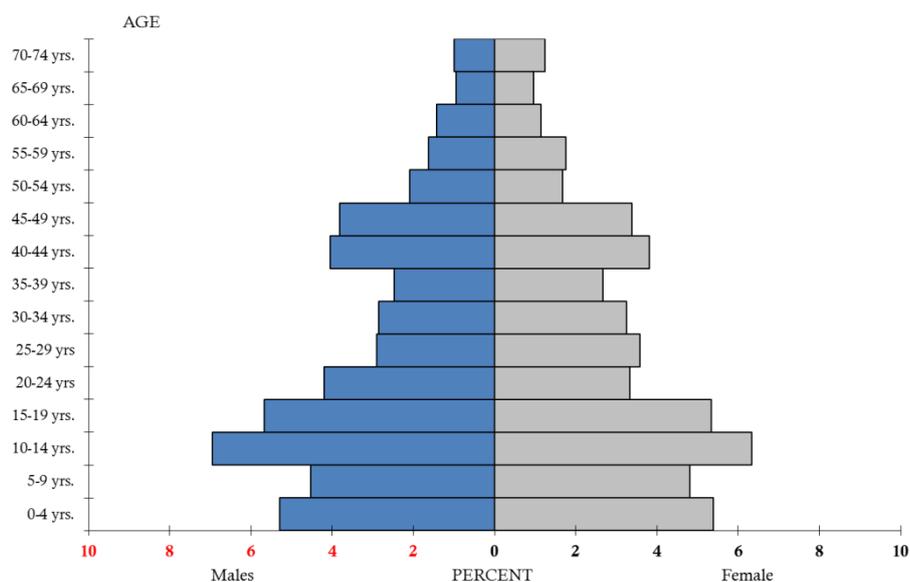
Source: Census 2010

The largest village on Beru is Nuka (“centre”), with 433 people or 21% of Beru’s population. Tabubukinberu, the location of the Island Council and the main medical clinic, actually has a very small population of only 64 people but is located close to the villages of Eriko, Teteirio, Nuka and the Hiram Bingham High School at Rongorongono.

Beru	Village	Population
	Autukia	188
	Tabiang	399
	Aoniman	123
	Rongorongono	190
	Nuka	443
	Teteirio	79
	Taubukinberu	64
	Eriko	259
	Taboiaki	354
<b>Beru total population</b>		<b>2,099</b>

Compared with other islands of Kiribati, Beru does not have a particularly large youth population; 33% of the population are under 15 where in some islands this figure is as high as 40%. The proportion of elderly people aged over 60 is higher than for Kiribati as a whole. The proportion of men and women on Beru is almost exactly 50/50, even in the older age groups where women generally outnumber men.

Figure 14-3: Age/ Sex distribution on Beru, 2010 Census



## LAND AND MARINE RESOURCES

### LAND RESOURCES

The island's main resources like the rest of the islands are its limited tree resources predominantly coconut trees, pandanus and its limited marine resources. Beru is not rich in its land fauna and comprises the common pigs, chickens, dogs, cats, birds and island insects such as rats, lizards, ants and crabs amongst others. The marine fauna has its share of fish, octopus, flying fish, tuna, sharks, lobster, and oil fish to name a few.

At the northern end of Beru are ponds/lakes called 'Nein Tabuariki'. In this lake, are found six different kinds of algae that are locally called 'bokaboka' but the proper name is 'meritaua'. According to the locals of Beru, there are six different types namely:

- *Takarokaron mataia uea*
- *Te makano*
- *Te ota*
- *Te taribi*
- *Te tanninga ni baa*
- *Te non*

These algae suspend in muddy water at different depths. The most commonly harvested ones are the 'red eyes of kings – *takarokaron mataia uea*' and the green one called '*te makano*'. Research done by Dr. Matakite Maata in the late 1990s and Dr. Temakei Tebano in early 2000 show that there are more than a dozen algal species in these ponds including harmful ones. Some species are commercially harvested in some parts of the world for food and cosmetics among other products.

## WATER RESOURCES

The 2010 census found that 71% of households use protected wells as their main source of drinking water, most of the remaining households use open wells as their main source of drinking water while a mere 2% mainly drink rainwater. The freshwater lens provides a reliable water supply throughout the year but is prone to brackishness in times of drought. For washing, households are about equally likely to use water from protected or unprotected wells.

## MARINE RESOURCES

### *Size of Reef/Lagoon Size*

Island	Reef (sq/km)	Reef base (sq/km)	Lagoon (sq/km)	Land (sq/km)
Beru	33.98	21	2.31	17.65

The villages of Tabukiniberu, Eriko and Taboiaki are conveniently located at the southern portion of the island where the ocean is very easily accessible from the villages. The lagoon is also abundant in fish and shellfish such as the 'kouamwara', 'nikabibi' and 'katura' amongst others making it easy for women to gather them for home use. There are also signs of declining fish numbers as indicated by bonefishfish fries are sold like sprats or *tarabuti*. There are also indications of crab and shellfish declining due to closure of inland lagoons at both ends of the island with causeways. Mangroves and iron wood trees are dying and disappearing as are benthic marine resources and fish which frequent those habitats. The negative and adverse impact of causeways on coastlines and marine resources will increase over time, some coastlines may disappear sooner or later and numerous finfish and shellfish will eventually disappear forever. Negative and irreversible impacts of causeways outweigh the short lived benefits derived from them.

Most households fish and collect shellfish from the lagoon, and on the ocean reef. The proportion of households venturing into the deep ocean to fish is relatively high at 40%.

Issues facing fishing and development of marine resources include the following:

- Lack of fishing equipment
- Remoteness of the island makes it hard for them to access fish markets in South Tarawa
- Absence of an ice-plant has made salting, their only way of preserving fish
- Depletion of ocean resources in the nearby ocean area (sea cucumbers)

## ENVIRONMENT

The most threatening environmental issue on the island is soil erosion, and flooding of land during high sea surges. Other issues also exist in the form of safe dumping of rubbish and lack of proper sanitation facilities that will not affect the water lens.

Drought is an ever-present threat to the Southern islands of Kiribati including Beru. Drought kills off land vegetation and where it does not, the fruits are affected in size and thus production. Wells providing the main source of water for the islanders turn brackish.

For the most part, coastal erosion appears to be mostly linked with aggregate mining for construction purposes such as housing, road, causeways, and land reclamation activities. To some extent seawalls appear to contribute to coastal erosion as well.

A list of environmental and climate change issues on Beru is included at the end of this report, and further information is available in the 2008 Beru Island Profile.

## ENERGY

Firewood is never an issue on the island due to its limited population and woodland that is abundant with drought-affected trees, dying and drying up. Together with firewood, people still use kerosene stoves especially during rainy days or functions. Kerosene, together with other fossil fuels are imported and distributed to all the outer islands by the Kiribati Oil Company (KOIL). In 2011, Beru was supplied with 93,600 litres of unleaded petrol (bentiin), 20,400 litres of diesel and 14,400 litres of kerosene.

## EDUCATION

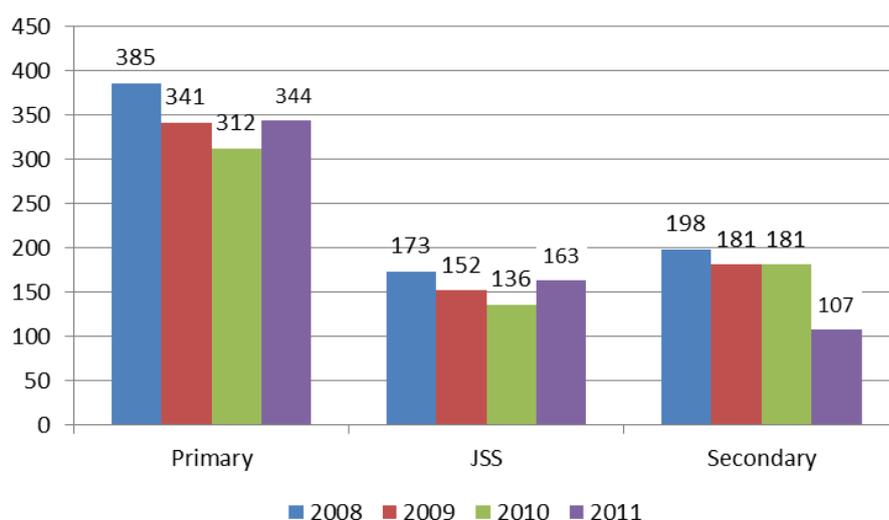
Beru has three primary schools which are strategically located at the most convenient locations for several villages as each village does not have primary school of its own. Namon Primary School is located in Tabiang and accommodates children from the villages of Autukia, Tabiang and Aoniman. Tebubutei Primary School is located in the village of Nuka and accommodates children from Rongorongo, Teteirio and Tabukiniberu while Tebono Primary School is located in Taboiaki for the Eriko/Taboiaki children.

Table 14-1: Beru primary school enrollments

Beru	No. of Pupils			No. of Teachers		
	2011		Total	2011		Total
	F	M		F	M	
<b>Namon Primary School</b>	61	63	<b>124</b>	3	3	<b>6</b>
<b>Tebono Primary School</b>	61	69	<b>130</b>	4	1	<b>5</b>
<b>Tebubutei Primary School</b>	45	45	<b>90</b>	4	0	<b>4</b>
<b>Total</b>	<b>167</b>	<b>177</b>	<b>344</b>	<b>11</b>	<b>4</b>	<b>15</b>

Beru JSS is located in Nuka for equal access by students from all over the island. Hiram Bingham High School, operated by the Kiribati Protestant Church, is located in Rongorongo. Hiram Bingham is one of the oldest schools in Kiribati, having been established by the Reverend William Goward in 1900 as a national centre for the education of pastors and missionaries of the Kiribati Protestant Church; it is now a boarding school offering Form 4-7 education. Between 2008 and 2011, enrollments at Hiram Bingham High School have fallen, but primary and JSS enrollments are stable.

Figure 14-4: Beru school enrollments 2008-2011



## HEALTH

There are three health centers on the island namely, Temaraa, Namon and Aonnati. The Medical Assistant is the most senior Medical Officer on the island and is stationed at the main health center on the island located at Temara. Nursing aides are recruited by the Beru Island Council and their responsibility is to assist in the nurses with community health activities and medical services as necessary. Namon center is provided with one trained nursing officer and three nursing aides. Aonnati is also provided with one trained nursing officer and two nursing aides.

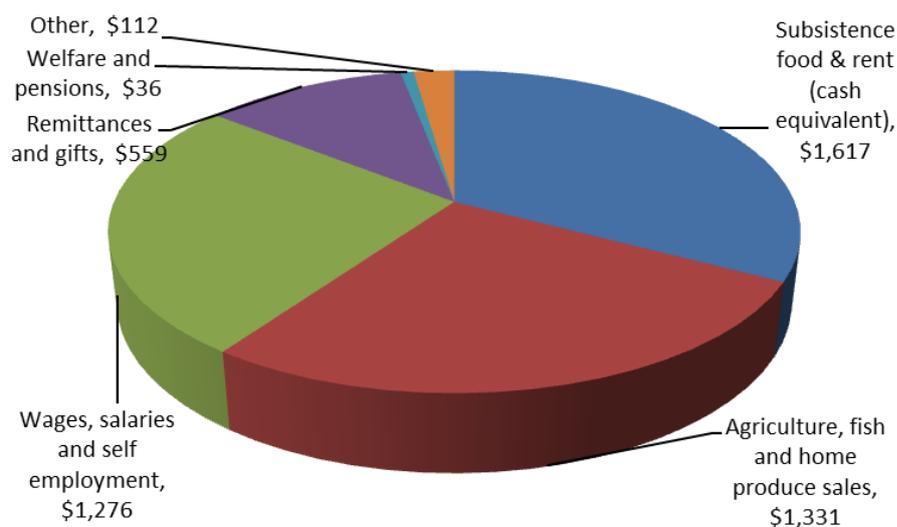
In common with other Southern islands, Beru has a high rate of smoking; 54% of adults (over 15) smoke “regularly” or “sometimes”. Around a quarter of all adults drink alcohol and a quarter drink kava (yangona). In practice this means half of all men as women rarely drink either alcohol or kava. This is close to the average for Kiribati.

The people of Beru apparently enjoy good health as they only visit a clinic, on average, 2.5 times each year and most of these visits are for non-serious illnesses. The most common serious illnesses are diarrhea, dysentery and fever. Night blindness, which is linked to vitamin A deficiency, is also relatively common on Beru.

## ISLAND ECONOMY

Beru is one of the islands selected to participate in the 2006 Household Income and Expenditure Survey, which gives a full picture of the different sources of income for households. The results for the Southern islands, including Beru, show that subsistence is still the mainstay of economic activity. Sales of “agriculture, fish and home produce” – mainly copra – is the only source of cash income for many households. , though wages and salaries are also important in the overall picture.

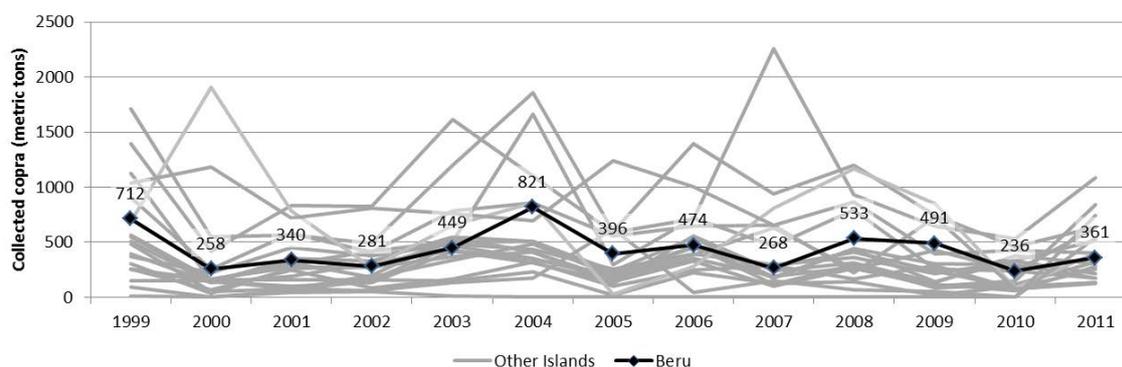
**Figure 14-5: Sources of income (both cash and subsistence) for Southern Gilbert islands, 2006**



## COPRA

Like the other Southern islands of Kiribati, other than fishing, copra cutting is the mainstay of the people on Beru.

**Figure 14-6: Copra production (collected copra), Beru 1999-2011**



Being an island vulnerable to droughts, the people over the years learned to harvest and cut copra according to their needs, though copra production fluctuates over the years with the times of drought and good seasons. The best year of production for Beru was in 2004 when their production reached a tonnage of 821 bringing in an income of \$410,500. On the other hand, its worst year of copra production was in the year 2000 when its annual production was 258 tonnes that brought an income of \$116,100. In late 2011, copra prices were increased to \$0.80 per kg by Government, although the actual value of copra on the international market is significantly lower than this.

## AGRICULTURE

Agricultural activities are greatly hindered by drought at times. The number of households growing cabbage or sweet potato in Beru is very low compared with other islands, and even

pawpaw and banana can be difficult to cultivate. Almost all households keep pigs, and most also keep chickens.

An agricultural advisor works on Beru to assist with provision of seedlings (coconuts) and breadfruit cuttings, and coconut replanting schemes, provision of pigs and chickens, and animal health schemes.

## TRANSPORT

Land and sea transportation on the island is not an issue as the Beru Island Council has a truck and people have their own pushbikes and motorbikes. The council and individuals also have their own canoes and boats which are used for fishing and for transportation between the villages.

The issues lean more toward transportation to and from the island for the islanders, and also for visitors and cargoes and foodstuff and the high cost of pushbikes and motorbikes.

Air Kiribati flies to Beru weekly on a Monday, but the cost of an airfare to Tarawa, at \$160, is high in proportion to the low cash incomes on Beru. Boat fares are less expensive but it is a long trip and the boat services do not run to a published schedule.

Table 14-2: Environmental and Climate Change issues on Beru identified by Beru participants at the National Summit in May 2011

ISSUES	PROBABLE CAUSE/S	IMPACT on SOCIETY	REMEDIAL ACTION	SUSTAINABILITY (EFFECTIVENESS)
Water	-drought	-kills vegetation  -fruits are affected in size -decrease in production thus decrease in income  -major fruit trees are affected i.e coconut trees, breadfruit and pandanus	-future plans for concrete cisterns  -water tanks -water systems to be in place  -refer to KIRBATI water and SANITATION PLAN for Beru island	-costly but sustainable
Coastal Erosion	-aggregate mining	-reduction in land masses, but minimal  - a threat to properties and welfare of the people  -threatens settlements, arable land, Water lens and coastal ecosystems	-control and limit aggregate mining by residents  -implementation of a Revised Environment Act of 2007	-takes time and questionable
Reduction in Marine resources	-overfished  -existing causeways	-marine food insecurity in the following marine species:-  • Bonefish	-a need for a bylaw to regulate catches, commercial species  -island council to report illegal ships fishing	-takes time  -not effective

ISSUES	PROBABLE CAUSE/S	IMPACT on SOCIETY	REMEDIAL ACTION	SUSTAINABILITY (EFFECTIVENESS)
	<p>-excessive fishing</p> <p>-Illegal commercial tuna boat fishing</p>	<ul style="list-style-type: none"> <li>• Mangrove crabs,koikoi,nikatona – no longer exist</li> <li>• Te kima and te were depleted</li> <li>• Lobsters and octopus decline in numbers</li> <li>• Commercialisation of some fish species which results in taking inferior imported canned fish which causes diseases relating to eating habits</li> <li>• Depletion of sea cucumber causing reduction in revenue</li> </ul>		
Less Agricultural Activity	<p>-superficial commitment to AA</p> <p>-shortage of feed for pigs/piglets due to delay in receiving orders from abroad</p>	<p>-no balance diet</p> <p>-no supply of land protein</p>	<p>-increase awareness and importance of livestock and agricultural activity through Agricultural Division and Taiwan Technical Mission</p> <p>-provide funding</p>	-it can be sustained

ISSUES	PROBABLE CAUSE/S	IMPACT on SOCIETY	REMEDIAL ACTION	SUSTAINABILITY (EFFECTIVENESS)
	<ul style="list-style-type: none"> <li>-limited funding</li> <li>-mismanagement of livestock</li> <li>-pigs slaughtered before they are bred</li> </ul>		<ul style="list-style-type: none"> <li>- use of local plants, marine seaweed mixed with breadfruit to supplement imported feed</li> </ul>	<ul style="list-style-type: none"> <li>-can be done, cheap and sustainable, needs creativity</li> </ul>
Capacity Building on climate change and sea level rise	<ul style="list-style-type: none"> <li>-no consultation previously conducted</li> <li>-no funding for training at island council level</li> </ul>	<ul style="list-style-type: none"> <li>-islanders are unaware of Climate Change and Sea Level Rise</li> <li>-island council employees not familiar with training of village people</li> </ul>	<ul style="list-style-type: none"> <li>-intensifying training and consultation</li> <li>-media training</li> <li>-contributions from respective govt. Ministries towards Climate Change and Sea level Rise preparedness</li> </ul>	<ul style="list-style-type: none"> <li>-sustainable through funding sources</li> <li>-must continue at paced intervals</li> </ul>