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KIRIBATI - COUNTRY STATEMENT

**Fisheries Division
Tarawa
Kiribati**

Status of the Inshore Fisheries Management in Kiribati

Fisheries Division

Kiribati

1. Introduction

The Republic of Kiribati, pronounce Kiribas, is one of the low lying coral islands in the Pacific region. Comprising of 33 small islands, predominantly atoll, the republic is inhabited by more than 72,000 people (Kiribati Census 1990). Because of the nature of the islands being completely surrounded by sea water, and with the limited land resources available in the country, the people of Kiribati have relied almost exclusively on marine resources for protein and income sources. The lagoon and reef areas provide easy accessed fishing grounds for the fishing community. With the growing population (estimated at 2.26 annually) and the need to develop the fishery sector, pressure on the existing marine resources is increasing. This is more pronounced in the urban area, Tarawa, where more than 40% of the population live and an annual growth rate of 2.73% (South Tarawa 3.11% and North Tarawa 2.35%). It is also where much of the developments took place. From the Fisheries Division's point of view, these resources must be carefully managed if we are to conserve and sustain the resources in these areas for future generations to come, a task difficult to implement and enforce.

For the purpose of this report, the inshore fisheries include all species caught inside the Lagoon, Reef flats and the outer slope of the Fringing Reef. It also include the catches of the Artisanal fishermen fishing outside the reef for tuna like species.

2. Types Or Fishing Activities

The types of fisheries currently exist in the country are basically determined by the location and habitat of the resource being exploited. The main types of fishing, namely *Handlining*, *Gillnetting*, *Pole and Line*, *Trolling*, *Collecting*, and other *Miscellaneous* fishing activities are all conducted in the lagoon and reef areas. Species harvested and landed for each type of fishing differ slightly from lagoon to non lagoon islands in terms of quantity and proportion (Table 1).

Pole and Line and Trolling are predominantly carried out in the ocean targeting tuna. In some islands in the south, trolling for tuna using outboard engine is prohibited and only traditional canoes are allowed to troll. This means that tuna like species are usually landed using the Dropline fishing, Pole and Line using any types of fishing boats, and trolling using traditional canoes. It is the belief of the locals that trolling with outboard engines tend to scare the tuna away from their fishing grounds. A few of the islands still maintain this practice while other islands have allowed fishermen to troll with any type gears.

Recently, a new fishing method known as "*te ororo*" or the "*splash method*" is now common throughout the country. The method utilise gill net set in the lagoon and an iron bar is used to drive the fish into the net by splashing it into the water. The species targeted is bonefish, (one of the commercially important species) but other species beside the bonefish are also being caught. The method is considered destructive to the bonefish stock and other finfish caught in this

manner, thus fishermen are encouraged not to use the method. In one island in the central, (Maiana) this type of fishing method is completely banned and only handline fishing for the bonefish is used instead. In Tarawa, the capital of Kiribati, the fishermen still employ this method.

One of the most important commercial species landed using the Collecting method is Beche-de-mer. The Beche-de-mer exist throughout the country but are more abundant in lagoon islands. Though the Beche-de-mer is not consumed locally, records indicated that the fishery was commercially exploited in 1990 for export purposes. The technique used in harvesting this resource is simply hand collecting in shallow waters and mask and snorkel in deeper waters. Because Beche-de-mer is a high value species and vulnerable to capture, this resource is being exploited at a considerable rate and there is evidence that the resource is declining. Fishermen are now forced to dive deeper and use weighted hooks from mid water to harvest the Beche-de-mer. Though this technique is generally allowed, scuba diving is prohibited.

Pet fish also known as aquarium fish is another high value species exploited in the country. Tarawa and Christmas are the two islands where pet fish are actively exploited. This is due to good market link between Tarawa, Christmas, Marshall Islands and Honolulu. Catching pet fish requires certified divers and a good understanding of the area involved. The resource is normally exploited outside the reef at depth ranging from 25 to 40 meters. Presently, two companies operate in the country which may not pose any problems to the resources at present. Reports, however, indicate that divers would normally break corals off when trying to catch these pet fish, a practice that could adversely affect the marine resources.

3. Responsible Bodies

Currently, the control over the fishing and disposition of the marine resources is primarily monitored by the Central and Local government through their appropriate bodies. In the case of the Central government, the Ministry of Natural Resources Development through the Fisheries Division, the Ministry of Environment and Social Development through the Fisheries Division and Lands and Survey Division, and the Ministry of Line and Phoenix through the Fisheries Division and Lands and Survey Division.

On the Outer Islands, the Island Councils are the sole influencing body but with the advice from the appropriate ministry, the Ministry of Home Affairs and Rural Development. The Island Council comprise of representatives from individual village, usually a well known and educated person. On one island in particular, a body comprising of the elders from each village is the sole influencing body and the Island Council acts as an adviser to this body. Civil servants stationed on the outer islands are required to assist and implement the appropriate duties required of them by the Island Council.

4. Laws and Regulations

Currently, the laws and regulations exist pertaining to marine resources are those formulated and controlled by the Central and Local governments. The Local government legislation is oriented

to the existing needs and state of the island fishery and apply strictly to the island. The Central Government legislation are more general in nature and cover all the islands in Kiribati .

5. Policies and Management

The wider policy objective of the Fisheries Division is to utilise the marine resources to generate foreign exchange, create employment and as a source of a healthy cheap protein to the local populace. One of the objectives is to conserve and properly manage the marine resources.

Management of the resources in the country is not a task easy to enforce. In the past, the management of the fishery resources has been at a community level where management decisions were issued from the elders and implemented by the village community, especially the fishermen. Little enforcement activities on the government's part was required partly due to the involvement of the fishing community, the availability of the resources, and the use of non destructive fishing methods during those periods. In some islands, especially in the southern group, this is still being observed but to a lesser extend as gradual changes took place.

The changes and developments that have occurred over the years, especially in Tarawa, have put pressures on the marine resources and in some cases detrimental effects on the marine resources are being observed. Among the factors attributing to these are;

- the increase in the population,
- a shift to utilise new fishing technologies both at the community and the industrial level in order to generate more revenue from the sale of marine products, and to meet the expanding fish demand,
- changes in the island physical structure.

With these changes taking place, the government recognised the need to upgrade and strengthen the management regimes that have been used in the past, hence a national fisheries legislation was subsequently drawn (see attached Fisheries Legislation 1984) The main aims are;

- to utilise the limited marine resources in a sustainable manner,
- to increase production and
- to harmonise disputes that may arise among island communities.

As previously mentioned earlier on, the Island Councils on the outer islands formulate fisheries legislation specific to their needs and requirements in meeting these changes. Management imposed on fisheries with the aim to protect the resources, have always

been difficult to enforce, hence achieve its aim. The problems and constraints in implementing this fisheries legislation are discussed below.

6. Constraints and problems

As previously mentioned in the introduction, the people of Kiribati rely almost exclusively on marine resources for food and income earning. This makes it very difficult to enforce the Fisheries Legislation without causing an imbalance to the livelihood of the people.

One of the main concern is the growing population in Kiribati and the rapid development that took place over the years. Tarawa, the most heavily populated area in the country raised great concern with regards to the state of the fishery resources in the lagoon and reef areas. Managing the resources in these areas has been hindered for various reasons, among them:

- the willingness of the fishermen to cooperate
- the need to improve the living standards of fishermen
- the capacity to enforce the fisheries legislation
- difficulty in controlling the importation of fishing gears such as gill nets

Since the Central Government and Island Councils are the responsible bodies in implementing and enforcing fisheries legislation, availability of funds is the major drawback. The island councils have always relied on the government for assistance . There is a need to involve the community in the management of fisheries resources.

The government through the fisheries division lack the following needed to effectively manage the inshore fisheries resources;

1. Management

- lack of information on which to base regulations
- general need for managing different fishery situations

2. Manpower

- lack of general manpower

3. Training

- computer training
- stock assessment training
- community level education on fishery management
- public school level education on fishery management

5. Assistance in increasing marine resource production

Assistance required in these fields

- improve estimates of catch and yield
- beche-de-mer culture

- sponge culture
- trochus culture
- sea urchin
- determination of TACs for commercial species
- determination of suitable FAD deployment techniques

Mariculture

- identification of suitable species
- identification of appropriate culture techniques
- economic aspects of mariculture

Taxonomy

- lack of taxonomic identification guides

8. Future Plans

Seeing the need to effectively and wisely manage the marine resources for better and long term benefits to the people of Kiribati., the Ministry of Natural Resources Development through the Fisheries Division seeks to improve on the current production form the marine resources both from the lagoon and reef areas. It is believed that most of the commercial species that exist in these areas, especially species of economic importance have declined. Among the plans to increase production and ensure sustainability involve:

- formulation of appropriate regulations to protect important species
- improve the national stock such as beche-de-mer through hatchery production
- improve the public awareness of the need for management of the marine resources
- enhance the production and farming of suitable marine species
- setup marine reserves for endangered species such as clam
- improve on information dissemination both within and to outside countries and
- develop and improve fishing techniques with the main aim of diversifying fishing pressure from heavily fished areas, such as the lagoon.

Tarawa which is in immediate need for management of its resources may receive priority over the outer islands. However, these plans would also be implemented on the outer islands when the need arises.

Table 1. Catch composition of artisanal fisheries landings in Kiribati

SPECIES (% OF Catch)	Butaritari	Ahemam	Onoia	S/IRW	Maians	Banaba	Tamana	Arora	Arunika	Kuria	NIRW
Sphyraenoidae	6.1	0	0.6	1.4	0.1	0	0.3	3.5	0.1	0	1.70
Serranidae	2.3	0	3.8	1.6	4	1.4	0.8	0.2	3	2.7	1.83
Scombroidei	9.4	17.9	9	34.1	0	10.3	42.4	19.5	26.1	33.6	3.04
Mullidae	0.9	1.3	3.1	0.5	14.9	0	0	0	2.1	0.1	6.62
Mugilidae	6.9	8.9	3.4	1.7	2.4	0	0.1	0	0.6	0	9.80
Molluscs	0.1	25.4	0.5	33	33.8	0.2	0.1	0	0	0.2	4.50
Lutjanidae	18	1.9	8.1	4.9	5.4	3.4	0	0.8	3.2	4.2	10.10
Lehrinidae	30.8	2.8	14.7	4.6	3.4	0	0.4	0.1	8	0.5	8.80
Gerridae	0.5	2.3	2.9	0.9	1.9	0	0	0	2.9	1.9	8.10
Exocetidae	0.1	0.2	0.6	0.1	0	0	19.8	23.3	32.7	21	0.00
Elasmobranchs	0	0	2.2	0	0	0	0	0	1.4	0	3.40
Crustaceans	0.1	0.3	0	0.1	0.4	0.2	0.2	0.5	0	0	0.03
Clupeidae	0.3	0	0	0	0	0	0	0	0	0	0.00
Chanidae	0.1	0	0.4	0	0	0	0	0	0	0	0.10
Cephalopods	0.7	0	0.6	0.4	0	0.1	0.7	0.1	1.2	4.6	5.10
Carangidae	1.5	4.3	4.6	2.4	2.4	22.3	12	3.1	3.4	2.8	3.82
Albulidae	0.2	30.2	2.2	4.3	25.8	0	0	0	0.6	0	23.10
Miscellaneous	22	4.3	42.6	9.1	5.5	62.1	23.2	49.1	14.7	28.4	9.60

Table 2. Total weight (kg) and the proportion of beche-de-mer exported from Kiribati between 1991 and 1994

Common name	Species name	1991		1992		1993		1994	
		Wt	%	Wt	%	Wt	%	Wt	%
White teat	<i>Holothuria fuscogilva</i>	2,909	22.7	43,026	77.8	9,109	7.3	915	3.0
Black teat	<i>H. nobilis</i>	210	1.6	792	1.4	14,579	11.6	758	2.5
Prickly	<i>Thelenota ananas</i>	2,992	23.3	1,552	2.8	6,932	5.5	1,497	5.0
Red surf	<i>Actionpyga mauritiana</i>	1,282	10.0	467	0.8	2,381	1.9	5,415	18.0
Black fish	<i>A. miliaris</i>	0	0.0	120	0.2	122	0.1	44	0.1
Tiger leopard	<i>Bohadschia argus</i>	8	0.1	635	1.1	10,085	8.0	2,970	9.9
Brown sand	<i>B. vitiensis</i>	3,287	25.6	2,202	4.0	26,236	20.9	3,023	10.1
Lollifish	<i>H. atra</i>	383	3.0	4,303	7.8	45,736	36.5	10,125	33.7
Greenfish	<i>Stichopus echinities</i>	1,746	13.6	2,206	4.0	10,243	8.0	5,279	17.6
Total		12,186	100.0	55,303	100.0	125,421	100.0	30,026	100.0

