



# 10. Aranuka



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## PHYSICAL FEATURES

Aranuka is made up of two islands with the mainland Aranuka harboring the two villages of Buariki and Baurua. Takaeang is the other inhabited islet that lies 7.68 kilometers west of mainland Aranuka. The mainland, Aranuka is 10.77 km, 1.31 km at its widest, and 0.1 km at its narrowest.

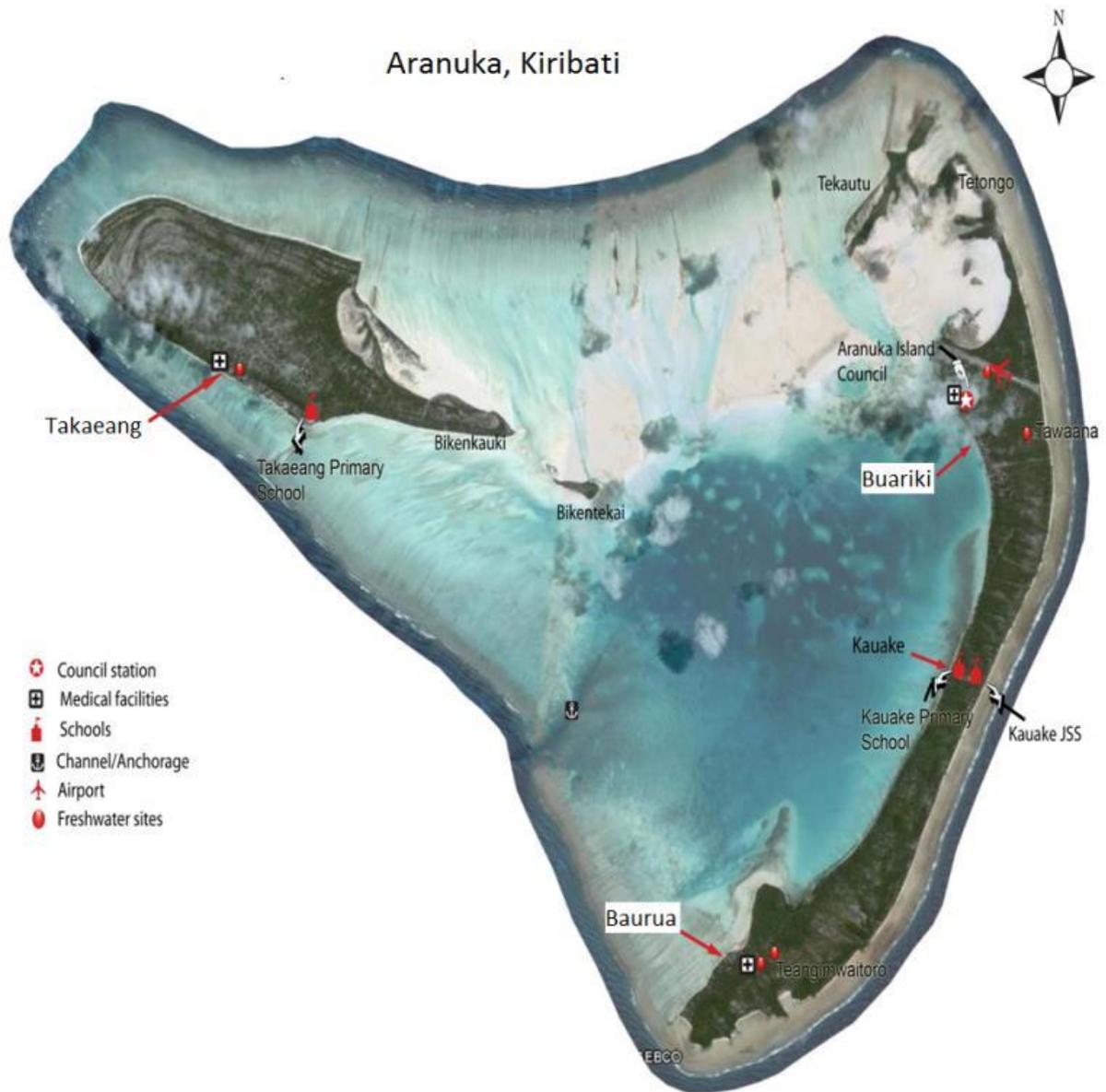
Buariki is the central village on the island where the Aranuka Island Council, Junior Secondary School (JSS), Primary and main medical facilities are located. However, according to locals, there is a fourth village called Kauake, joined to the village of Buariki and thus counted in the census as one village with Buariki.

There is only one road that runs alongside the lagoon-side of the island where villages are located and a network of access and feeder roads running from the main road to other parts of the island. These pathways generally are wide enough to accommodate pushbikes and motorbikes but not big trucks. All villages are located on the lagoon side on both sides of the main road, easily accessed by walking, with bicycles, motorbikes and trucks.

Aranuka has a lagoon, but this is not so rich in shellfish. There is a passage into the lagoon, available for the boats in moderate weather, through the middle of the reef on the southwestern side of the atoll. There are several dangerous points in the passage where tidal streams can be very strong. It is also well known for its old stand of *Rhizophora stylosa* mangroves that have grown as tall as coconut trees and are now a breeding site for birds. These mangroves can be found towards the northern end of mainland Aranuka.

The central village, Buariki, has the largest population and is also the location of the seaport, is nearest to the airport and is the center of all government and island council activities. Takaeang is isolated from the rest of villages by a strip of mudflat at the lagoon side and reef flat at the ocean side. It can be accessed on foot during low tide or by canoe and boat during high tide. Akaeang is surrounded with abundant marine resources.

Figure 10.1: Map of Aranuka



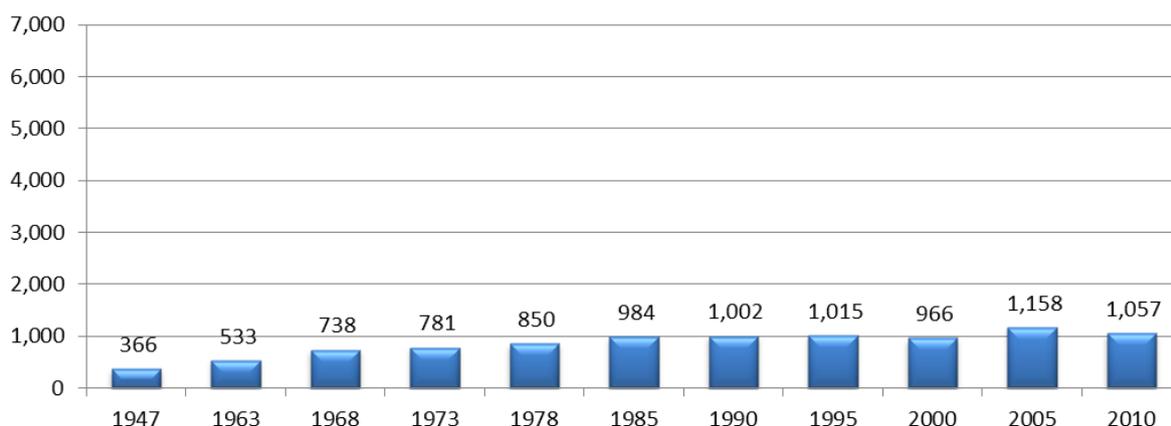
**Note:** Refer to Aranuka Island Profile 2008 for problem areas and sites of significance.

## POPULATION

The population of Aranuka in the 2010 census was 1057; this is 1% of Kiribati's total population.

Compared to the 2005 population of 1158, the population appears to be declining however the longer term trend, since 1985, has been for the population of Aranuka to be stable at around 1,000 people.

**Figure 10.2: Aranuka Population 1947-2012**



Source: 2010 Census

Aranuka has a combined land area of 11.61 square kilometers and a population (in 2010) of 1057, giving a population density of 91 people per square kilometer. Compared with other islands in Kiribati, Aranuka is one of the least densely populated islands.

There are 214 households in Aranuka, and the average household size is 4.9 people meaning that households in Aranuka tend to be smaller on average than on most islands in Kiribati.

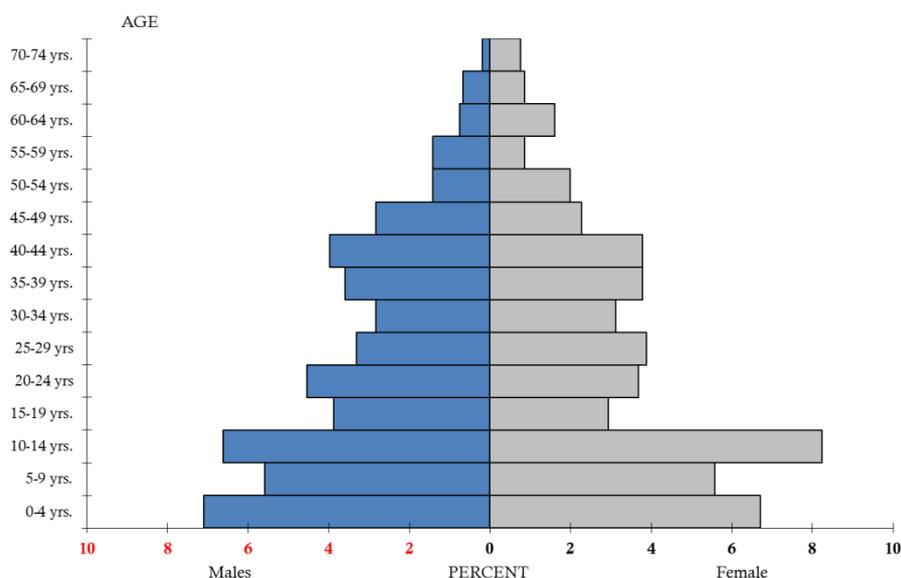
Over half of the population of Aranuka lives in the main village of Buariki, and the remaining population are split roughly evenly between the small islet of Takaeang and the village of Baurua.

**Table 10.1: Aranuka Population by Village**

Aranuka	Village	Population
	Takaeang	252
	Buariki	592
	Baurua	213
<b>Aranuka total population</b>		<b>1057</b>

Aranuka has a young population, with 40% of the islands' residents aged under 15. Within this, the age group from 10-14 years is the largest, making up 15% of the total population. There are few young people aged 15-19, which is consistent with the fact that there is no secondary school on the island so many young people will be attending school on other islands.

Figure 10.3: Age Sex Distribution, Aranuka



Source: 2010 Census

## LAND AND MARINE RESOURCES

### LAND RESOURCES

Most households in Aranuka live on their own family land, with a few households (5%) living on Government leased land.

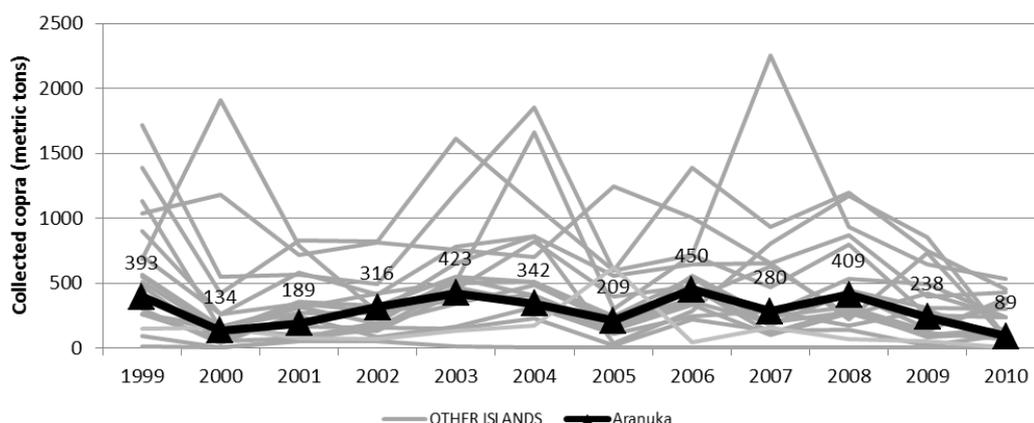
Aranuka is faced with major constraints in agricultural production. Poor soil limits the number of agricultural crops that can be grown and the existing physical features limit the land area where agricultural or livestock activities can be extended. The island's main resources are its limited fruit tree resources predominantly coconut, pandanus and breadfruit. Most households also cultivate *bwabai* (swamp taro), generally on family land located away from the main villages.

Almost all households have at least one pig, and about half of all households also have chickens and dogs. Hardly any other animal apart from pigs and chickens can live and survive in the atolls plus they take time to grow and are kept for special functions or family celebrations. Cats, birds, rats, lizards and crabs, as well as insects, make up the most common fauna on the Island.

### COPRA

Copra remains the main commodity for exports, and in good years provides a basic income for many families. Droughts affect copra production, for example in 2000 when production was only 134 tonnes. The resulting drop in income makes it hard for locals to buy much needed food items. Rainy weather boosts copra production and household income increases.

**Figure 10.4: Aranuka Copra Production 1999-2010**



Source: Statistics Unit, MFED

## WATER

The only and main water source for drinking and sanitary purposes on the island is the groundwater lens. Wells however are subject to brackishness during prolonged droughts. During drought potable water may be fetched from as far as a kilometer away.

Aranuka being located in the central group suffers from drought periods. Supply and quality of water from the wells are dependent on the amount of rainfall and how the wells are protected; some households have protected (covered) wells for drinking but most do not. Boiling well water is common.

## MARINE RESOURCES

The main and major source of protein for atoll islanders is ocean and reef fish. Aranuka has a large lagoon and reef, and a relatively small population, so fish and other marine foods are plentiful.

**Table 10.2: Size of Reef/Lagoon Size, Aranuka**

Island	Reef (square km)	Reef base (square km)	Lagoon (square km)	Land (square km)
Aranuka	22.25	15.5	35.86	11.6

Source: Ministry of Fisheries & Marine Resource Development

Despite the natural abundance of fish on Aranuka, there are still issues facing fishing and development of marine resources; these include the:

- a. Lack and cost of fishing equipment
- b. Overfishing, and the absence of legally binding bylaws for use of marine resources by visiting ships/companies and the island community as a whole.

## EDUCATION

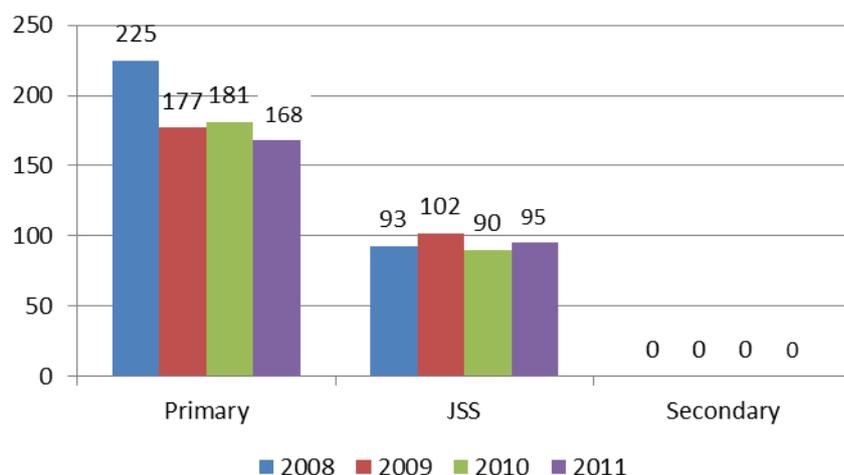
There are two primary schools on Aranuka; Kauake Primary located on mainland Aranuka and accommodating all primary children from mainland Aranuka (Buariki and Baurua villages) and Takaeang Primary School caters for primary aged children from the islet only.

**Table 10.3: Primary School Enrollments, Aranuka**

Aranuka	No. of Pupils			No. of Teachers		
	2011		Total	2011		Total
	F	M		F	M	
<b>Kauake Primary School</b>	69	63	<b>132</b>	6	0	<b>6</b>
<b>Takaeang Primary School</b>	17	19	<b>36</b>	3	0	<b>3</b>
<b>Total</b>	<b>86</b>	<b>82</b>	<b>168</b>	<b>9</b>	<b>0</b>	<b>3</b>

Kauake junior secondary school accommodates children from all over the island including those from the islet of Takaeang. In 2011, there were 95 students at Kauake JSS, 32 in Form 1, 30 in Form 2 and 33 in Form 3.

**Figure 10.5: Aranuka school enrollments 2008-2011**



Generally throughout the country, the JSS schools which are late additions during late 1990s are of permanent material, in better/good condition and adequately furnished; on the other hand primary schools generally lack furniture, and are constructed from a combination of local and imported material. In principle, schools built from local materials should be easier for outer island communities to maintain but in practice, most schools are poorly maintained. Poor maintenance causes a lot of frustrations amongst parents, teachers and children, the latter are most affected.

Primary schoolers have to contend with sitting on the floor during school days thus mats woven from coconut and pandanus fronds are often contributed by the families and teachers alike for the children to sit on. These mats are much needed especially since most primary classroom facilities do not have concrete floors. But most classrooms have basic equipment such as blackboards, teaching aids and others.

## HEALTH

The Health Centre is located at the Aranuka Island Council area in Buariki while each of the villages of Baurua and Takaeang have their own clinics. The population of Aranuka appears to be very healthy; on average people visit the clinic fewer than three times per year, with most of these visits being for less serious diseases that are not officially recorded in health statistics. The only officially recorded disease that is more common on Aranuka than for Kiribati as a whole is night blindness, which is associated with Vitamin A deficiency. Of all the foods in the Kiribati diet, only *te tau* (pandanus fruit) and *te karewe* (fresh coconut toddy) are rich in Vitamin A.

Aranuka has a low rate of alcohol use with only 20% of adults drinking alcohol “regularly” or “sometimes”. However the rate of kava use is much higher, at 31% of adults or over half of all adult men (on Aranuka as on all islands, few women drink kava). Kava use is not associated with violence or disorderly behavior in the way that alcohol is, but the effects on families can be just as bad, with fathers spending more than they can afford on kava and being too sleepy the next day to fish or to work.

On Aranuka as on all islands of Kiribati, the majority of adult men and many adult women smoke tobacco.

## ISLAND ECONOMY

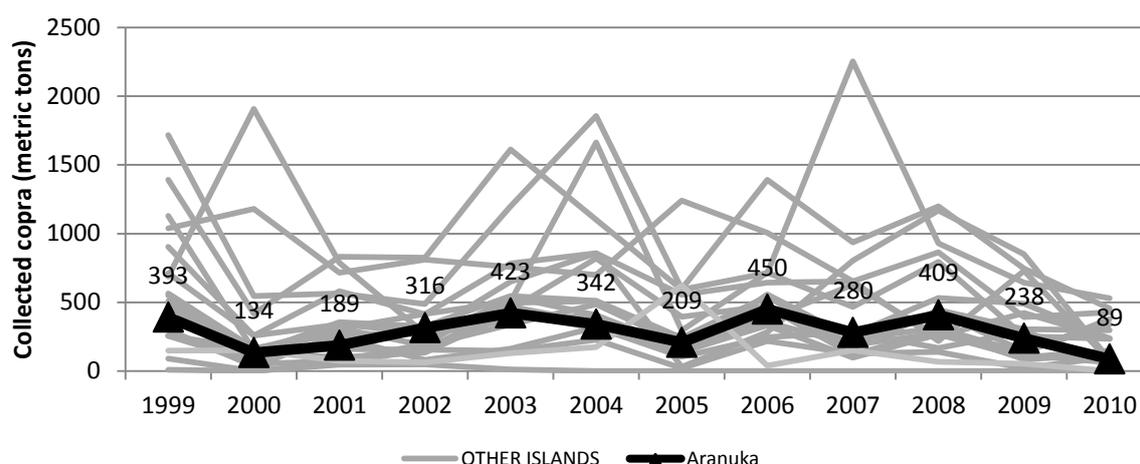
### SUBSISTANCE ACTIVITIES

Typical subsistence 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.

### COPRA CUTTING

The production of copra is an important economic activity on Aranuka. It was the major source of income before seaweed farming was introduced. It is a common issue for copra funds to be depleted and this has led to complaints by copra cutters on Aranuka.

Figure 10.6: Copra production Aranuka 1999-2010



Source: Kiribati National Statistics Office

The best year of copra production for the island was in 1992 when their production reached 450 metric tonnes, bringing in an income of \$270,000. The price of copra at the time was \$0.60 per kg. The worst year was in 2010 when only 89 tonnes of copra were collected from Aranuka, which brought an income of \$62,300.00 even though copra prices by the year 2000 had risen to \$0.70/kg. The drought in 2010 was the major factor; droughts have a severe impact on coconut trees and other fruit trees.

## AGRICULTURE

The main agricultural activities include cutting toddy, and cultivation of *bwabwai* (swamp taro). Most households have their own *bwabwai* pit/s, usually located away from the house either near by the village or in the bush, and three in four households cut toddy.

Planting of breadfruit, bananas, pawpaw, 'te bero', and pandanus also contributes to subsistence living. Cultivation of garden plants such as sweet potato and cabbage is very uncommon on Aranuka.

## LIVESTOCK

Livestock on the island is limited to pigs and chickens of both local and exotic breeds. There are over 700 pigs on the island and a similar number of chickens. Even compared with other islands of Kiribati, Aranuka has a lot of pigs; most households (92%) have at least one local pig and the majority of households (62%) have three or more. Even so, pork is not an everyday item on the local diet but is saved for feasts and other special occasions.

## FISHERIES

As islanders, households have been harvesting the sea in one way or another, initially to satisfy their own subsistence needs, to send salted fish (fish jerky) to relatives in other parts of Kiribati mostly South Tarawa and lately for domestic sale to others unable to fish, most of

the time Council staff living at the Council quarters in Buariki. One third of households (33%) own a canoe in working order, and 7% own a boat.

## EMPLOYMENT

The Island Council serves as the biggest employer for the people of Aranuka, employing 30 staff (in 2010). Apart from this handful number of jobs offered by the Island Council in its limited services, and other Government positions on the island as teachers, police and nurses, the opportunity for paid employment for the islanders is otherwise non-existent. However around 100 people or one in six adults earn at least some cash from market oriented activities such as sale of fish, copra, agricultural produce or handicrafts, or running a small store or service.

Most adults on Aranuka are likely to describe themselves as working in subsistence or voluntary work rather than unemployed. This indicates that they are not actively seeking work, probably because there is so little work available.

## TRANSPORTATION

The most common form of land transport is the pushbike followed by motorbikes and trucks. As a wide island, the main road, constructed around the villages close to the lagoon side extends all the way around the island making it easy for round trips on both mainland Aranuka and the islet of Takaeang.

## ENVIRONMENT

The most threatening environmental issue on Aranuka is coastal erosion, and flooding of land during high sea surges. Other issues also exist in the form of unsafe dumping of rubbish, lack of proper sanitation facilities that will not affect the water lens and a dusty environment during years of drought.

A number of sites have been identified where coastal erosion is threatening important community assets and these are listed in full in the Aranuka Island Profile 2008. The concerns of participants from Aranuka at the National Summit on Climate Change and the Kiribati Development Plan in May 2011 are set out in the following table.

ENVIRONMENTAL AND CLIMATE CHANGE CONCERNS OF REPRESENTATIVES FROM KURIA ATTENDING THE 2011 NATIONAL SUMMIT ON CLIMATE CHANGE AND THE KIRIBATI DEVELOPMENT PLAN

ISSUES	PROBABLE CAUSE/S	IMPACT on SOCIETY	REMEDIAL ACTION	SUSTAINABILITY (EFFECTIVENESS)
Coastal erosion	-high sea surges  -sea wall construction	-there is little impact, but it is a threat to properties  -disturb the welfare of the people  -rows of coconut trees and vegetation disappear from the beach	Design of seawalls need to be considered	-may sustain but have side effects
Water	-drought	-kills vegetation  -fruit trees are affected in size  -decreased income  -brackish water for drinking and purposes  -dry vegetation vulnerable for bush fire	-future plans for concrete cisterns  -water tanks for ironed roofed houses	-sustainable but costly    -can be sustained
Reduction of Marine resources	-illegal ships fishing in the seawaters	-unpredicted number of catch for future generations	-Local government division within MISA to make an Act to allow Island Councils bylaws to be legal and effective	-takes time to materialise