

REPUBLIC OF KIRIBATI

NATIONAL BIODIVERSITY STRATEGIES AND ACTIONS PLAN (KIRITIMATI ISLAND 2005)



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EXECUTIVE SUMMARY

The Biodiversity in this context means all terrestrial and marine ecosystems, all plants and animal species and varieties found in these ecosystems including the knowledge, uses, beliefs and language that the people of Kiribati have in relation to their ecosystems and species. Biodiversity Conservation is always considered along with sustainable use. It has been confirmed that the present state of biodiversity in the Republic of Kiribati is being degraded socially, economically, politically and even judicially. As a nation with very limited resources we just cannot afford to sit back and let this serious degradation continues. If the biodiversity is not conserved or used on a sustainable basis, and if traditional sustainable management practices, and the knowledge and relevant language are not maintained or strengthened then future development would not be able to sustain the people in the long term. The main key in the whole process is the resource owners and users at the community level who hold the long-lasting key to biodiversity conservation.

The development of Kiribati National Biodiversity Strategy and Action Plan (K-NBSAP) has been highly consultative. The process of collecting data and information has been guided by the Steering Committee, a multi-disciplinary committee that comprises of representatives from different stakeholders. The diverse representation of the Steering Committee and the collaborative incentive of the grassroots people reflected a shift towards a multi-sectoral collaboration and the need to establish stronger social and institutional infrastructure to make local community co-management actually work in practice. A number of national and inter-islands workshops have provided input to the final K-NBSAP document that carries the local community's consensus and approval.

With the assistance of the Steering Committee, the Planning Team and the Working Group the K-NBSAP major achievements has been evolved including raise in the technical capacity to address biodiversity management issues, consolidate information about biodiversity in Kiribati and, most importantly, the establishment of a network between various Government Ministries and other relevant partners on national, regional and international levels.

The exercise involved reviews of the 1999 Environment Law, 1975 Wildlife Ordinance, part of Fisheries Ordinances currently in force and other conservation related regulations already existed in the Republic of Kiribati. The Kiribati-National Biodiversity Strategy and Action Plan is in line with the current National Development Strategy and also comply with the developed Ministry Operational Plan (MOP) to fulfill both the K-NBSAP and Kiribati's obligations under the Convention of Biological Diversity.

The results from series of community consultations indicated that some terrestrial and marine resources are extinct, rare and endangered. The main causes of the problem include a multiple environment issues identified by the local communities. The K-NBSAP is expected to provide guidelines and strategies for the conservation of biodiversity in Kiribati. It shall be seen as a guideline to all conservation activities in all levels of communal institutions. Let all

government agencies make an effort to work harmoniously with other agencies in order to achieve objectives and priorities set out in this Strategy.

Some species of terrestrial and marine organisms have been identified as extinct, threatened and rare. The people of Kiribati are affected by loss of biological diversity but would stand to benefit from the implementation of this strategy. The successful implementation of the strategy depends on budgetary priorities and clear understanding of the root causes of constraints by local communities through individual jurisdictions.

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ACRONYMS

Conservation International	CI
Convention of Biological Diversity	CBD
Clearing House Mechanism	CHM
Crop Regional Organization Partnership	CROP
Environment and Conservation Division	ECD
Environmental Youth Club	EYC
Food Agricultural Organization	FAO
Global Environment Facility	GEF
Kiribati National Biodiversity Strategies and Actions Plan	K- NBSAP
Marine Protected Area	MPA
Ministry of Environment, Lands and Agriculture Development	MELAD
Ministry Operational Plans	MOP
National Development Strategies	NDS
National Economic Planning Office	NEPO
Phoenix Islands Protected Area	PIPA
Non Government Organizations	NGOs
Participatory and Learning Actions	PLA
Protected Area	PA
South Pacific Applied Geoscience Commission	SOPAC
South Pacific Regional Environment Programme	SPREP
United Nation Development Program	UNDP
University of the South Pacific	USP

1.0 INTRODUCTION

The formulation and development of the Kiribati National Biodiversity Strategies and Actions Plan (K- NBSAP) is based on the outcomes and recommendations of the various national and follow-up Participatory and Learning Actions (PLA) workshops, community consultations and the biodiversity surveys undertaken in selected islands of the Gilberts Group and Kiritimati Island, which also represented the Line and Phoenix Groups. The biodiversity participatory surveys undertaken served as the basis of the biodiversity inventories, which can be usefully supplemented by more in-depth scientific surveys in community based identified critical habitats such as terrestrial and marine reserves or proposed ecotourism sites or to identify nationally important species of plants (rare or endemic).

The overall objectives of the biodiversity surveys, informal discussions with local communities, national and follow up workshops were to rapidly gather and discuss in-depth information on terrestrial and marine biodiversity that could be again used by local communities to identify actions that can be taken at the resource owner/user level, community or island level to protect, conserve and sustainable use the existing terrestrial and marine biodiversity as the basis for all cash and non-cash income (now and in the future).

Thus, the Kiribati NBSAP emphasizes on the living environment or the biodiversity of Kiribati. Biodiversity is a combination of two words- 'biological', which refers to living things and 'diversity', which refers to the variety of different types of living things (Thaman, Tukiuha, Kulatea & Aue, 2004 p. 125). Within the environment context of Kiribati as a small atoll nation, the biodiversity includes all terrestrial and marine ecosystems, all plant and animal species and varieties found in these ecosystems and the traditional knowledge, uses and beliefs and local language that people have, in relation to these ecosystems and species. These knowledge systems have enabled the people to live harmoniously with their environment (on land and at sea) and enabled them to survive in these limiting environments for many generations.

Kiribati has always relied on the biodiversity as the only capital available to sustain the people and the country's livelihoods, cultural identity and socio-economic well-being. Compared to other

island countries, the indigenous vegetation and flora of the atolls of Kiribati are among the poorest on earth and very few if any endemic species. But this is also the only biodiversity available and both the people and the country rely on it for their economic and social survival as atoll dwellers. . Despite the limitations of land, soil, and water resources, people have developed sophisticated subsistence agricultural systems based on coconut (*Cocos nucifera*), breadfruit (*Artocarpus altilis*), pandanus, native fig (*Ficus tinctoria*), banana (*Musa* sp.) on the wetter islands, and the cultivation of the giant swamp taro (*Cyrtosperma chamissonis*) (Redfern, 2005). Apart from the capital island, the majority of local communities continue to live simple lifestyles in harmony with nature – and Kiribati needs to enable this to continue.

Kiribati's relatively rich marine fauna has been and continues to provide the people with their only main protein – fish. The marine fauna of Kiribati includes between 300 and 400 species not including some amazing species found during the research expedition to the Phoenix Islands.

Sadly a very large percentage of this biodiversity is seriously threatened and in need of some form of protection. If the biodiversity of Kiribati is not conserved and protected it might prove inadequate to sustain the people in the long run. The traditional sustainable management practices and the knowledge, the language used for conservation and protection of our biodiversity should be maintained and strengthened.

There is a national need to undertake strategic resource management measures that would safeguard the deteriorating status of natural resources for future generations of I-Kiribati. At the same time, it is essential to take into consideration traditional conservation practices, knowledge, skills and ethics that are effective in the day-to-day utilization and management of natural resources available amongst the grassroots people.

1.1 BACKGROUND

The principal objectives of the Convention of Biological Diversity (CBD) are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the utilization of genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies (CBD Text and Annexes). The CBD recognizes that the key to maintaining biological diversity depends upon using this diversity in a sustainable manner. The Convention establishes a financial mechanism for the provision of financial resources to developing country Parties for the purpose of the Convention on a grant or concessionary basis. It also provides for the establishment of a Clearing House Mechanism (CHM) for scientific and technical cooperation, where Parties will be able to share and disseminate their national biodiversity information on the website. The CBD imposes obligations on governments to respect, preserve and maintain indigenous peoples' knowledge, innovations and practices, and to protect and encourage their customary use of natural resources (WALHI, JATAM & AMAN, 2004 p.1)

The government of Kiribati has recognized the importance of conserving biological diversity and has become a member by ratifying the CBD on 16th August 1994. Under its membership, Kiribati has certain obligations to meet the objectives of the CBD at the national and international levels. This is being provided for, under the Enabling Activities - the Kiribati National Biodiversity Strategy and Action Plan (NBSAP) Project and the NBSAP Add-On Project. The CBD operational focal point is the Permanent Secretary of the Ministry of Environment, Lands and Agriculture Development (MELAD).

The government is developing revisions to environmental legislation which will allow for greater and more effective measures for the conservation of biodiversity and implementation of the CBD.

The Kiribati National Biodiversity Strategies and Actions Plan Project is nationally executed by the Environment and Conservation Division (ECD) of the Ministry of Environment, Lands and Agriculture Development. Biodiversity conservation is one of the key environment issues identified under the Summary of Priority Environmental Concerns for Kiribati in 2002 that needs

urgent attention to address (Teariki, 2002 p.51). Until this is seriously considered at the community, island and national levels within the Republic of Kiribati, then the natural environment and resources available would be able to be conserved and managed sustainably for equal sharing of benefits arising from, between many generations now and in the future.

2.0 PRELIMINARY ASSESSMENT ON BIOLOGICAL DIVERSITY

This preliminary assessment is based on the 2000 Kiribati National Biodiversity Strategy and Action Plan prepared by the previous teams of the NBSAP Project, coordinated by Mr. Amara Makaea from late 1998 to early 2000. However, at the national level, there were no in-depth assessments that have been made, to determine the actual contributions of biological diversity to the livelihoods of the people and economy of the country. The assessment of the monetary values and quantities of certain components and products of terrestrial and marine biological diversity is limited to those resources that are currently exported out of the country or have market values within Kiribati. (ref. Table 1, page 11)

The needs assessment for capacity building continued mid 2003 with an additional fund for Enabling Activities. The add-on project is coordinated by Mr. Bwere Eritaia and Ms. Nenenteiti Teariki as a National Consultant. The project organized series of workshop on national, island and even government levels. Findings from the workshops provided significant base for the Kiribati National of Biodiversity Strategy and Action Plan.

2.1 INVENTORY

2.1.i TABLE 1: ENDANGERED SPECIES

TAXA	NUMBER OF SPECIES	NUMBER OF ENDANGERED SPECIES	LOCAL NAMES	COMMON NAMES	SCIENTIFIC NAMES
Invertebrates	92	4 species	1. Neitoro.		<i>Tridacna gigas</i>
			2. Kima./ were matai	Fluted Giant Clam	<i>Tridacna Squasoma</i>
			3 Aubunga.	Rugose Giant Clam	<i>Tridacna maxima</i>
			4. Buuroo		<i>Cypraea spp.</i>
Reptilian	6 turtle species	3 turtle spp.	1. On	Green turtle	<i>Chelonia mydas</i>
			2. On tabakea, borauea	Hawksbill turtle	<i>Eretmochelys imbricate</i>
			3. Kabi-ni-Wa	Leatherback turtle.	<i>Dermochelys coriacea</i>
Mammals	3 whales & 3 dolphin species = 6	3 species	1 Ten Tokitoki	Sperm whale	<i>Megaptera Novaeangliae</i>
			2. Kua ni Marawa	Blue whale	<i>Balaenoptera musculus</i>
			3. Kua	Humpback whale	<i>Megaptera novaeangliae</i>
Aves	38 bird species	38	1. Eitei-male: Marenaiti or Bairakau female: Ubamara	Great frigate bird	<i>Fregata minor</i>
			2. Eitei - Ubaimoa	Frigate bird	<i>Fregata aquila</i>
			3. Eitei - ubaitoi or Ubamei	Lesser frigate bird	<i>Fregata ariel</i>
			4. Korouangutungutu.*	White tailed tropic Bird*	<i>Phaeton lepturus</i>
			5. Taake	Red tailed tropic bird	<i>Phaethon rubricauda</i>
			6. Ruru.	Phoenix petrel	<i>Pterodroma alba</i>
			7. Keeu	Sooty tern	<i>Sterna fuscata</i>
			8. Tarangongo/ Maningongo	Bridled tern/Grey-backed tern	<i>Sterna anaetheta</i>
			9. Kewe-wii anau	Sanderling	<i>Groethia alba</i>

			10. Bokikokiko	Line Islands warbler*	<i>Acrocephalus aquinoctialis</i> *
			11. Koota	Red footed booby	<i>Sula sula</i>
			12. Raurau*	Blue- grey noddy*	<i>Procelsterna cerulean</i> *
			13 Io	Brown Noddy/Common noddy	<i>Anous stolidus</i>
			14. Bewebwe ni marawa*	Polynesian storm-petrel*	<i>Nesofregatta fuliginosa</i> *
			15. Nna*	Audubon's shearwater*	<i>Puffinus iherminieri</i> *
			16. -	Dusky shearwater	<i>Puffinus obsurus</i>
			17. Kaai	Reef heron	<i>Demigretta sacra</i>
			18. Mangkiri	Black noddy	<i>Anous minutus</i>
			19. Kunei	White capped noddy	<i>Microanous leucocapillus</i>
			20. Kiakia	Black napped tern	<i>Sterna sumatrana</i>
			21. Karakara	Great crested tern/Swift tern.	<i>Sterna bergii</i>
			22. Matawa/matawanaba	Common White tern	<i>Gygis alba</i>
			23. Kibui	Mottled hawk	<i>Astur rufitorques</i>
			24. Kaai	Crane	<i>Antigone australasina</i>
			25. Kiriri	Wandering tattler	<i>Heteroscelus incanus</i>
			26. Kitibwa	Ruddy turnstone	<i>Arenaria interpres</i>
			27.		<i>Phaethon lepturus</i>
			28. Moukena*	Masked booby*	<i>Sula dactylatra</i>
			29. Kibui	Masked gannet	<i>Sula cyanops</i>
			30. Tangiuoua	Wedge-tailed shearwater	<i>Puffinus pacificus</i>
			31. Tinebu*	Christmas shearwater*	<i>Puffinus nativitatis</i> *
			32. Tarariki/ Te Keeu	Sooty tern (Wideawake tern)	<i>Sterna fuscata cabuensis</i>
			33. Kitiba	Sandpiper	<i>Calidris arenaria</i>
			34. Kewe	Bristle- thighed curlew	<i>Numenius tahitiensis</i>
			35. Kun	Pacific golden plover	<i>Pluvialis fulva</i>
			36. Kun	Sandsnipe	<i>Totanus icanus</i>

			37. Kibui/Tairoiro	Brown booby/Common booby	<i>Sula leucogaster</i>
			38. Kura*	Kuhul's (Scarlet-breasted) lorikeet*	<i>Vini kuhlii</i>
Fish	430(including 37 new species found at Phoenix)	1. Humphead wrasse	1. Karon	Humpheaded wrasses	<i>Cheilinus undulatus</i>
		3. Large grouper	1.Maneku	Rockcod	<i>e.spp</i>
			2. Kauoto	Grouper	<i>c.spp</i>
			3. Marati	Large grouper	<i>c.spp</i>
Higher Plants:					
Bryophytes	3	None			
Pteridophytes	2	None			
Gymnosperms	(Refer to Appendix II)				
Angiosperms	(Refer to Appendix II)				

* Vulnerable species on Kiritimati, McKean and Phoenix (Rawaki) Islands of the Line and Phoenix Groups (islands which host the last breeding sites of such) (Lovell, Kirata, Tekinaiti, 2001 p. 71)

2.2 MONETARY VALUES OF BIODIVERSITY

2.2.i **TABLE 2: COMPARATIVE VALUES OF BIODIVERSITY**

The table indicated a summary of terrestrial and marine products that generated revenue to the country in terms of exports. The exception is with eco-tourism, game fishing and pleasure diving which enable tourists to visit Kiribati, in particular Kiritimati Island of the Line Group, to enjoy the luxury of such commodities.

PRODUCTION	QUANTITY			VALUE (AUD\$)		
	1998	2001	2002	1998	2001	2002
1. Copra	480 tons	N/A	6649 m.tons	216,000-00	N/A	1,029,791-00
2. Handicrafts		N/A	N/A	278,224-00	N/A	50-00
3. Eco-tourism	11,214	N/A	N/A	5,046,300-00	N/A	N/A
Marine Products						
4. Bechedemer (Sea cucumber)	14.4 m.tons	N/A	19,090 kg	N/A	N/A	454,438-00
5. Fish	N/A	N/A	3,029 kg	N/A	N/A	23,908-00
6. Pet Fish*	106,684 pieces	N/A	2,797 boxes	1,076,738-00	N/A	2,500,165-00
7. Lobsters	N/A	N/A	7,132 kg	N/A	N/A	78,720-00
8. Shark-fins	N/A	N/A	2,602 kg	N/A	N/A	437,212-00
9. Seaweed	635.3 m.tons	N/A	660 m.tons	620,000-00	N/A	652, 386-00
10. Commercial fishing (tuna resource)	26 m.tons	N/A	N/A	N/A	N/A	N/A
11. Game fishing*	853 persons	837	636	32,410-00	29,295-00	22,260-00
12. Diving (for pleasure)*	73	20	27	2,555-00	700-00	945-00

* Specific details are tabled separately

2.2.ii **¹TABLE 3: MONETARY VALUATION OF PET FISH, FISHING PERMIT (FOR SPORT-FISHING) & PLEASURE DIVING OPERATIONS ON KIRITIMATI ISLAND (1998 – 2004):**

The number of bonefish anglers and divers visiting Kiritimati Island fluctuated over the years but has generated a total revenue (1998 – 2004) of AUD\$184,380-00 for sport-fishing and AUD\$8225-00 for pleasure diving. The number of pet fish pieces exported also fluctuated but has indicated an increase again in 2003. Currently, there are 10 pet fish operators existing in Kiribati and the majority of these operators are locals living in Kiritimati Island.

¹ Data collected from Principal Fisheries Officer- Fisheries Div: London, Kiritimati Island 2005

Year	Number of Bonefish Angler	Number of Divers	Fishing Permit (Value AU\$)	Dive Rev. (Value AUD\$)	Pet Fish Pieces	Value (US\$)
1998	853	73	29,855-00	2555-00	100,948	512,612-00
1999	1,019	60	35,665-00	2100-00	96,565	410,410-95
2000	951	28	33,285-00	980-00	73,977	372,502-00
2001	837	20	29,295-00	700-00	115,091	610,316-00
2002	636	27	22,260-00	945-00	130,479	554,060-50
2003	723	21	25,305-00	735-00	161,436	756,615-05
2004	249	6	8,715-00	210-00	2415	N/A
2005	345	60	12,075-00	2100-00	110098	639,917-75
TOTAL	5,613	295	196455-00	10325-00	791009-00	3856434.25

2.2.iii TABLE 4: The following table illustrates the total value for catches recorded by Fisheries Licensing and Enforcement Unit at the Ministry of Fisheries, and Marine Resources Development for the years 1998 to 2004.

	1998	1999	2000	2001	2002	2003	2004
Grand Total	112,782	86,572	111,844	206,285	196,233	57,425	83,962

2.3 MANAGEMENT COSTS FOR CONSERVATION AREAS AND RESERVE

There are existing conservation areas and reserves in Kiribati that are administered under the Fisheries Division, Environment and Conservation Division and Wildlife Unit of Environment and Conservation Division. Kiribati has also established a system of marine protected areas that aim to conserve marine biological diversity. These areas also serve as ecologically representative networks of protected areas at sea. Currently there are 12 Marine Protected Areas that are primarily set up for stock enhancement of marine species that have been identified and confirmed as declining in numbers, yet important for our livelihoods and economic well being. ²There are seasonal closed and closed marine areas that have been designated in several islands of Kiribati- Butaritari, Marakei, Abaiang, Nonouti and Tabiteuea North in the Gilbert Group and Cook Islet of Kiritimati Island in the Southern Line Group for in-situ conservation of both populations of marine species targeted (all marine fish including grouper species- ‘te kuau’ species and wrasse- ‘te karon’) for live fish trade (market

² Pers. Communication (Awira, R. 06th May 2004)

export), and their natural habitats, which are the spawning aggregate sites of such species.
³Fisheries Division is currently working with local island governments of the host islands to develop a bye-law on these closed areas and seasonal closed areas for appropriate legal back up at both national and island levels.

Similarly, there are existing protected areas in the Line and Phoenix Groups and these include:

Phoenix group:

All eight (8) islands in the Phoenix group have been declared conservation areas at the Convention on Biodiversity (CBD) Conference of Parties (COP9) meeting in Curitiba Brazil in March 2006. This Conservation initiative is called the Phoenix Islands Protected Area (PIPA) and is a significant accomplishment in meeting the Kiribati commitments to the CBD. The PIPA is 187,500 km² and is the third largest Marine Protected area in the world. Along with the ocean area, the PIPA includes the terrestrial habitats of the following islands: Nikumaroro (CA), Manra (CA), Orona (CA), Kanton (CA), Rawaki (CA), Enderbury (CA), Birney(CA) and MacKean (CA).

Southern Line group:

Caroline Island/Millennium Island (PA), Malden (PA)

Northern Line group:

Kiritimati Island:

Ngaontetaake (PA); Dojin (PA); Tanguoua (PA); Koil (PA); Toyota (PA); Mouakena (PA); Motu Tabu (PA); Motu Upua (PA); Cook Islet (PA)

These protected areas are designated as wildlife sanctuaries to protect the abundant and unique birdlife existing in the Line and Phoenix Groups. These areas and islands are also globally significant seabird sites that function as critical refuge for migratory, resident and breeding marine and terrestrial biota and critical habitat for many endemic, depleted and endangered species (Kokkenen, Teariki, Teaioro & Takeke, 2004 p: 4).

³ Pers. Communication (Awira, R. 06th May 2004)

2.3. i TABLE 5: MANAGEMENT COSTS FOR PROTECTED AREAS & MARINE RESERVES (1998 – 2004):

The following table illustrates some islands in the Gilbert Group that have identified certain marine reserve areas. These areas have been identified by local communities as marine close areas. The management cost should be included in the annual budgetary allocation of the island council concerned or as an additional budget to the central government supporting grants to island councils. The Fisheries Division in collaboration with the Conservation Unit of the Environment and Conservation Division would play significant role in managing these closed areas.

DESIGNATED AREAS/SITES	TOTAL LAND/MARINE AREA	ANNUAL OPERATING COSTS (AUD\$)						
		1998	1999	2000	2001	2002	2003	2004
I. MARINE RESERVES – (not yet assessed)								
1. Butaritari Marine Closed Area	No assessment made yet.	n.a	n.a	n.a	n.a	n.a	n.a	n.a
2. Marakei Marine Closed Area	No assessment made yet	n.a	n.a	n.a	n.a.	n.a.	n.a.	n.a
3. Abaiang Marine Closed Area	No assessment made yet.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
4. Nonouti Marine Closed Area	No assessment made yet	n.a	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
5. Tabiteuea North Marine Closed Area	No assessment made yet.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
6. Onotoa Marine Closed Area	No assessment made yet.	n.a	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
7. Cook Islet Marine Closed Area	Data not yet available.	13,500.00	33,700.00	24,200.00	22,780.00	n.a.	n.a.	n.a
II. PROTECTED ISLANDS								
8. Phoenix Islands Protected Areas (PIPA)	Currently assessed.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
- McKean	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
- Birnie	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
- Nikumaroro	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
- Manra	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
- Orona	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
-Kanton	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
-Binikiti	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
-Enderbury	Currently assessed	n.a.	n.a.	n.a.	n.a.	n.a	n.a.	n.a
9. Malden	Not yet assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a

10. Caroline or Millenium Island	Not yet assessed	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
III. PROTECTED AREAS: - There is no specific budgetary allocation for the management of protected areas, costs are included in the Wildlife and Fisheries Divisions Recurrent budget annually.								
11. Ngaontetaake	15,183 acres inclusive	✓	✓	✓	✓	✓	✓	✓
12. Dojin	Incl. above	✓	✓	✓	✓	✓	✓	✓
13. Tanguoua	Incl. above	✓	✓	✓	✓	✓	✓	✓
14. Koil	Incl. above	✓	✓	✓	✓	✓	✓	✓
15. Toyota	Incl. above	✓	✓	✓	✓	✓	✓	✓
16. Mouakena	7,062 acres	✓	✓	✓	✓	✓	✓	✓
17. Motu Tabu	296.64 acres	✓	✓	✓	✓	✓	✓	✓
18. Motu Upua	50,302 acres	✓	✓	✓	✓	✓	✓	✓
19. Cook Islet	5,384.50 acres	✓	✓	✓	✓	✓	✓	✓

Key: n.a = not available, ✓ = no direct cost allocated.

3.0 KIRIBATI NBSAP GOALS AND OBJECTIVES

The goals and objectives of the Kiribati National Biodiversity Strategies and Action Plan (K-NBSAP) are developed with the aim of meeting the main objectives of the CBD within the environment context of Kiribati. The key objective in the development process of the K-NBSAP is to mobilize the participation of all consulted stakeholders that is multi-disciplinary in nature, who play key roles in the subsequent implementation of the Plan, once it is final. This approach is aimed at fostering a sense of ownership of the Plan amongst all stakeholders concerned from different sectors of government, private sectors, Non Government Organizations (NGOs) and grassroots people, to ensure their cooperation and support in the implementation of the various stages of the K-NBSAP.

The National Biodiversity Strategies and Actions Plan, has the following goals for the next 5 year period:

- Improvement of informal education and public awareness at local community levels, which would form the basis for improved decision- making and participatory approach in biodiversity protection.
- Sustainable use and management of land and terrestrial resources that are in line with traditional and customary land and marine tenure systems.
- Biological resources shall be enhanced, used and managed to maintain biological diversity in the short and long term run.

- Available data and information on national biodiversity shall be expanded and made available to policy makers and the public.
- Activities that pollute and threaten biodiversity shall be minimized.

Current strategic actions and activities of the NBSAP Project include:

- Inventory surveys and stocktaking assessment on terrestrial and marine flora and fauna in Butaritari, Nonouti, Nikunau and Kiritimati in the Northern Line Islands.
- Formal and Informal public education and awareness on biodiversity significance and associated issues targeting local communities (women, youths, grassroots people).
- Implementation of general measures for conservation of living resource within and outside their habitats (pipeline).
- Documentation of biodiversity related knowledge of indigenous and local communities embodying traditional lifestyles (pipeline).
- Methodologies to evaluate and mitigate specific threats to biodiversity components (pipeline).
- Development of a national biodiversity website to facilitate information sharing and dissemination at national and international level (pipeline).
- Re-vegetation/ replanting schemes of indigenous plants/trees that have important cultural values (pipeline).

During the participatory learning and action workshops, national workshops and community visits and consultations, many grassroots people agree that:

- All life forms are important components of biological diversity.
- The people of Kiribati depend on biological diversity for their livelihoods and socio-economic well being. Hence, people must work together to protect, manage and utilize biological diversity in a wise manner to ensure its availability for many generations to enjoy.

- Information sharing on the need to protect and manage biological diversity amongst the people is critical and should be promoted at the community, island and national levels.
- The protection and management of biological diversity is a multi-disciplinary issue that needs a multi-disciplinary approach to address. The multi-disciplinary stakeholders are important to identify and shall be consulted and informed on the status of biological diversity. These stakeholders are instrumental in the protection and management of biodiversity on a daily basis and shall be involved in all activities that aim to protect and manage biodiversity.
- All infrastructure and development activities should be ecologically and economically sustainable.
- Traditional and customary use of biological resources and the natural environment need to be recognized, respected and integrated into the contemporary environment and resource conservation and management planning in Kiribati.

3.1 NATIONAL DEVELOPMENT STRATEGIES (NDS) 2004 – 2007 AND ITS RELEVANCE TO THE K-NBSAP

The National Development Strategies (NDS) is a strategic plan for sustained growth in the income and welfare of the people of Kiribati (NDS 2004 -2007, p: 8). It is a planning framework that aims to encompass the national government current policy statement, which is *Enhancing and ensuring the equitable distribution of development benefits to the people of Kiribati according to principles of good governance*. To achieve this, the combined efforts of all sectors of Kiribati's society and economy were required and would come from:

- Partnership of public and private investment in infrastructure and production.
- Equitable distribution of services and economic opportunity.
- Improved efficiency in the public sector.
- Equipping people to manage social and economic change as individuals, communities and as a nation.
- Using natural resources and physical assets sustainably.

- Preserving the financial reserves of Kiribati while utilizing it to finance development.

In general, there is limited coverage of environmental issues in the NDS. There are limited or no direct policies that clearly address the environmental issues that are often multi-disciplinary in nature. There are six key policy areas issues and these are:

- Economic Growth
- Equitable Distribution
- Public Sector Performance
- Equipping People to Manage Change
- Sustainable Use of Physical Resources
- Protection and Use of Financial Reserves

The issue of climate change and its potential social and economic impact, and the need to manage public open spaces in South Tarawa were highlighted under the Sustainable Use of Physical Resources. Climate change is also the only environmental issue that has undergone mainstreaming in all concerned government sectors. Other environment issues such as the need to protect and manage biological diversity, waste management and pollution control, enforcement and compliance of the Environment Act, to name a few, are addressed as single statements under different key policy areas issues that are administered and fall under the portfolios of different government sectors (Ministries) (*pers. comm.* Director- National Economic Planning Office (NEPO): March 2004). Such issues and concerns would be emphasized and reflected in the arrangement for implementing and monitoring performance of the NDS 2004 – 2007. This would be the detailed planning activities to achieve the various government key policy areas in the Ministry Operational Plans (MOP) that are to be developed by individual Ministries. These plans would be developed according to the different portfolios of each operating government agencies and the performance of such agencies based on these plans, would be monitored and reported to Parliament and the public. MOPs are also closely connected to financial planning (NDS 2004 -2007, p: 9).

3.1. i ENVIRONMENT AND CONSERVATION DIVISION MINISTRY OPERATION PLAN (MOP) AND ITS RELEVANCE TO THE K-NBSAP

Environment and Conservation Division's program under the Ministry of Environment, Lands and Agriculture Development (MELAD) MOP Planning and Monitoring Framework is *Improving the environment through conservation and protection*. (ECD MOP 2004). The key outcomes are the *prevention and minimization of Kiribati's environmental degradation and the promotion of conservation and sustainable (fair and equitable) use of island biodiversity to support the socio-economic needs of Kiribati*.

There are five key outputs of ECD MOP and one of these outputs, is the Conservation and Management of Biological Diversity:

3.1. i.a TABLE: 6: ECD MOP OUTPUT D:

Biodiversity Conservation and Management	Performance Measures and Timeliness
1. Create incentives and mechanisms that would form the basis of establishing community based environmental protection and management initiatives (Establishment of community-based conservation and protected areas).	At least 5% of coastal and terrestrial zones important for island biodiversity are placed under community-based conservation management between 10/06 and 09/07 Management plans for conservation and protected areas are developed.
2. Invasive alien species and feral animals are controlled.	At least 1 invasive alien species is under control every year beginning 02/05, 02/06 and finally 09/07.
3. Data and information compilation for the production of a national red data book National red data book (identification, protection and restoration of endangered, rare, threatened and culturally significant species, habitats and ecosystems).	Degraded natural ecosystems and declining species are identified, by 02/05, Endorse National Red List and translated environment terms by 05/05, published before 10/05, protection and restoration may be in place as follows: 10% by 11/05; 20% by 08/06; 30% by 10/07. Update of National red book every 3 years
4. Access and benefit sharing of island biodiversity that include bio-prospecting, are regulated.	Manage (database, procedure, etc) all environmental (other than marine scientific) research from external institutions, by 10/04. Regulation is in place by 06/05
5. Clearing-house mechanism*	A website on environmental information (biodiversity, biosafety, climate change, etc) established, by end of 2005 and further developed in 2006-7

* This is reflected in Output E: Information and Data Management of ECD Ministry Operational Plan

Activities outlined in Output D are developed on the basis of the outcomes identified during the implementation of both the NBSAP and NBSAP Add-On Projects. These activities are also the major gaps identified at the national level. Such activities, including other relevant outcomes of these projects would be continually monitored and reported to the Parliament and the general public, with the aim of improving information and knowledge on the status of biological diversity in Kiribati.

In line with the above, the Environment and Conservation Division's long term objective concerning the conservation and management of biological diversity, are to preserve the productivity of nature and the diversity of species. This implies that important ecological processes and the natural basis for production must be maintained, while anthropogenic changes and the potential adverse impacts on the environment need to be avoided. In particular, those anthropogenic changes that affect the genetic structure of the natural populations of species.

4.0 IDENTIFIED GAPS/ OBSTACLES THAT AFFECT THE PROTECTION AND MANAGEMENT OF BIOLOGICAL DIVERSITY

This section examines and compliment the various gaps identified during the various workshops, biodiversity surveys, community visits and consultations that have the potential to affect the protection and management of biodiversity. Other problems and issues have been discussed in detail in the country report.

At the grassroots level, people are ignorant on the importance of conserving and managing biodiversity at the community and island levels. Biodiversity and other related environment terms are new words that do no have direct translations in the native language (Kiribati translations). Many people do not immediately understand the meaning of biodiversity until the term itself is simplified into definitions that fit their environmental situations, which they occupy. This is a big challenge, when it comes to doing consultations with grassroots people, as in many cases, a combination of Kiribati words have to be used for translating biodiversity. For many generations, people have classified knowledge that have helped them to survive in the limiting atoll environment. These knowledge are passed down verbally amongst closest kin only from one generation to the next. Many of these knowledge are traditional science that have also helped to sustain the natural resources and environment for many years. However, most of these traditional science are also limiting to certain species and associated habitats. For example, in the Kiribati traditional way of living, not every living or non-living things is equally important. There are certain living and non-living things that will be considered as more important and hold higher status in peoples lives than others. In most cases, those species and habitats that are known to be important are not viewed as having inter-relatedness with other species and habitats.

Other equally important gaps identified that have the potential to impact the protection and management of biodiversity and need consideration include:

1. Low level of willingness of grassroots people to undertake and participate in the conservation and management of biodiversity at the community and island levels.
2. Low level of public understanding and knowledge on the importance of undertaking conservation and management of biodiversity at the community and island levels.
3. Population increase and changing lifestyles. For instance, many people have abandoned the traditional food systems over imported foodstuffs. This has resulted in decreasing number of people who maintain, preserve and apply traditional knowledge associated with food systems. Consequently, this may result in the loss of such knowledge as they hardly use it in their daily interaction with nature.
4. Low level of budgetary allocation and integrating environmental and biodiversity issues into the National Development Strategies 2004 – 2007.
5. Change over of staff, who are members of the Steering Committee and the Planning Team (working groups of the NBSAP and NBSAP Add- On Projects) in several government and private sectors including the civil society, during the implementation periods of the NBSAP and NBSAP Add-On Projects.
6. Several members of both the Steering Committee and the Planning Team, who are also key stakeholders to the protection and management of biodiversity, hardly turn up in meetings and in national workshops undertaken.

5.0 KIRIBATI NATIONAL BIODIVERSITY STRATEGIES AND ACTIONS PLAN

To meet the goals and objectives developed under the NBSAP and NBSAP Add- On Projects, in order to conserve and manage island biodiversity, the national government needs to develop and implement a National Biodiversity Strategies and Actions Plan (NBSAP). It is important to note that the basis of developing and formulating the biodiversity strategies and actions was the outcomes of strategies and actions suggested by local communities identified during the various workshops, biodiversity surveys with key informants of the island identified by local people, community visits and consultations that were undertaken at various stages of the NBSAP and NBSAP Add-On Projects. These strategies and actions are identified with the aim of addressing issues that affect the protection and management of biological diversity, within the environmental context of Kiribati as a small atoll nation. These strategies and actions are subjected to further follow up and in-depth research, if the national government of Kiribati sees the need to.

5.0.i TABLE 7: STRATEGIES AND ACTIONS PLAN FOR TERRESTRIAL AND MARINE ENVIRONMENT

5 Year Objectives	5 Year Targets	
1.1 Create incentives and mechanisms that would form the basis of establishing community based environmental protection and management	1.1.1	Establish at least 1 community-based conservation area and 1 marine reserve in the Gilberts Group, 1 community-based conservation area in the Line.
	1.1.2	Establish and strengthen conservation networks, initiatives and partnerships between national government, private sectors and civil society
	1.1.3	Identify and develop incentives that would generate income to local communities, while carrying out a community based environmental protection and management
	1.1.4	Develop means of engaging government and private businesses in environment friendly practices and support for conservation of biological diversity
	1.1.5	Designate uninhabited islands for eco-tourism developments
1.2 Create sustainable financial mechanism for the protection and management of biological diversity	1.2.1	Increase national government budgetary allocation by 5% (yearly) to fund for the protection and management of biological diversity
	1.2.2	Undertake feasibility studies on the viability of establishing Environment Trust Fund in Kiribati

	1.2.3	Mainstream the protection and management of island biodiversity into different sectors of government, private sectors and civil society
1.3 Increase the number of conservation areas under effective management and planning	1.3.1	Develop an integrated environment management actions plan for Kiribati that address environmental issues in a multi-disciplinary manner
	1.3.2	Control and where possible, eradicate at least 2 alien invasive species that threatened viable populations of nationally ecological and culturally significant rare, threatened and endangered species
	1.3.3	Identify at least 1 local community in each Island Groups (Gilberts, Line and Phoenix) that is ready to undertake community based efforts in protecting and managing important conservation areas in their island
	1.3.4	Ban indiscriminate burning and felling of flora (plants and trees) important to the livelihoods of people through appropriate legal back-up (Environment Act)
	1.3.5	Provide support for effective local surveillance of designated marine reserves
1.4 Protect species, viable populations and associated habitats of ecological, natural heritage and cultural significance	1.4.1	Enact and enforce an environment legislation that allows for the protection of species, viable populations and associated habitats of ecological, natural heritage and cultural significance
	1.4.2	Implement general measures for in-situ and ex-situ conservation
	1.4.3	Establish at least 1 national park island in each of the Line and Phoenix Groups (important ecological corridors for migratory species- avifauna & fisheries) (fish park)
	1.4.3	Compile and publish a national red data book for Kiribati (endangered, rare, threatened and culturally significant species, habitats and ecosystems)
	1.4.4	Recognize, define and integrate traditional and customary use of biological resources/species and their associated habitats into the integrated environment management plan to be developed
	1.4.5	Identify and map ecosystems and habitats of ecological, natural heritage and culturally significant in the Gilberts, Line and Phoenix Groups
	1.4.6	Develop and initiate actions to protect and restore at least 2 threatened species in each of the Gilberts, Line and Phoenix Groups
1.5 Regulate access and benefit sharing of island biodiversity that include bio-prospecting	1.4.7	Develop and initiate actions to protect and restore at least 2 threaten ecosystems in each of the Gilberts, Line and Phoenix Groups
	1.5.1	Manage (database, procedure, etc) all environmental (other than marine scientific) research from external institutions
	1.5.2	Review, develop and integrate appropriate legal back up on benefit sharing and bio-prospecting on biological diversity, in the existing Environment Act
1.6 Improve and enhance knowledge and	1.6.1	Develop a national roster of experts on national biological diversity (to be approved by Cabinet)

understanding on the status of biological diversity amongst different sectors of society and the general public	1.6.2	Identify research needs based on the outcomes of the household biodiversity surveys (Inventory surveys and stocktaking assessment on terrestrial and marine flora and fauna) already undertaken under the NBSAP and NBSAP Add On projects, for follow up purposes and to address gaps in knowledge
	1.6.3	Identify best approaches to address the issue of public non-compliance to legislations developed, to protect and manage biological diversity
	1.6.4	Develop a national Clearing House Mechanism by 2006 to host information and data that reflect the status of biological diversity and natural environment in Kiribati
	1.6.5	Identify and provide appropriate capacity building programs to local experts, who are working in the field of biodiversity protection, management and planning
	1.6.6	Allow local experts to participate and involve in all research expeditions related to biodiversity and the environment in general
	1.6.7	Develop appropriate formal and informal biodiversity outreach programs to meet the different levels and needs of the general public (schools of all levels, local communities and church leaders, parliamentarians, grassroots people, children and adults)
	1.6.8	Implement at least 2 national awareness campaigns targeting 2 conservation issues (Replanting scheme campaign (on species of plants and trees that are decreasing in availability for cultural uses in South Tarawa) & management and protection of public open spaces in South Tarawa) with Environmental Youths Club
1.7 Improve collaboration amongst relevant national government departments and relevant CROP agencies (e.g. SPREP, SOPAC, USP, etc)	1,6.9	
	1.7.1	Seek assistance and work with relevant CROP agencies to undertake research on alternative marine natural resources, beside tuna fishery resources
	1.7.2	Seek assistance and work with relevant CROP agencies to develop maps on important terrestrial and marine habitats
1.8 Eliminate destructive actions and activities that degrade viable populations of species and their associated habitats, ecosystems	1.8.1	Ban fishing methods identified and agreed upon by local communities as being destructive to the fisheries and associated marine habitats (use of under-size mesh of gillnets; splash fishing method (te ororo) to catch bonefish; fishing the undersized of important fisheries that have associated market values (e.g. use of bonefish in sport-fishing tourism on Kiritimati Island); coral and aggregate mining; fishing during fish aggregate periods; shark lassoing, to name a few)

6.0 PARTNERS

The Environment and Conservation Division (ECD) of Ministry of Environment, Lands and Agriculture Development would work in close collaboration with key government sectors, private sectors and civil society, to implement the Kiribati National Biodiversity Strategies and Actions Plan. The ECD is also the national lead agency responsible for implementation of all Enabling Activities under its membership to the Convention on Biological Diversity. The lead agency would work in close collaboration with the National Biodiversity Task Force/Committee and the National Roster of Experts on Island Biodiversity in Kiribati. This Committee and Roster of Experts would be identified, approved and endorsed by the national government and would be instrumental in the implementation processes, in terms of consistent participation in all technical (advisory) and administrative matters. The expertise of the sub-working groups of the NBSAP and NBSAP Add-On projects (NBSAP Planning Team and Steering Committee) would continue to be tapped from time to time, where appropriate. Currently, the procedure and viability of mainstreaming the protection and management of island biodiversity within the policies framework of the national government are ready to be explored, with the aim of securing and increasing financial and technical supports from different sectors of government, towards implementation of this plan.

7.0 MONITORING AND EVALUATION

The Kiribati National Biodiversity Strategies and Actions Plan (K-NBSAP) is a tool that would serve as the basis for reporting all activities that are carried out in Kiribati that are in line with meeting the objectives of the CBD. The Environment and Conservation Division would play an instrumental role in monitoring activities and in undertaking any required follow up activities, in close collaboration with the National Biodiversity Task Force/Committee and the National Roster of Experts on Island Biodiversity in Kiribati that are multi-disciplinary in nature. The performance of the K-NBSAP would be monitored and evaluated against the ECD MOP, where relevant outputs are concerned. Quarterly and annual reporting on the evaluation of the performance of the K-NBSAP would be carried out in parallel with the reporting on the achievements of the outcomes of the ECD MOP. The contribution of the K-NBSAP towards the main outcomes of the ECD, which is the Prevention and minimization of Kiribati's environmental degradation and the promotion of the conservation and sustainable (fair and equitable) use of island biodiversity to support the socio-economic needs of Kiribati, would be reviewed and assessed during the reporting periods. This contribution would be again re-assessed against the Republic of Kiribati National Development Plans 2004 – 2007 different policy statements that addressed the issue of protecting and managing island biodiversity, at the national level.

8.0 K-NBSAP BUDGET

The following table is summarising the total budget received under the Enabling Activities- the NBSAP and NBSAP Add On projects, from 1999 to end of October, 2005:

* This is the total budget allocated and received from UNDP Suva, Fiji office as the regional implementing agency for GEF funds for CBD Enabling Activities

8.0.i TABLE 8: KIRIBATI NBSAP BUDGETS FOR 1999 – 2005

ACTIVITY	TOTAL (US \$ 000)
ORIGINAL ENABLING ACTIVITY	
• Original EA, less costs of CHM activities	US\$206,590-00
• CHM support (provided through project itself)	US\$5,000-00
Total support for EA:	US\$211,590-00
ADDITIONAL REQUEST	
1. Project Personnel Total, includes salaries for Project Coordinator, National Consultant and Project Assistant; International Consultants, Monitoring and Evaluation and Mission Costs.	83,000.00
2. Subcontracts Total- Project Audit Expenditure	3,000.00
3. Training Total, includes National Workshops, Inter Island Workshop, Community Consultations, Promotion and Public Awareness and E-mail and Internet.	94,800.00
4. Miscellaneous Total, includes Reporting costs, Production of report, Sundries, Steering Committee, Planning Team and Translation of Documents in Vernacular	16,300.00
2. Country-driven project for participation in the CHM	Costs provided through the original Enabling Activity Funding.
3. Consultations for the preparation of a second national report	The Government of Kiribati does not request funding for the preparation of the 2 nd national report on the first place but would do so when there is a need.
4. Sub-total Additional Funding Phase:	US\$198,000-00
Total supports received for the original Enabling Activity and the Additional Request for Kiribati.	US\$409,590-00

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APPENDICES

APPENDIX I:

NBSAP WORKING GROUPS:

There are two NBSAP working groups established under the NBSAP Projects- the NBSAP Steering Committee and the Planning Team. These groups are multi-disciplinary in nature, in which representatives are drawn from government and private sectors including the civil society that have the potential to affect the protection and management of island biodiversity in Kiribati.

TABLE 9. NBSAP STEERING COMMITTEE MEMBERS (1999 – 2000):

NAMES	OCCUPATION	ADDRESS
1. Temakei Tebano	Manager, Atoll Research	Atoll Research, USP. Teaoraereke, Tarawa
2. Ribwanataake Awira	Fisheries Officer	Fisheries Division, Ministry of Natural Resources Development. Tanaea, Tarawa
3. Kaitu Koina	Agriculture Officer	Agriculture Division, Ministry of Natural Resources Development. Tanaea, Tarawa
4. Eita Metai	Chief Water Engineer	PWD, Ministry of Works and Energy Development. Betio, Tarawa
5. Manikaoti Timeon	Assistant Rural Development Officer	Ministry of Home Affairs and Rural Development. Bairiki, Tarawa
6. Kentaro Ono	Chairman	Kiribati Chamber of Commerce. Betio, Tarawa
7. Aren Teannaki	Social Development Officer	Ministry of Environment and Social Development. Bikenibeu, Tarawa
8. Tion Nabau	Lawyer	Attorney General Chambers. Bairiki, Tarawa
9. Teem Uriam	Tourism Officer	Ministry of Commerce, Industry and Labour. Betio, Tarawa

10. Tebutonga Ereata	Lands and Survey Officer	Lands and Survey Office, Ministry of Home Affairs and Rural Development. Bairiki, Tarawa.
11. Tiibwa Tooki	Assistant Secretary	Linnix Office. Bairiki, Tarawa
12. Ruta Tiriata	Economist	Planning Division, Ministry of Finance and Economic Planning. Bairiki, Tarawa
13. Berenato Timon	Curriculum Development Writer	Curriculum Development Unit. Bikenibeu, Tarawa
14. Bwere Eritaia	North Tarawa Conservation Area Support Officer	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
15. Amara Mwakaea	NBSAP Project Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
16. Tererei Abete Reema	Environment Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
17. Selai Cati	Women Federation Representative	Aia Mwaea Ainen Kiribati (AMAK). Bikenibeu, Tarawa
18. Danfung Ng Kumho	Environment Education Officer	FSP Office. Abarao, Tarawa

TABLE 10: NBSAP PLANNING TEAM MEMBERS (1999 – 2000):

NAMES	OCCUPATION	ADDRESS
1. Temakei Tebano	Manager, Atoll Research	Atoll Research, USP. Teaoaraereke, Tarawa
2. Ribwanataake Awira	Fisheries Officer	Fisheries Division, Ministry of Natural Resources Development. Tanaea, Tarawa
3. Kaitu Koina	Agriculture Officer	Agriculture Division, Ministry of Natural Resources Development. Tanaea, Tarawa
4. Eita Metai	Chief Water Engineer	PWD, Ministry of Works and Energy Development. Betio, Tarawa

5. Manikaoti Timeon	Assistant Rural Development Officer	Ministry of Home Affairs and Rural Development. Bairiki, Tarawa
6. Tion Nabau	Lawyer	Attorney General Chambers. Bairiki, Tarawa
7. Bwere Eritaia	North Tarawa Conservation Area Support Officer	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
8. Amara Mwakaea	NBSAP Project Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
9. Tererei Abete Reema	Environment Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa

TABLE 11: NBSAP OFFICERS (1999 – 2000):

NAMES	OCCUPATION	ADDRESS
1. Temakei Tebano	Manager, Atoll Research (International Consultant to the NBSAP Project- Part time)	Atoll Research, USP. Teaoraereke, Tarawa
2. Ribwanataake Awira	Fisheries Officer (National Consultant to the NBSAP Project- Part time)	Fisheries Division, Ministry of Natural Resources Development. Tanaea, Tarawa
3. Kaitu Koina	Agriculture Officer (National Consultant to the NBSAP Project- Part time)	Agriculture Division, Ministry of Natural Resources Development. Tanaea, Tarawa
4. Amara Mwakaea	NBSAP Project Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
5. Kautoa Tonganibeia	NBSAP Project Assistant	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa
6. Tererei Abete Reema	Environment Coordinator	Environment Unit, Ministry of Environment and Social Development. Bikenibeu, Tarawa

With the turn over of staff in the NBSAP Project in 2000, the NBSAP Project team also changed. Several members of both the Steering Committee and Planning Team also changed as some of them have either moved to work in other different workforces or went overseas. There are also new members invited to join both the Committee and the Planning Team, to suit the changing context of development in South Tarawa as the capital island.

TABLE 12: NBSAP STEERING COMMITTEE MEMBERS (2001 – 2006):

Names	Title	Address
Rikiaua. Takeke	Deputy Secretary (Chair-person)	Ministry of Environment, Lands and Agriculture Development (MELAD)
Tererei. Abete-Reema	Director	Environment and Conservation Division (ECD), MELAD
Bweree. Eritaia	NBSAP Coordinator	Environment and Conservation Division (ECD), MELAD
Nenenteiti Teariki-Ruatu	Ag. Biodiversity and Conservation Officer	Environment and Conservation Division (ECD), MELAD
Makin Binataake	Public Awareness	Environment and Conservation Division (ECD), MELAD
Faitele Miika	Economist	Min of Finance & Economic Development
Manikaoti Timeon	Director, Rural Development Division	Min of Internal and Social Affairs Development
	Ag Senior Land Planning Officer	Lands Management Division (LMD), MELAD
Tabite Bineua	Executive Officer	Min of Line & Phoenix Development
Karabi Bwate	CDRC	Min of Education, Youth & Sport Development
Taratau Kirata	Fisheries Officer	Min of Fisheries & Marine Resources Development
Tianeti Ioane	Agricultural Research Officer	Agriculture Division, MELAD
Dr Alolae Cati	Advisor Maurin Kiribati Traditional Medicine (MKTM)	Min of Health & Medical Services Development
Iataake King	Tourism Officer	Min of Communication, Tourism and Transport Development
Toabwa A Toabwa	Consumer Right Officer	Min of Commerce Industry & Cooperatives
Eveata.Maata	State Advocate	AG's Chamber
Teaaro Otiuea	Quarantine Officer	Agriculture Division, MELAD
Tonganibeia Tamoia	Customs Officer	Custom Division, MFED
Ienimoa Kiatoa	Research Manager	Atoll Seaweed Company
Karawe. Teroroko	Chairperson	KANGO
Nei Maere Tekanene	Secretary	Kiribati Chamber of Commerce
Aren Teannaki	Senior Women Development Officer.	Ministry of Internal and Social Affairs.

TABLE 13: NBSAP PLANNING TEAM (2001 – 2006):

Names	Title	Address
Tererei Abete	Director (Chairperson)	ECD, MELAD
Teitirua. Bwaate	Project Officer	MELAD
Taratau Kirata	Fisheries Officer	Fisheries Division, Min of Fisheries & Marine Resources Development
Tianeti Ioane	Senior Research Agriculture Officer	Agriculture Division, MELAD
Manikaoti Timeon	Director	Rural Planning Development Div - MISA
Eveata Maata	State Advocate	AG's Chamber
Iataake Kinga	Tourism Development Officer	Min of Communication, Transport & Tourism Development
Eita T Metai	Water Chief Engineer	Min of Public Works & Utilities
Dr Alolae Cati	Advisor MKTM (Maurin Kiribati Traditional Medicine)	Min of Health & Medical Services
Dako Nating	Deputy Director	University of the South Pacific - Kiribati
Bwere Eritaia	NBSAP Project Coordinator	ECD, MELAD
Nenenteit Teariki-Ruatu	Ag. Biodiversity and Conservation Officer	ECD, MELAD
Aberce. Bauro	NBSAP Project Assistant	ECD, MELAD
Danfung Binoka	Biosafety Project Coordinator	ECD, MELAD
Makin Binataake	Assistant Environment Education Officer	ECD, MELAD

APPENDIX II:**THREATENED TERRESTRIAL AND MARINE SPECIES (FLORA AND FAUNA)**

The following tables highlighted plants and trees that are culturally important but are increasingly not common or decrease in availability for public use, based on the experiences and knowledge of people, particularly amongst those who live on the capital island (South Tarawa) and Kiritimati Island. Species identified in these tables complimented those identified in Table 2.1.i. Some of the identified species also came from the outcomes of the first round of consultations undertaken throughout Kiribati by the first NBSAP team from 1999 to 2000. The majority of the flora listed below, have important socio-economic and cultural values to the people of Kiribati. This information came from the outcomes of the analysis of the household and maneaba biodiversity surveys undertaken. This needs to be reconfirmed through further scientific assessments and studies:

TABLE 14: TERRESTRIAL FLORA THOSE ARE INCREASINGLY NOT COMMON OR DECREASE IN AVAILABILITY FOR PUBLIC USE: (* REFER TO TABLE 2)

KIRIBATI NAME	COMMON NAME	SCIENTIFIC NAME	STATUS
1. Aitoa		<i>Lumnitzera littorea</i>	Increasingly not common/ Decrease in availability
2. Ango	Premna	<i>Premna serratifolia</i> L.; syn. <i>P. obtusifolia</i> R.B.; <i>P. taitensis</i> Schauer (I)	Increasingly not common/ Decrease in availability
3. Aronga	Acalypha tree	<i>Acalypha wilkensisiana</i>	Increasingly not common/ Decrease in availability
4. Aroua	Surian	<i>Suriana maritima</i>	Increasingly not common/ Decrease in availability

5. Aroma	Silver pipturus	<i>Pipturus argenteus</i>	Increasingly not common/ Decrease in availability
6. Baireati	Fish poison tree	<i>Barringtonia asiatica</i>	Increasingly not common/ Decrease in availability
7. Bero	Wild fig	<i>Ficus tinctoria</i> Forst.f.	Increasingly not common/ Decrease in availability
8. Bingbing	Lantern tree	<i>Hernandia nymphaeifolia</i> (Presl.) Kubr.	Increasingly not common/ Decrease in availability
9. Biku	Common fig	<i>Ficus caria</i>	Increasingly not common/ Decrease in availability
10. Boi	Broad-leaved purslane	<i>Portulaca lutea</i> Sol. syn. <i>P. Oleracea</i>	Increasingly not common/ Decrease in availability
11. Boi	Pigweed	<i>Portulaca oleracea</i>	Increasingly not common/ Decrease in availability
12. Boi	Wild purslane	<i>Portulaca tuberosa</i>	Increasingly not common/ Decrease in availability
13. Buka	Pisonia/ great lettuce tree	<i>Pisonia grandis</i> R. (Brown)	Increasingly not common/ Decrease in availability
14. Bumorimori	Giant milkweed, crownflower	<i>Calatropis gigantea</i>	Increasingly not common/ Decrease in availability
15. Bwabwai (and associated cultivars)	Giant swamp taro	<i>Cyrtosperma chamissonis</i> (Schott.) Merr. (A)	Increasingly not common/ Decrease in availability
- Iabea	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Iokanai	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Aurairaki	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Bamaïi	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Natutebubura	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability

			in availability
- Oineke	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Ikauraura	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Kaoki	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Bakateke	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Antouman	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Unikaai	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Ikaraoi	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Kaikui	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Katutu	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Atimainiku	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Ibaon	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Ibuota	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Manra	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Kairoro	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability
- Nawaro	Unknown	<i>Cyrtosperma chamissonis</i>	Increasingly not common/ Decrease in availability

16. Ibibi (n Tamoā)	Unknown	<i>Inocarpus fagifer</i>	Increasingly not common/ Decrease in availability
17. Inato	Privet	<i>Clerodendrum inerme</i> (Linn.) Gaertn	Increasingly not common/ Decrease in availability
18. Itai	Alexandrian laurel/punai nut	<i>Calophyllum inophyllum</i> Linn.	Increasingly not common/ Decrease in availability
19. Kabekau	Wild poinsettia/Painted lady	<i>Euphorbia cyathophora</i> Murray syn. <i>E. heterophylla</i>	Increasingly not common/ Decrease in availability
20. Kaibuaka	Lantana	<i>Lantana camara</i> L. var. <i>Camara</i>	Increasingly not common/ Decrease in availability
21. Kaibwabwa	Bamboo	<i>Bambusa vulgaris</i>	Increasingly not common/ Decrease in availability
22. Kaibwaun	Firecracker flower/ Coral plant	<i>Russelia equisetiformis</i> Cha. & Schlecht. Syn. <i>R. juncea</i> Zucc.	Increasingly not common/ Decrease in availability
23. Kaikare	Stinking fleabane	<i>Pluchea symphytifolia</i>	Increasingly not common/ Decrease in availability
24. Kaimatu	Sleeping plant; silver bush	<i>Phyllanthus amarus</i> Schum. & Thonn.	Increasingly not common/ Decrease in availability
25. *Kaina (and associated cultivars)	Pandanus; screw pine	<i>Pandanus tectorius</i> Park.	Increasingly not common/ Decrease in availability
26. Kanawa	Sea trumpet	<i>Cordia subcordata</i> Lam.(I)	Increasingly not common/ Decrease in availability
27. Kaura	Golden mallow/ilima (Hawaiian)	<i>Sida fallax</i> Walp.	Increasingly not common/ Decrease in availability
28. Kaura ni Banaba	Abutilon	<i>Abutilon indicum</i>	Increasingly not common/ Decrease in availability
29. Kaiboia	Dodonea	<i>Dodonea viscosa</i>	Increasingly not common/ Decrease in availability
30. Keang ni makin	Scented fern/ lawai fern	<i>Phymatosorus scolopendria</i> Burm.	Increasingly not common/ Decrease in availability
31. Kiaou	Beach burr	<i>Triumfetta procumbens</i> Forst.f. (I)	Increasingly not common/ Decrease in availability

			in availability
32. Kiaiai	Beach hibiscus	<i>Hibiscus tiliaceus</i> L. var. <i>tiliaceus</i>	Increasingly not common/ Decrease in availability
33. Kiebu rara te ruru n aine	Crinum lily	<i>Crinum asiaticum</i> Linn.	Increasingly not common/ Decrease in availability
34. Kiebu (te ruru n mwane)	Crinum	<i>Crinum pedunculatum</i>	Increasingly not common/ Decrease in availability
35. Kiebu	Queen Emma lily	<i>Crinum angustum</i>	Increasingly not common/ Decrease in availability
36. Kunikun, te ntarine	Sea almond; Pacific almond	<i>Terminalia catappa</i> Linn.	Increasingly not common/ Decrease in availability
37. Mai (and associated cultivars)	Breadfruit tree	<i>Artocarpus altilis</i> (Park.) Fosb. (A)	Increasingly not common/ Decrease in availability
- Mai (and associated cultivar Maikora/Maitarika?)	Breadfruit	<i>Artocarpus mariannensis</i> Trec	Increasingly not common/ Decrease in availability
- Mai- Bukiraro	Breadfruit		Increasingly not common/ Decrease in availability
- Maikeang	Breadfruit	<i>Artocarpus altilis</i> (Park.) Fosb. (A) syn. <i>A. incisa</i> Thumb.	Increasingly not common/ Decrease in availability
- Mai- Teinukuntaake	Breadfruit	<i>A. altilis</i>	Increasingly not common/ Decrease in availability
- Mai- Te nnanako (Kuria Is)	Breadfruit	<i>A. mariannensis</i>	Increasingly not common/ Decrease in availability
- Mai- Motiniwae	Breadfruit	<i>A. Altilis.</i>	Increasingly not common/ Decrease in availability
- Mai-Bokeke	Breadfruit	<i>A. Altilis</i>	Increasingly not common/ Decrease in availability
38. Makemake	Polynesian arrowroot	<i>Tacca leontopetaloides</i> (Linn.) Merrill.	Increasingly not common/ Decrease in availability
38. Marou	Sweet basil	<i>Ocimum basilicum</i>	Increasingly not common/ Decrease in availability

39. Meri	Sacred basil	<i>Ocimum sanctum</i>	Increasingly not common/ Decrease in availability
40. Mtea	Purslane	<i>Portulaca quadrifida</i> Linn. Syn.- <i>P. samoensis</i> Von Poelnitz sensu anehira non Linn.	Increasingly not common/ Decrease in availability
41. Ngea	Ironwood, pemphis	<i>Pemphis acidula</i> Forst. (I)	Increasingly not common/ Decrease in availability
42. Ni (only the following identified cultivars)	Coconut tree	<i>Cocos nucifera</i> L.	Increasingly not common/ Decrease in availability
- Nii-Nei Mori	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii- Nei Tibee	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii rinano	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii bubura (te nii ni ibu)	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii ni benu	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii- Te tina n nii	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii ni ngaun	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii bunia	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Nii wae	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
- Ari uai	Coconut tree	<i>Cocos nucifera</i>	Increasingly not common/ Decrease in availability
43. Ren	Tree heliotrope	<i>Tournefortia samoensis</i>	Increasingly not common/ Decrease in availability
44. Ren uarereke	Beach heliotrope	<i>Tournefortia argentea</i>	Increasingly not common/ Decrease

			in availability
45. Robu	Bamboo	<i>Agave rigida</i>	Increasingly not common/ Decrease in availability
46. Ruku mainaina	Moon flower	<i>Ipomea tuba (Schlecht) G. Don.Syn.- I. grandiflora (Choisy) Hallier f. non Lamarck</i>	Increasingly not common/ Decrease in availability
47. Tongo	Red Mangrove	<i>Rhizophora mucronata</i>	Increasingly not common/ Decrease in availability
48. Nikabubuti	White mangrove	<i>Sonneratia alba</i>	Increasingly not common/ Decrease in availability
49. Tongo buangi	Oriental mangrove	<i>Bruguiera gymnorhiza</i>	Increasingly not common/ Decrease in availability
50. Ukin	Beach almond	<i>Terminalia samoensis</i> Rech. Syn.- <i>T. littoralis</i> Seemann.	Increasingly not common/ Decrease in availability
51. Uri tabuki	Guettarda; wut	<i>Guettarda speciosa</i> L. (I)	Increasingly not common/ Decrease in availability
- Uri rara	Guettarda	<i>Guettarda spp</i>	Increasingly not common/ Decrease in availability
- Uri rereba	Guettarda	<i>Guettarda spp</i>	Increasingly not common/ Decrease in availability
- Uri maran	Guettarda	<i>Guettarda</i>	Increasingly not common/ Decrease in availability
52. Wao	Pigweed	<i>Boerhavia diffusa</i> Linn.	Increasingly not common/ Decrease in availability
53. Wao n anti	Boerhavia	<i>Boerhavia tetrandra</i>	Increasingly not common/ Decrease in availability
54. Wekeweke	Fleurea	<i>Fleurea ruderalis</i>	Increasingly not common/ Decrease in availability

TABLE 15: PANDANUS TREE AND CULTIVARS IDENTIFIED TO BE INCREASINGLY NOT COMMON/ DECREASE IN AVAILABILITY FOR PUBLIC USE:

Species Name (Local)	Status	Species Name (Local)	Status
1. Antinakarawe	Threatened	30. Arantebwe	Threatened
2. Araurabono	Threatened	31. Araumwaumwa	Threatened
3. Arabaikiaro	Threatened	32. Arauriaria	Rare
4. Arabwauti	Threatened	33. Arauneitira	Rare
5. Aratoae	Threatened	34. Arareei	Threatened
6. Aratenneia	Threatened	35. Aratokotoko	Threatened
7. Araoanimaai	Threatened	36. Aramaon	Threatened
8. Aratemam	Threatened	37. Aramaeka	Threatened
9. Arabukitaba	Threatened	38. Aramumun	Threatened
10. Arauriamwaere	Threatened	39. Arakomma	Threatened
11. Aramwanunu	Threatened	40. Aramaeriniai	Threatened
12. Arauteeko	Extinct (Nooto)	41. Arakaiboboki	Threatened
13. Arataira	Extinct (Nooto)	42. Aratebwai	Threatened
14. Arautaon	Extinct (Nooto)	43. Aramarieta	Threatened
15. Arauarea	Rare (Nooto)	44. Aramaiaki	Threatened
16. Arakairiki	Rare	45. Arantebwe	Threatened
17. Arateaang	Rare	46. Aratekenna	Threatened
18. Arataitara	Rare	47. Arabutannanna	Threatened
19. Aramaru	Rare	48. Aratabukitokia	Threatened
20. Aratekura	Rare	49. Arabanuuri	Threatened
21. Aramarawa	Rare	50. Arabeka	Threatened
22. Arakeang	Rare	51. Arabaua	Threatened
23. Aratangana	Rare	52. Arabunonnon	Threatened
24. Aramboia	Rare	53. Arabuota	Threatened
25. Aramron	Rare	54. Arabakioba	Threatened
26. Arakoinawa	Rare	55. Arakatau	Threatened
27. Aramwaerere	Rare	56. Arakakaia	Threatened
28. Arakauki	Threatened	57. Aramatang	Threatened
29. Arabaitara (Found commonly on ocean side of the island)	Threatened	58. Aramaibiniben	Threatened

Species Name (Local)	Status	Species Name (Local)	Status
59. Aramakeke	Threatened	86. Anikairinano	Threatened
60. Aramwakemwake	Threatened	87. Anibwannakoi	Threatened
61. Arangua	Threatened	88. Antabakia	Threatened
62. Arataborio	Threatened	89. Annibai	Threatened
63. Aratebe	Threatened	90. Anikaierua	Threatened
64. Aratenawa	Threatened	91. Anikorobuangi	Threatened
65. Aratetongo	Threatened	92. Annarua	Threatened
66. Aratuubwere	Threatened	93. Iribubura	Threatened
67. Arauanou	Threatened	94. Irirongo	Threatened
68. Arauakitua/Arakiritua	Threatened	95. Iroto	Threatened
69. Arauruaki	Threatened	96. Iritebun	Rare
70. Arawaibeba	Threatened	97. Irinimwaiana	Threatened
71. Arawaentongo	Threatened	98. Iritawatawa	Rare
72. Antabwearake	Threatened	99. Iritokotoko	Threatened
73. Anikomuri	Threatened	100. Iribiongo	Threatened
74. Antabutonii	Threatened	101. Irinimwatiare	Threatened
75. Anibwannakoi	Threatened	102. Nikiniri	Threatened
76. Aniwaentang	Threatened	103. Nikorokoro	Threatened
77. Anikabokia	Threatened	104. Ntinatina	Threatened
78. Anikabokaa	Threatened	105. Bakororo	Threatened
79. Animonamona	Threatened	106. Kamwera	Rare
80. Annabanabanuotaea	Threatened	107. Kaureiko/Raeraeti	Threatened
81. Annabanaba	Threatened	108. Mangataro	Threatened
82. Anneibati	Threatened	109. Tina	Threatened
83. Anneitoka	Threatened	110. Tina ni karawa	Threatened
84. Anneiriri/ Riki ni iri	Threatened	111. Tina maran	Threatened
85. Antinakarawa	Threatened	112. Utongau	Threatened

TABLE 16: MARINE SPECIES THAT ARE INCREASINGLY NOT COMMON OR DECREASE IN AVAILABILITY FOR PUBLIC USE

KIRIBATI NAME	COMMON NAME	SCIENTIFIC NAME	STATUS
1. Awatai (with the exception on Kiritimati Island)	Adult milk-fish	<i>Chansochanos</i>	Threatened
2. Bwaua	Silverbelly	<i>Lacrolepsis</i>	Threatened
3. Baikua (utuna tabeua):	Ray fish.		Threatened (due to over-fishing through spearing)
- Awenei/Baimanu	Devilheaded mantaray	<i>Mobula spp</i>	Threatened
- Iku	Leatherskin ray	<i>Rhinoraja longicauda</i>	Threatened
- Mai	Stingray	<i>Himantura spp</i>	Threatened
4. Bakoa (uarereke) ao utuna tabeua:	Small sharks.		Threatened (due to over-fishing through gillnets fishing)
- Ngareei	Lemon shark	<i>Negaprion acutident</i>	Threatened
-Kimoa	Leopard Shark	<i>Stegostoma faciatum</i>	Threatened
- Unun	Oceanic white tip	<i>C. logimanus</i>	Threatened
5. Bwaara	Wahoo	<i>A. solandri</i>	Threatened
6. Ikarii	Bone fish	<i>Albula vulpes</i>	Threatened
7. Ingo	Red bass	<i>Lutjanus bobar</i>	Threatened
8. Karon	Humpheaded wrasses or Giant wrasses	<i>Cheilinus undulatus</i>	Threatened
9. Koikoi (karinanin manin taari ake iai nanaia)	Shells.		Threatened
- Koumwara	(Unknown)	<i>Gafrarium pectinatum</i>	Threatened
- Katura	Surf clam	<i>Atactodea striata</i>	Threatened
- Bankekewa	(unknown)	<i>(unknown)</i>	Threatened
- Neeang	Horned shell	<i>Lambis spp</i>	Threatened
- Nikatona	(unknown)	<i>Quidnipagus palatom</i>	Threatened
- Kima	Hippopus Clam	<i>Hippopus hippopus</i>	Threatened
- Were	Giant clam	<i>Tridacna crocea</i>	Threatened
- Bun	Ark shell	<i>Anadara antiquata</i>	Threatened
- Tumara	Moon shell	<i>Polinices pyriformis</i>	Threatened
- Kabwaau	Cowries Cypraeidae	<i>Cypraea caputserpentis</i>	Threatened
- Ningoningo	Periwinkle	<i>Littoraria scabra</i>	Threatened
10. Kereboki (utuna tabeua):	Echinoderms(Beche-de-mer)		Threatened
- Buraerae	Prickly Red Fish	<i>Thelenata ananas</i>	Threatened
- Uninga-bakoa	Brown sand fish	<i>Bobadshia vitiensis</i>	Threatened

- Buniia	Tiger fish	<i>Bobadshia argus</i>	Threatened
- Kiriin	Green fish	<i>Stichopus chloronatus</i>	Threatened
- Mmamma	White/Black teatfish	<i>Holothuria fuscogilna/nobilis</i>	Threatened
11. Kiika (utuna tabeua)	Cephalopods		Threatened
- Kiika	Reef octopus	<i>Octopus cyanea</i>	Threatened
- Kikao	Common octopus	<i>Octopus vitiensis</i>	Threatened
12. Kua (utuna tabeua):	Marine Mammals		Threatened
- Kua kewe	Spinner dolphin	<i>Stenella longirostris</i>	Threatened
- Kua	Bottlenose dolphin	<i>Tursiops truncatus</i>	Threatened
13. Mwanai (utuna tabeua):	Crabs		Threatened
- Ntabwabwa	Red spot crab	<i>Carpilius maculatus</i>	Threatened
- Mwanai	Land crab	<i>Cardisoma carnifex</i>	Threatened
- Aaii	Coconut crab	<i>Birgus latro</i>	Threatened
14. Ninimwai	Silver biddy	<i>Gerres spp</i>	Threatened
15. Nnewe (utuna tabeua):	Crustaceans.		Threatened
- Mnawa	Slipper lobster	<i>Parribacus caledonicus</i>	Threatened
- Nnewe	Painted rock lobster	<i>Panulirus versicolor</i>	Threatened
16. Naeta n taari (utuna tabeua):	Sea snakes.		Threatened
- Teimoone	Spotted snake eel	<i>Myricthus maculosus</i>	Threatened
- Kabwanganira	(unknown)	<i>(unknown)</i>	Threatened
- Korona	Halequin Snake eel	<i>M. colubrinus</i>	Threatened
17. On (utuna tabeua):	Sea Turtles.		Threatened
- On tabwakea	Hawksbill turtle	<i>Eretmochelys imbricata</i>	Threatened (eggs are heavily poached)
- On	Green turtle	<i>Chelonia mydas</i>	Threatened
18. Raku	Blackmarlin	<i>Makaira Indica</i>	Threatened
19. Rabono (utuna tabeua)	Eels.		
- Ngabingabi	Giant Moray	<i>Gymnothorax javanicus</i>	Threatened
- Bukiroro	Moray eel	<i>Gymnothorax flavimarginatus</i>	Threatened
20. Waro (utuuna tabeua)	Snapping Shrimps.		
- Niwarowaro	Alpheidae	<i>Alpheus sp.</i>	Threatened
- Waro	Banded prawn killer	<i>Lysiosquilla maculata</i>	Threatened
21. Urua	Great Travelly	<i>C.ignobilis</i>	Threatened