



12. Tabiteuea North



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

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

12.	Tabiteuea North	1
	SUMMARY OF MAIN SOCIOECONOMIC INDICATORS – TABITEUEA NORTH ..	1
	Physical Features	2
	Population	2
	Land AND MARINE Resources	5
	Land	5
	Marine resources	5
	Environment.....	6
	Education	7
	HEALTH.....	8
	Island Economy	9
	Copra.....	9
	Energy	10
	Transportation	10

SUMMARY OF MAIN SOCIOECONOMIC INDICATORS – TABITEUEA NORTH

	Tabiteuea North					All other outer islands					South Tarawa including Betio					All Kiribati				
	2005		2010			2005		2010			2005		2010			2005		2010		
Population (Census)	3,600		3,689			48,622		49,187			40,311		50,182			92,533		103,058		
Percent of national population	3.9%		3.6%			52.5%		47.7%			43.6%		48.7%			100%		100%		
Land area, km ²	25.78		25.78			684.8		684.8			15.76		15.76			726.34		726.34		
Population density, people per km ²	140		143			71		74			2,558		3,184							
Population growth			2005-10					2005-10					2005-10					2005-10		
Annual rate of growth of population, %			89					565					9,871					10,525		
			0.5%					0.2%					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	1439	985	605	432	228	18,626	12,939	8,898	5,808	2,916	17,119	15,784	8,959	5,813	2,507	37,184	29,708	18,462	12,053	5,651
Population by age group, %	39%	27%	16%	12%	6%	38%	26%	18%	12%	6%	34%	31%	18%	12%	5%	36%	29%	18%	12%	5%
	2005		2010			2005		2010			2005		2010			2005		2010		
Number of private households	573		682			8,181		8,656			5,245		6,705			13,999		16,043		
Number of persons in private households	3,332		3,573			46,126		47,137			39,186		49,250			88,644		99,960		
Average household size	5.8		5.2			5.6		5.4			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	285	50	0	614	1,197	4,561	3,616	0	4,012	10,933	8,594	2,487	0	6,826	13,545	13,440	6,153	0	11,452	25,675
Labour force status %	13%	2%	0%	29%	56%	20%	16%	0%	17%	47%	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	262	891	450	577	70	3,933	10,967	6,873	8,127	661	2,418	8,125	7,570	13,626	1,324	6613	19983	14893	22330	2055
Education attainment %	12%	40%	20%	26%	3%	13%	36%	22%	27%	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

Tabiteuea North – often simply called “TabNorth” is the northernmost island of the Southern Gilberts. Like other islands of the South, it is a dry island which suffers from the impact of recurring droughts over the years. Giant taro, ‘*bwabwai*’ pits are located quite a distance inland in order to take advantage of the thicker freshwater lens.

Tabiteuea North extends from the northern village of Tekabuibui to the southern village on the islet of Aiwa. Other islets include Kabuna, Tenaatorua and Bangai. There are numerous small islets in between these inhabited islets making this portion of the island the most productive in terms of marine resources. Aiwa marks the boundary between North and South Tabiteuea. TabNorth as is known has a total land area of 25.78 sq.km, and is 2.18 km across at its widest point (Tekaman), and 0.13 km at its narrowest point.

Tabiteuea like all coral islands and atolls is lowlying, averaging just 2 meters above sea-level. Sandy and porous soil makes agriculture difficult for most home gardening. The main source of drinking water is the underground water that is tapped through wells dug 3-5 meters into the ground. The quality of groundwater is easily affected by long droughts but quickly replenished during the rainy season. Boiling well water is common on the island. The people depend for their livelihood on this groundwater and the plants it supports, to complement the abundant fish in their diet. Coconuts dominate atoll vegetation along with other common shrubs along coastal areas. Saltbush and other vegetation flourishes along island coastlines.

POPULATION

The population of Tabiteuea North in the 2010 census was 3,689. Compared to the 2005 population of 3,600 and the 2000 population of 3,365, the population is relatively stable. The population of Tabiteuea North grew by 89 between 2005 and 2010, an annual population growth of 0.5%.

Figure 12-1: Tabiteuea North Population 1947-2010

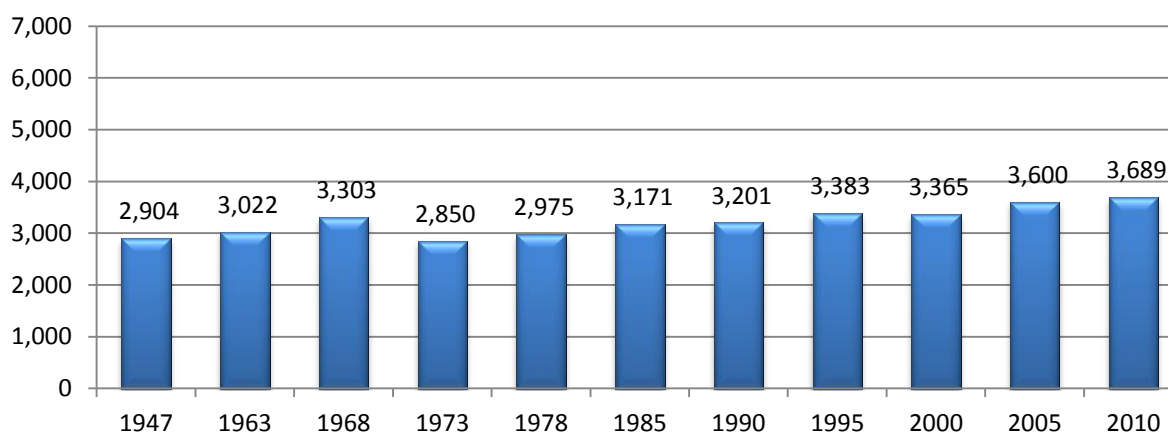
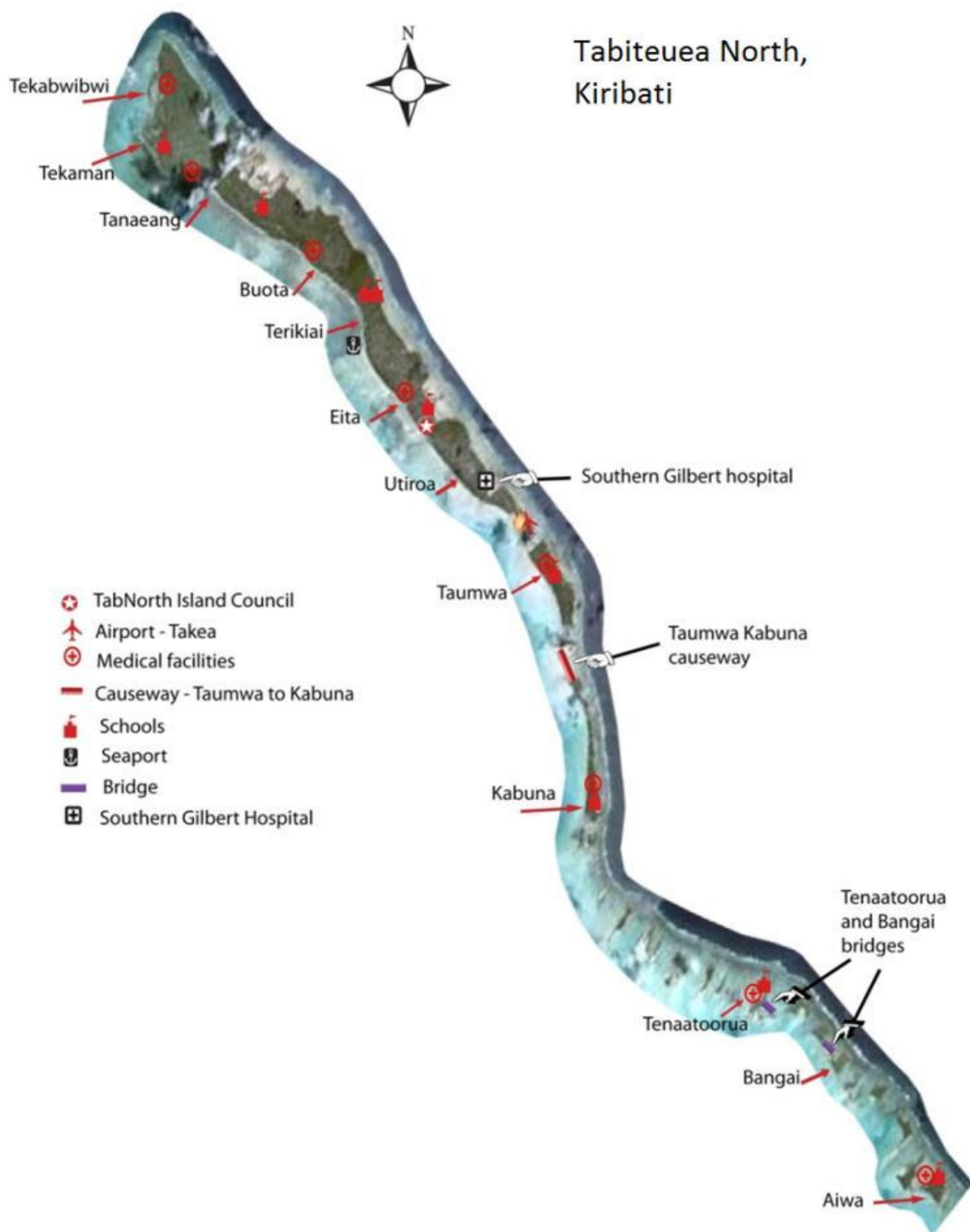


Figure 12-2: Map of Tabiteuea North



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

Tabiteuea North has a combined land area of 25.78 square kilometers and a population (in 2010) of 3,689, giving a population density of 143 people per square kilometer. Compared with other islands in Kiribati, Tabiteuea North is the 9th most densely populated island.

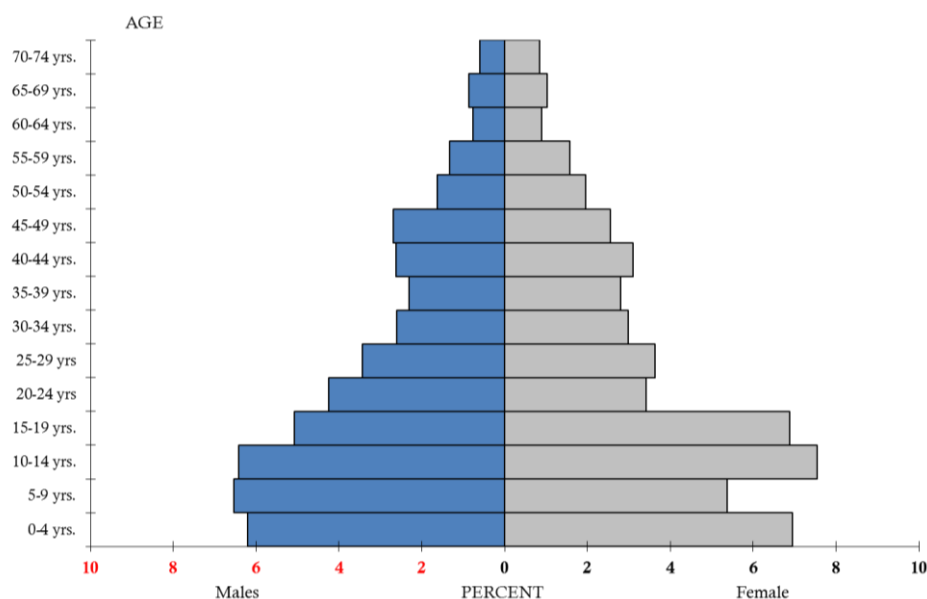
In 2010, the most populous of the twelve villages on the island was the village of Utiroa, with 762 people or 21% of the total population. The villages of Eita and Tanaeang respectively came as the next two most populous villages on the island. Eita constituted 19% while Tanaeang constituted 14% of the total population. The rest of the people were dispersed among the remaining nine villages. The least populated village was the islet of Bangai where only 42 people resided. Similarly, Tenaatorua and Aiwa the other two islets are a lot less populated than villages on mainland Tabiteuea North.

Table 12-1: Tabiteuea North 2010 population by village

Tabiteuea North	Village	Population
	Tekabwibwi	140
	Tekaman	228
	Tanaeang	498
	Buota	385
	Terikiai	278
	Eita	696
	Utiroa	762
	Tauma	201
	Kabuna	202
	Tenatorua	130
	Bangai	42
	Aiwa	127
Tabiteuea North total population		3689

The age distribution in Tabiteuea is very close to the average for a Kiribati outer island, with a large youth population (39% are under 15) and apparent “baby boom” in the 0-4 year age range. Interestingly there are more adult women in Tabiteuea North than men; 935 women aged 15-49 and only 848 men aged 15-49. This may be due to men leaving the island in search of work as there are very few cash jobs.

Figure 12-3: Tabiteuea population by age and sex 2010



LAND AND MARINE RESOURCES

LAND

Like other islands in Kiribati, land on Tabiteuea North is owned by families through inheritance or other customary means. Most households (74%) live on land that they themselves own, but there are some private leases (6%). A further 17%, mainly those in Government or Island Council employment, live on Government leased land.

Land is divided among the heirs on the death of the owner, with male heirs taking precedence over females. There are also lands given away as gifts and for nursing an aged or dying elder. Some lands were won in battle by the victors and this happened after the religious war on Tabiteuea in 1881. However, the increased migration to other islands has sometimes resulted in landowners dying elsewhere, without immediate families convening in the traditional way to apportion the land. Such lands, that have not been divided between sons and daughters, are left as family lands, awaiting the presence or representatives of all the children of the deceased to divide it.

MARINE RESOURCES

It is difficult to quantify the fish resources of Tabiteuea North, or any island for that matter. However, it is generally accepted that the bigger the reef area the larger the fish resource, particularly reef fish. Consequently, given that the atoll of Tabiteuea has a large reef and lagoon area, it can be concluded that Tabiteuea North has a vast and diverse number of marine resources.

Table 12-2: Size of Reef/ Lagoon Size

Islands	Reef (sq/km)	Reef base (sq/km)	Lagoon (sq/km)	Land (sq/km)
Tabiteuea	39	49	532	25.78

Free migratory fish such as skipjacks and yellow fin tuna (*Katsuwonus pelamis*, *Thunnus albacores*), flying fish (*Cypserulus sp.*) and shark (*Ginglymostoma ferrugineium*) amongst others are always abundant at both leeward and windward open seas.

A variety of shell fish can be found on the lagoon and reef flats at low tide or sometimes in deeper lagoon waters, and abundant schools of small fish live among the roots of the mangroves. Then there is the famous sea worm and sea cucumbers that are also fished off the lagoon flat and are two of the main income generating resources on the island. Eels, turtles, common mojarra, lobsters and crabs can be found in abundance in the surrounding ocean and lagoon. All these marine resources provide the most important source of food and income to the people of the island.

ENVIRONMENT

Coastal erosion is becoming a major environmental issue for the islands of Kiribati including TabNorth. Many locations on TabNorth have been seriously eroded, resulting in the relocation of infrastructure (road, buildings, etc.) or the recurrent high expenditure of maintaining seawall protection.

The islet of Tenaatorua is suffering mild erosion all around; Bangai is suffering mild erosion at the southern end and extreme erosion at the northern end where the bridge stands. Aiwa on the other hand is also suffering mildly from coastal erosion on the northern lagoon side of the island only. On Tenaatoorua freshwater is slowly becoming brackish, Bangai residents are now fetching drinking water from either Aiwa or another nearby islet while Aiwa is using their only freshwater well located at Tebwatua. Like the islets of Nonouti, fruit trees have been greatly affected by the heat and lack of water. In times of drought, there are very few coconuts and the toddy cutters have to give up most of their toddy trees as the spathes are either too small to get anything out of or the toddy itself is not forthcoming.

A scientific assessment of water lens capacity in Tabiteuea North undertaken for the KAPII project confirmed that the Tabiteuea water lenses are under stress during drought periods. The islet of Kabuna is particularly vulnerable as the water lens is not deep and the amount of water that can be safely extracted without harming the fragile balance of the water lens is less than 50 litres per person per day.

Flooding is rare on the island except for the village of Kabuna where flooding occurs every high tide towards the southern end of the village. Accretion and erosion go hand in hand and where there is erosion, accretion is occurring in other places. Kabuna suffers from erosion starting from where the causeway ends at the village area to nearly halfway up the village. The southernmost tip has, for some years, been accreting.

The island's limited land area and resources will face increasing pressure as the population continues to grow. Coconut, which in the form of copra is one of the main commercial agricultural products, is now scarce, as more and more people compete to harvest it.

Climate change and sea level rise are creating dreadful realities in the outer islands including TabNorth, requiring that people are better informed and prepared for solutions that could eventually mean relocation to other parts of Kiribati or overseas migration.

Environmental issues identified by participants from Tabiteuea North in the 2011 National Summit are included at the end of this document. For further details of environmental and climate change issues refer to the Tabiteuea North Island Report 2008.

EDUCATION

There are 8 primary schools on Tabiteuea North, strategically located to accommodate two villages at a time, one junior secondary school and a senior high school, Teabike High School. All schools are owned by the Government and thus there are Government funds for maintenance work required for the schools from time to time.

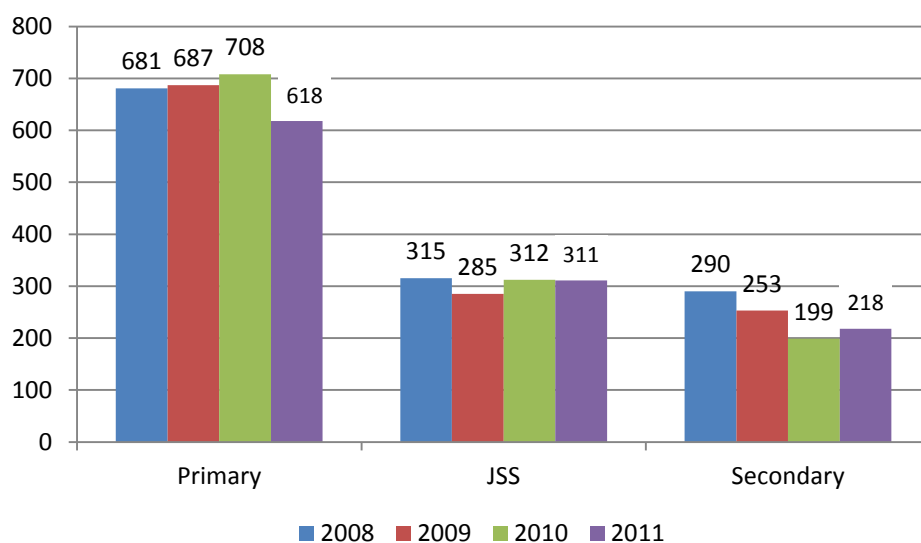
North Tabiteuea	No. of Pupils			No. of Teachers		
	2011		Total	2011		Total
	F	M		F	M	
Buranikoraoi Primary School	45	48	93	5	0	5
Taunibong Primary School	65	72	137	2	4	6
Takoronga Primary School	31	55	86	3	2	5
Temwamwang Primary School	102	77	179	7	1	8
Auriaria Primary School	16	7	23	3	0	3
Kabuna Primary School	18	26	44	3	0	3
Ueen Maungan te Raoi	14	23	37	3	0	3
Nukantewa Primary School	10	9	19	3	0	3
Total	301	317	618	29	7	36

Source: Kiribati Education Digest 2011

In 2011, a total of 18 children were attending the various primary and junior secondary schools on the island.

Eita and Utiroa are the biggest villages on the island and thus Eita shares both Takoronga and Temwamwang primary schools to ease the student load were Eita and Utiroa to share only one primary school. Bangai on the other hand has a very small population and thus is not yet eligible to have a primary school on its own. Children from Bangai therefore attend primary school in either Tenaatorua or Aiwa.

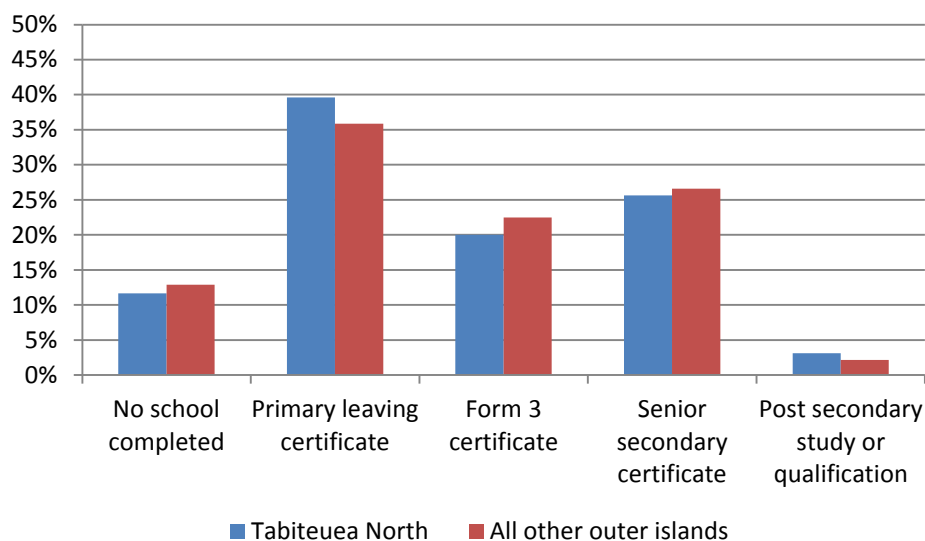
Figure 12-4: Tabiteuea North School Enrollments 2008-2011



Data Source: Kiribati Education Digest 2011

Almost all adults in Tabiteuea are literate in the Kiribati language (94% of those over 15). Education levels are similar to other outer islands, although adults in Tabiteuea are slightly more likely to have completed primary school, and slightly less likely to have gone on to further schooling.

Figure 12-5: Education levels of mature TabNorth community (over 15)



HEALTH

A new hospital near Utiroa village, built with assistance from the Government of Taiwan, opened in late 2009 with the aim of catering for the southern islands and relieving the pressure of overcrowding in Nowerewere Central Hospital on Tarawa. TabNorth residents are so fortunate to be close to one of the best equipped health centers in the country. The

hope is that as well as providing basic needs for patients, the development will result in TabNorth becoming more of a centre for the Southern Islands, with employment and other commercial activities that would not have been there without extra health services.

In addition to the Southern Hospital, there are seven clinics on the island of which two are located on the islets of Tenaatorua and Aiwa and the rest scattered within the mainland villages:

Table 12-3: Clinic locations, Tabiteuea North

Clinic location	General information
Tekabwibwi	Supervised by a nursing officer and caters for Tekabwibwi community
Tanaeang	Nursing Officer in charge and caters for Tekaman and Tanaeang
Buota	Nursing officer in charge and caters for southern part of Tanaeang and Buota communities
Utiroa	A new hospital intended to serve the whole Southern Gilberts, as well as providing clinic services for southern Eita and Utiroa
Taumwa	Nursing Officer in charge and caters for Taumwa community
Kabuna	Supervised by a Nursing Officer for the Kabuna community
Tenaatorua	Supervised by a Nursing Officer for Tenaatorua community
Aiwa	Supervised by a Nursing Officer for Aiwa community

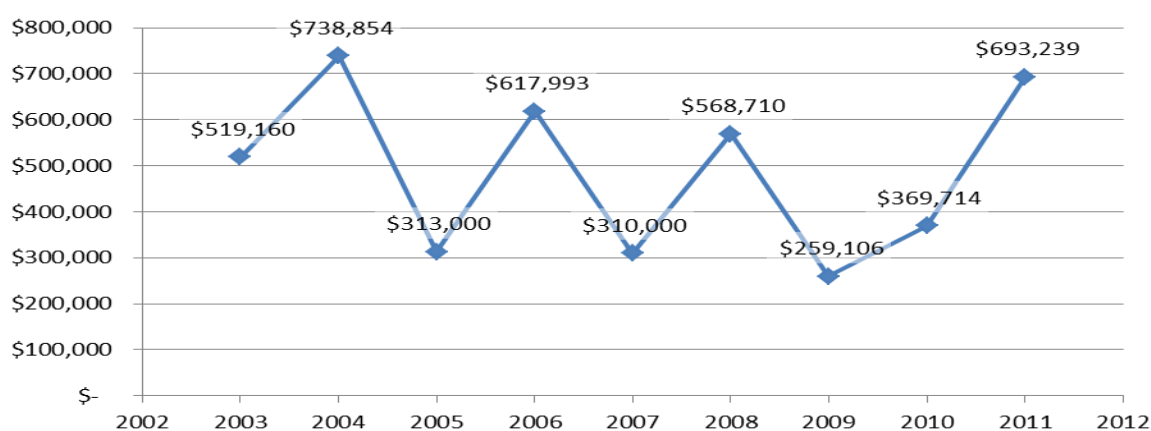
Each village has its own Village Welfare Group, which is helping the medical staff on the island in the promotion of health activities.

ISLAND ECONOMY

COPRA

Copra production remains the most important commercial activity on TabNorth that has provided a major 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.

Figure 12-6 : Income from copra production, Tabiteuea North (DW disbursements)



Data source: Ministry of Commerce, Industry and Co-operatives

Income from copra production varies a great deal year by year, tending to be lower in drought years but also to rise in response to increases in the copra price. In Tabiteuea, income from copra alone generates enough income that all households have access to more than \$1 a day.

Table 12-4: Copra income per household, Tabiteuea North

	2005	2006	2007	2008	2009	2010	2011
Copra price \$/kg	\$ 0.60	\$ 0.60	\$ 0.60	\$ 0.60	\$ 0.60	\$ 0.70	\$0.70*
Income from copra	\$313,000	\$617,993	\$310,000	\$568,710	\$259,106	\$369,714	\$693,239
Income/HH	\$546	\$1,039	\$503	\$891	\$392	\$542	\$985
Income/Day	\$1.50	\$2.85	\$1.38	\$2.44	\$1.08	\$1.49	\$2.70

*Copra price rose to \$0.80 in November 2011

ENERGY

The most common fuel is firewood, mainly in the form of coconut husk, dry coconut leaves and common wood, but people are also resorting to the use of modern technology to provide energy to meet their private and public needs. The new technologies however use fuel that is imported from overseas through the Kiribati Oil Company Limited (KOIL). Petrol is used for outboard motors and motorbikes, diesel for trucks and generators, and kerosene is used for stoves and lamps.

The total volume of fuel sent by KOIL to TabNorth in 2011 was 348,000 litres of petrol (bentiin), 112,800 litres of diesel and 36,000 litres of kerosene.

TRANSPORTATION

The popular household means of land transport on the island are bicycles and motorcycles as these vehicles are cheaper when compared to cars 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 means of transportation.

There were 13 cars on Tabiteuea at the time of the 2010 Census which while a small number in comparison to the 682 households there is actually quite large in comparison to other outer islands.

Travel to the islets of Tenaatorua, Bangai and Aiwa is done by boat even though it is possible to walk between the islets during low tide. However, the distance would mean several hours of walking from the end of Kabuna and thus not agreeable to those visiting on an official basis. If one had time to walk though, it would be quite an experience as the islets in between Kabuna and the inhabited ones are full of local history and the natural environments of islands.

Canoes and boats are therefore not only used for fishing but also provide the main means of inter-island transport between mainland TabNorth and the islets of Tenaatorua, Bangai and Aiwa.

Air Kiribati operates flights every weekday linking Tabiteuea North with Tarawa, as this airport is used as a stopover for flights to other Southern islands. However the airfare of \$120 means people from Tabiteuea North do not travel to Tarawa often. Fares by boat are cheaper but there is no schedule for shipping services, which are affected by weather and by the timing of cargo shipments.

Table 12-5: Environmental and Climate Change Issues and Impacts, Tabiteuea North

ISSUES	PROBABLE CAUSE/S	SOCIETAL IMPACT	REMEDIAL ACTION	SUSTAINABILITY (EFFECTIVENESS)
Coastal Erosion	<ul style="list-style-type: none"> -aggregate mining -high tides -existing causeway 	<ul style="list-style-type: none"> -impacted 66 sites on the island -Tenaatorua Bangaiand Aiwa heavily hit -brackish water -less coconuts - give up toddy trees as spathes become too small to produce juice -land masses reduces -flooding at Kabuna and Tekabwibwi -rows of trees falling - fruit trees affected 	<ul style="list-style-type: none"> -seawall construction -mangrove planting -control aggregate mining -reopening of causeways -replanting 	<ul style="list-style-type: none"> -sustainable but costly -sustainable, cheap -requires stringent by-law -expensive but sustainable
Water	<ul style="list-style-type: none"> -droughts -high temperatures 	<ul style="list-style-type: none"> -vegetation destroyed -less production -less income - 	<ul style="list-style-type: none"> -increase concrete cisterns -water systems overhead tanks With solar pumps and piping -refer to KIRIBATI WATER AND SANITATION PLAN 	Costly but effective

ISSUES	PROBABLE CAUSE/S	SOCIETAL IMPACT	REMEDIAL ACTION	SUSTAINABILITY
Agricultural Activity	-superficial commitment to agricultural activity	-no balance diet	-increase awareness and importance of livestock and agricultural activity through Agricultural Division and Taiwan Technical Mission	-it can be sustained
	-shortage of feed for pigs/piglets due to delay in receiving orders from abroad -limited funding -mismanagement of livestock -pigs slaughtered before they are bred	-no supply of land protein	-provide funding - use of local plants, marine seaweed mixed with breadfruit to supplement imported feed	-Can be done, cheap and sustainable, needs creativity