



8. Abemama



OFFICE OF TE
BERETITENTI

Phone: +686 21183

E-mail: islandreports@ob.gov.ki

Website: climate.gov.ki

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

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SUMMARY OF MAIN SOCIOECONOMIC INDICATORS – ABEMAMA

	Abemama					All other outer islands					South Tarawa including Betio					All Kiribati				
	2005	2010				2005	2010				2005	2010				2005	2010			
Population (Census)	3,404	3,213				48,818	49,663				40,311	50,182				92,533	103,058			
Percent of national population	3.7%	3.1%				52.8%	48.2%				43.6%	48.7%				100%	100%			
Land area, km ²	27.37	27.37				683.21	683.21				15.76	15.76				726.34	726.34			
Population density, people per km ²	124	117				71	74				2,558	3,184								
		2005-10					2005-10					2005-10					2005-10			
Population growth		-191					845					9,871					10,525			
Annual rate of growth of population, %		-1.1%					0.3%					4.5%					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	1063	1043	539	380	188	19,002	12,881	8,964	5,860	2,956	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%	32%	17%	12%	6%	38%	26%	18%	12%	6%	34%	31%	18%	12%	5%	36%	29%	18%	12%	5%
		2005					2005					2005					2005			
Number of private households		592					8,162					5,245					13,999			
Number of persons in private households		3,059					46,399					39,186					88,644			
Average household size		5.2					5.7					7.5					6.3			
	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	272	207	664	128	879	4,574	3,459	6,879	4,498	11,251	8,594	2,487	1,611	6,826	13,545	13,440	6,153	9,154	11,452	25,675
Labour force status %	13%	10%	31%	6%	41%	15%	11%	22%	15%	37%	26%	8%	5%	21%	41%	20%	9%	14%	17%	39%
	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	154	744	365	800	87	4,041	11,114	6,958	7,904	644	2,418	8,125	7,570	13,626	1,324	6613	19983	14893	22330	2055
Education attainment %	7%	35%	17%	37%	4%	13%	36%	23%	26%	2%	7%	25%	23%	41%	4%	10%	30%	23%	34%	3%
		2010					2010					2010					2010			
Literate in [te taetae ni] Kiribati %		94%					90%					93%					91%			

PHYSICAL FEATURES

Abemama has a land area of 7.89 square kilometers with a width varying from 50 m to 2 km. The island has 3 main islets; the largest and main islet has 11 villages and is home to most of the population. Abatiku, an islet located at the north-western reef, and Biike just south of it, have much smaller populations.

The island is blessed with a massive lagoon area and an abundance of lagoon fish, shellfish, and worms. There are also some seaweed farms.

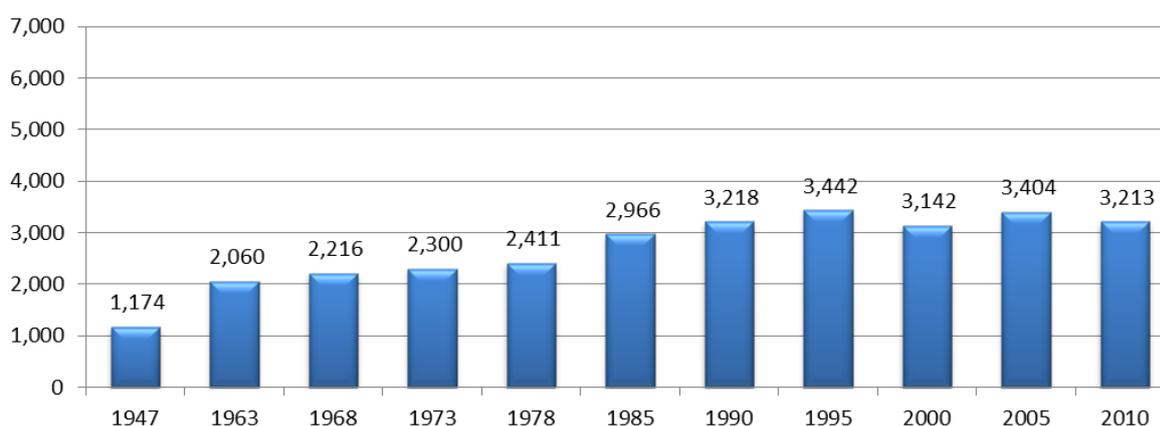
Causeways were constructed to link all villages on the main islet making transportation easy. The island resembles an incomplete “G” letter, with two reef passages; one is located in between Abatiku and Tabiang village at the north-western end. The other is between Biike and Kenna, the latter being the southernmost end of the main islet. The island is surrounded with an exposed reef at the windward side and submerged reef at the leeward side where Biike and Abatiku are situated. Most of the important food crops in Kiribati such as coconut, giant taro, pandanus and breadfruit grow well in Abemama.

POPULATION

The population of Abemama in the 2010 census was 3213; this is 3.1% of Kiribati’s total population.

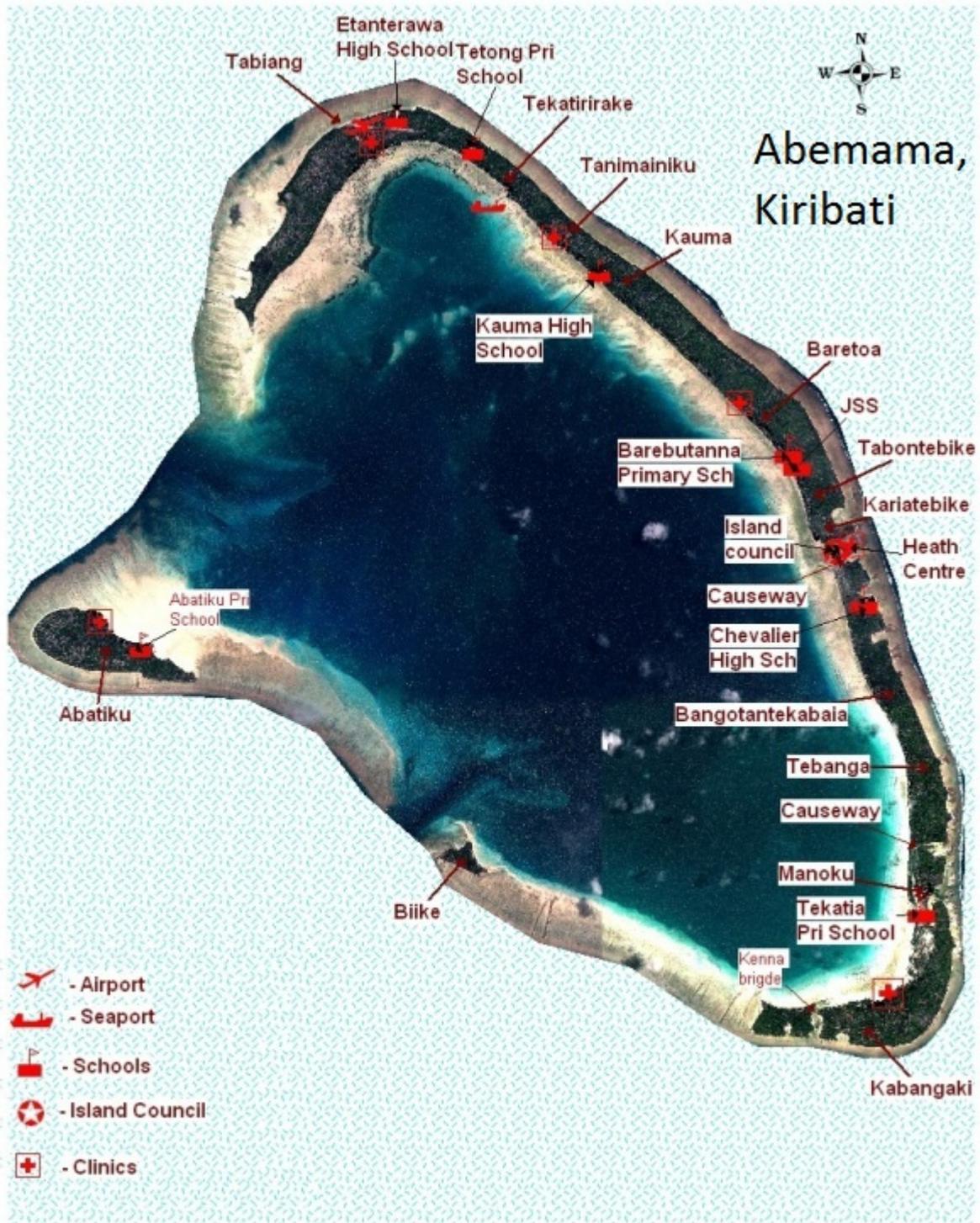
Compared to the 2005 population of 3,404, the population would seem to be declining, but the longer term trend is for a relatively stable population. Since 1985, the population has varied slightly between censuses from a low point in 1985 of 2,966 people to a high in 1995 of 3,442 people.

Figure 8.1: Abemama Population 1947-2010



Abemama has a combined land area of 27.37 square kilometers and a population (in 2010) of 3,213, giving a population density of 117 people per square kilometer. Compared with other islands in Kiribati, Abemama is the 14th most densely populated island. There are 583 households in Abemama, and the average household size is 4.8 people, that is, households in Abemama tend to be smaller on average than other outer islands (5.5 people) and much smaller than households on South Tarawa (7.3 people).

Figure 8.2: Map of Abemama



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

The largest and main islet has 11 villages, all connected by road, from Tabiang in the Northwest to Kabangaki in the Southeast and is home to most of the population. Abatiku, an islet located at the north-western reef, had just 150 residents in the 2010 census and Biike just south of it, is used as a base for fishing, copra cutting and raising of pigs; only 13 people were resident there at the time of the 2010 census.

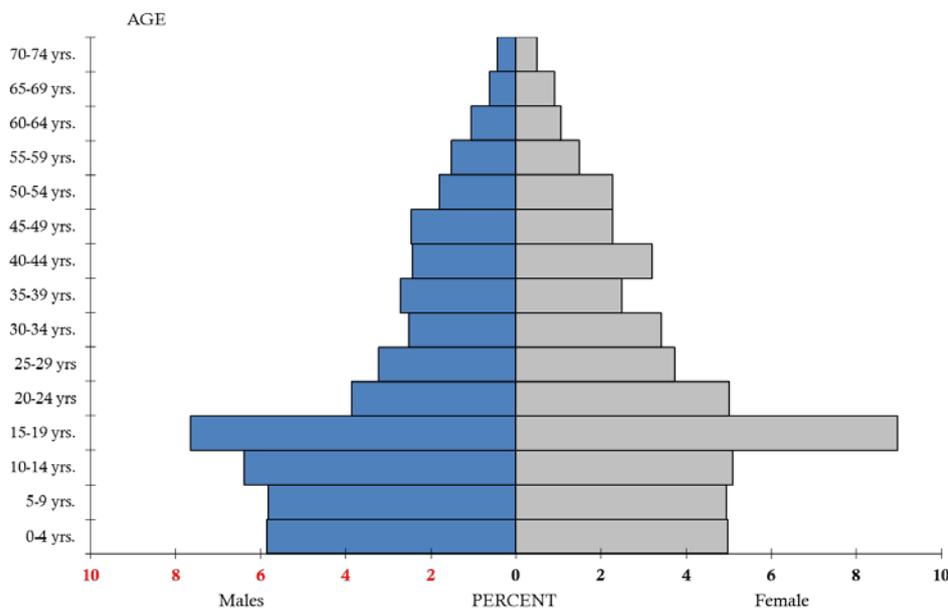
Table 8.1: Abemama Population by Village 2010

Abemama	Village	Population
	Abatiku	150
	Tabiang	487
	Tekatirirake	182
	Tanimainiku	250
	Kauma	74
	Baretoa	387
	Tabontebike	380
	Kariatebike	505
	Bangotantekabaia	79
	Tebanga	62
	Manoku	170
	Kabangaki	474
	Biike	13
Abemama total population		3213

Data Source: 2010 Census

Unlike most islands of Kiribati, Abemama does not have a particularly large youth population; only a third (33%) of the population is aged under 15. The large population aged between 15 and 19 is due to the two Senior Secondary schools on the island.

Figure 8.3: Abemama Population 2010 by Age and Sex



LAND AND MARINE RESOURCES

LAND RESOURCES

Land is owned by the families of former chiefs and the people in general. About a quarter of the land area is leased by the Island Council for its clinics, health center, schools, airfield runway and its administrative station. A small area is also leased by the various religious groups and the Cooperative Society.

The two isolated islets of Abatiku and Biike are owned by a number of people who use them for copra cutting and raising of pigs; Biike itself is owned by the royal blood family, and settlement on Biike is allowed only under the authorization of the royal family kinship. Abatiku however, is an islet with 150 people and has its own small clinic, a primary school, and two compounds for Roman Catholic and Kiribati Protestant Church denominations.

A large portion of the land on Abemama is used up by wild bush and cultivated *bwabwai*. The dominant tree in terms of numbers is the coconut, which grows everywhere. Other plants include pandanus (*te kaina*), breadfruit trees (*te mai*) and bananas that grow mostly in village area.

WATER RESOURCES

Most (72%) households use water from protected wells as their main source of drinking water, and a relatively high number (6%) use rainwater. Water for washing comes from a mix of protected and unprotected wells. Boiling well water for drinking is common. Abemama has vast resources of groundwater throughout the island, however prolonged droughts affect water quality.

MARINE RESOURCES

Abemama has 67.86 square kilometers of reef. This is a big reef area compared to other larger islands in Kiribati. The island is of simple coral formation and therefore has a great lagoon; there are ocean passages which cut through the island so the lagoon is kept clean by constant interchange of water with the ocean.

Table 8.2: Reef/ Lagoon size, Abemama

Island	Reef (square km)	Reef base (square km)	Lagoon (square km)	Land (square km)
Abemama	67.86	23.2	152.49	27.4

Source: Ministry of Fisheries & Marine Resource Development

ENVIRONMENTAL ISSUES

Coastal erosion is a major environment issue for the people of Abemama. Many locations on Abemama have been seriously eroded, resulting in the relocation of infrastructure (road, buildings, etc.) or the recurrent high expenditure of maintaining seawall protection. Abemama is one of the islands in the Gilbert Group with causeways; one is at Kariatebike,

the other is at Kenna. The impact of causeways are being felt but people and the island council are pretending not to know them and continue destroying mangrove forests, and collecting sand and gravel from foreshores thus aggravating sand and material movement cause by causeways. In future, it is forecast that climate change will cause significant erosion however it is human destruction of the environment which in many ways is a more likely cause of Abemama's current erosion problems.

Detailed locations of eroded areas, which occur throughout Abemama, are listed in the Abemama Island Profile 2008, and a summary of environmental and climate change issues as identified by Abemama representatives to the National Summit held in Tarawa in May 2011 is included at the end of this report.

EDUCATION

The people of Abemama tend to be more highly educated than the average for Kiribati as a whole. 94% of adults (those over 15) are literate in Kiribati and only 7% have not attended school at all. 35% of the adult population have a Primary leaving certificate, 17% have a Form 3 certificate, and 37% have a Senior Secondary certificate. The proportion holding a Post-Secondary qualification is 4% which is higher than any other island except South Tarawa.

Abemama island has 4 Primary Schools, one Junior Secondary School and two Senior or High Schools. One primary school is located on the islet of Abatiku, the other three serve the population of the main islet with children travelling from their villages to school.

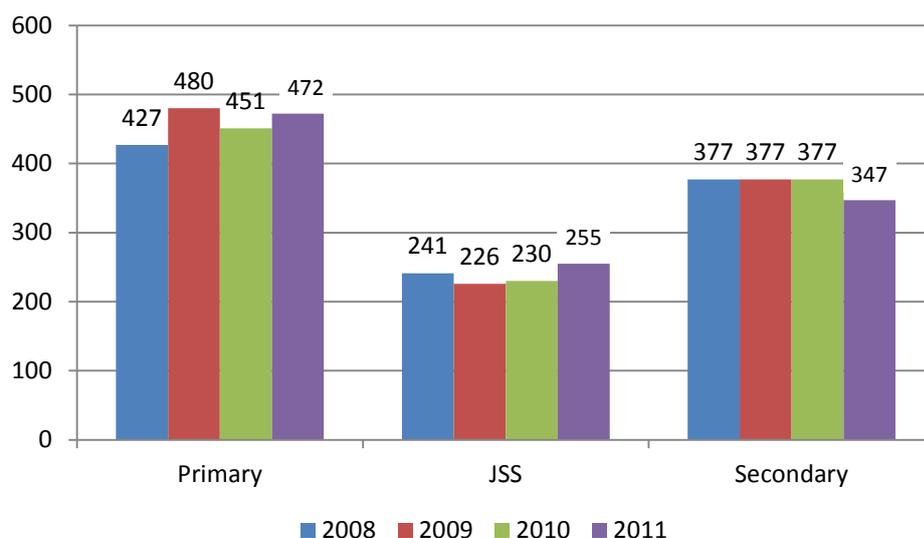
Table 8.3: Abemama Primary School Enrollments

Abemama	No. of Pupils			No. of Teachers		
	2011		Total	2011		Total
	F	M		F	M	
Abatiku Primary School	7	17	24	2	0	2
Tetongo Primary School	73	90	163	5	1	6
Barebutanna Primary School	67	72	139	5	0	5
Tekatia Primary School	71	75	146	4	1	5
Total	218	254	472	16	2	18

Source: Kiribati Education Digest 2011

Boutoka te Baretaiti Junior Secondary School is situated on Tabontebike and has 225 students; a further 30 students are enrolled at JSS levels in Kauma High School. Chevalier High School located on Kariatebike is run by the Catholic Church, and Kauma High School in Kauma village is run by the Seventh Day Adventist Church. Both are boarding schools open to students from throughout Kiribati. A Kiribati Protestant Church high school was inactive for many years but has recently re-started however data from this school is not yet included in Ministry of Education statistics.

Figure 8.4: Abemama School Enrollments 2008-2011



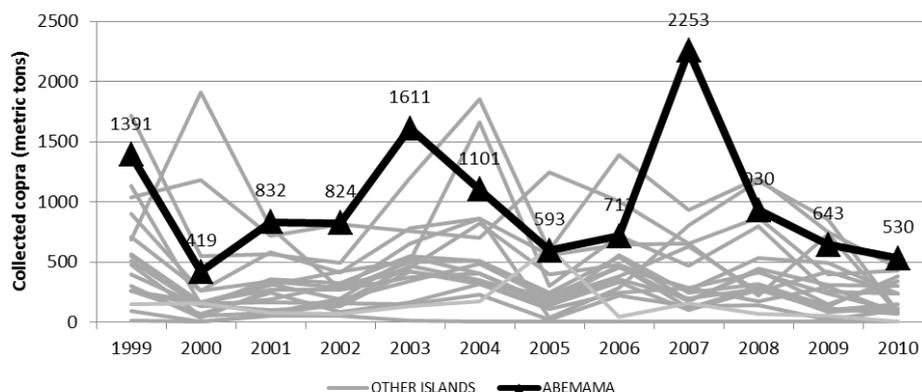
Data Source: Kiribati Education Digest 2011

ISLAND ECONOMY

COPRA

Copra cutting is an important activity which provides a source of income for many people on Abemama. In 2007, Abemama produced 2,253 tonnes of copra which is the highest production of any island in recent years. At \$0.60 cent per kilogram this brought revenue of over \$1.3 million, or \$424 per person. Although copra is an important source of income for residents of Abaiang, revenue does fluctuate because of the marked fluctuations in production level. These are the result of several factors among which are the changes in copra price and climatic conditions which affect production. The worst year of production was in 2000 caused by a nationwide drought which lasted for more than a year. In 2000, copra production earned only \$60 per person.

Figure 8.5: Copra production (collected copra) Abaiang 1999-2010



REMITTANCES

With limited employment and income-generating activities, many people on Abemama depend to a great extent on remittances sent to them by relatives working in Tarawa or overseas. In 2010, 7% of households received remittances from seamen, and 23% received other remittances in the form of money loaned to family, gifts, birthday money, allowances and other gifts sent back by relatives and friends living and working outside Abemama.

AGRICULTURE

The predominant food crops on Abemama are *bwabwai*; banana, pandanus, coconut and breadfruit. Each family has its own *bwabwai* pits, breadfruit and toddy trees. Home gardening is more common on Abemama than other islands, with 23% of households growing sweet potato and 17% growing local cabbage, mainly for home consumption.

The main animals reared by the islanders are pigs and chickens, also for home consumption. In 2010 the total number of pigs on Abemama was 1475, with 80% of households owning at least one local pig. There were almost 2,000 local chickens. The people of Abemama believe that they can produce more meat and vegetables for export to Tarawa if the problem of transport, communication and marketing are resolved. They also believe that training on vegetable and livestock production is important if trade in these primary produce is going to be undertaken.

HEALTH

There are 4 clinics and one health center on Abemama. The clinics are located in the villages of Abatiku, Tabiang, Tekatirirake and Kabangaki villages, while the health center is located in the island's administrative center, Kariatebike village. There is one Medical Assistant (MA) who is the highest ranking medical staff on the island. The MA is in charge of 2 nurses and 4 nursing aides. As on other outer islands, the MA and nurses are paid by the central government while the nursing aides are the responsibility of the Island Council of Abemama.

The most common diseases on Abemama as in the rest of Kiribati are diarrhea and respiratory infections. Night blindness, linked to Vitamin A deficiency, and the skin infection Tinea Coporsis (te konee) are relatively more common on Abemama than on other islands.

TRANSPORTATION

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

There were fewer than 20 cars on the island in 2010, but many households have one or more bicycles and/or a motorbike.

Inter-village travel between main island and the two islets; Abatiku and Biike is done through the use of canoes and small boats, since the villages are separated by sea. It is possible to walk between the islets during low tide but the distance is the main deterrent. The separation of Abatiku and the main islet affects children the most, in particular those who are old enough to attend junior secondary school and senior secondary school. Whereas there is a primary school on Abatiku, the junior secondary school is located on Tabontebike village, and children must travel every day to attend school. Those who do not have access to transport either miss a lot of classes or just simply drop out of school. In 2006 central government provided a skiff and outboard engine to the community to use it specifically to serve the need of JSS pupils.

ISSUES IDENTIFIED BY ABEMAMA REPRESENTATIVES TO 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	-Causeway construction -high tides -storms	-relocation of infrastructure (road, buildings etc)	-sea wall protection	-sustainable, but costly
Climate Variability	-Global Warming	-underground water purity will be affected (if climate goes dry) -depletion of land resources and vegetation will occur -marine resources will decrease overtime	- in need of a future plan to combat these adversaries overtime	-unpredictable
Agricultural Activities	-superficial commitment to agricultural activities -shortage of feed for pigs/piglets due to delay in receiving orders from abroad -limited funding	-no balance diet -no supply of land protein	-increase awareness and importance of livestock and agricultural activity through Agricultural Division and Taiwan Technical Mission -provide funding - use of local plants, marine seaweed mixed with breadfruit to supplement imported feed	-it can be sustained -Can be done, cheap and sustainable, needs creativity

	-mismanagement of livestock -pigs slaughtered before they are bred			
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