



**SCIENTIFIC COMMITTEE
FIFTH REGULAR SESSION**

10-21 August 2009
Port Vila, Vanuatu

**ANNUAL REPORT TO THE COMMISSION
PART 1: INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS**

WCPFC-SC5-AR/CCM-10

KIRIBATI

The Republic of Kiribati

**Annual Report to the Commission's
SC5 Meeting, Port Vila, Vanuatu
10-21 August 2009**

**Part 1 Report
Information on Fisheries, Research and
Statistics**

**Fisheries Division
Ministry of Fisheries and Marine Resources
Development.**

Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by 30 April 2009	[YES]
If no, please indicate the reason(s) and intended actions:	

ABSTRACT

Tuna fishing in Kiribati is predominately carried out by foreign licensed foreign fishing vessels. However, artisanal fishermen continue to play an important role in this fishery by providing food security to the people. These artisanal fishermen used small skiffs/local craft which are less than 7 meters. In 2008, around 4,800 of these small crafts were in operation with an estimated total catch of around 12,600mt valued at around A\$33 million which is equivalent to what Kiribati received from access fees. Most of the artisanal catches were sold locally while some are kept for subsistence use.

Kiribati joint venture purse seine vessel continues to fish in PNA member waters under the FSM Arrangement. Highest catch was achieved in 2005 in the amount of over 7,100 mt. In subsequent years catch dropped but progressively increases to reach over 5,700mt in 2008.

With limited capacity to harvest its own tuna resources, Kiribati continues to license foreign fishing vessels to fish for tuna in its EEZ in return for access fees. In 2008 over 400 licenses were issued. In that same year purse seine catch reach 192,000 mt an increase in catch of around 16% if compared to the previous year. In the longline fishery there was a substantial drop in catch by around 86% in 2008 (882mt) if compared to 2007 catch of 6,500mt. This could be attributed to the delay in submission of logsheets from fishing operators and the drop in the number of vessels fishing in Kiribati waters.

In 2008, access fees contributed around 40% towards the country's national budget each year. The tuna fishery continues plays a very important role to the country in achieving its social and economic aspirations. Because of the fishery greater social and economic value, it is very crucial for Kiribati to see that the management and development of the tuna resources is sustainable in the long term.

1. ANNUAL FISHERIES INFORMATION

As a Small Island Developing State, Kiribati does not have a fully developed tuna industry. Only few of its offshore fishing vessels operated in the region and that include purse seine and longline vessels, however the majority of the domestic fishing vessels were small fishing vessels of less than 7 meters in length and in most cases all fish caught were sold at the local market.

Artisanal fishermen were the main supplier of tuna to the local community and the bulk of these fishermen were located on South Tarawa. Each year they produce around 12,600mt of tuna which is valued to around A\$33.2 million with an estimate of over 20,000 people who are directly or indirectly employed in this business.

Each year an artisanal survey was conducted by Fisheries Division which supposes to cover all islands, however due to limited resources only two to three islands can be surveyed each year. The results of these surveys were used as a source of information in estimating tuna landings on all the 22 inhabited islands.

In 2004, a joint venture (JV) operation between the government and a fishing company in Japan was established. The JV purse seine vessel mostly fish outside Kiribati waters and sell it catch to Asian markets. Since the establishment of company, its operation was not too healthy as most of the time it

makes losses however despite those losses the vessel continue to operate. There was speculation that an additional purse seine will soon join the company with the expectation that it will bring better results. Kiribati sees that JV operations is one way of developing its tuna industry with the anticipation that it will participate in harvesting its own tuna resources and to be able to generate more employment and income to its people.

In 2008, there was an influx in the number of foreign fishing vessels changing flag to Kiribati. Because of the substantial increase in the reflagging of foreign fishing vessels, Kiribati is increasingly concerned that such increase could have a tremendous impact on the country's 70% catch based annual contribution to the Tuna Commission.

The tuna fishery continues to play a very important role to the country in achieving its social and economic aspirations. Because of the fishery's social and economic value, Kiribati is very keen to cooperate and collaborate with others at national, regional and international level to develop and manage this resource sustainably in the long term.

1.1 TABULAR ANNUAL FISHERIES INFORMATION

Kiribati had 24 oceanic fishing vessels which comprised of 1 purse seine, 4 longlines, 13 carriers and 6 tankers. The number of vessels substantially increased from 6 in 2007 to 24 in 2008. We expect that in 2009 the number of Kiribati fishing vessels will certainly increase and so to the catch.

In 2008, there were 3 longline one purse seine vessels that were active in the WCPFC region. The other 11 vessels are support vessels which comprised of 2 fish carriers and 9 tanker vessels.

Detail of Kiribati fishing fleet and size composition is provided in Table 1 (a).

Table 1(a) Number of active tuna fishing vessels in WCPFC Area
(by gear and size classes) for last 5 years (2004-2008)

Gear	LONGLINE				
Fleet	Kiribati-flagged vessels				
Size class (GRT)	2004	2005	2006	2007	2008
0-10					
10-50	1				
50-200					3
200-500					
500+					
Gear	PURSE SEINE				
Fleet	FSM Arrangement vessel				
Size class (GRT)	2004	2005	2006	2007	2008
0-500					
500-1,000	1	1	1	1	1
1,000-1,500					
1,500+					
Gear	ARTISANAL TROLL				
Fleet	Local vessels				
	2004	2005	2006	2007	2008
	??	??	??	4895	4766

Note

1. The number of artisanal vessel estimate was derived from the social and economic surveys conducted by the Fisheries Division.

1.2 ANNUAL CATCHES – WCPFC CONVENTION AREA

Longline fishery

Around October 2008, Kiribati introduced 3 longline fishing vessels that were authorized to fish in the Commission area. These fishing vessels operate from overseas ports and within 3 months (October – December), over 50mt of fish was caught with more than 80% of the catch were bigeye.

Detail of catch by species is depicted in Table 1 (b).

Table 1(b). Annual catch (mt) by species for the KIRIBATI LONGLINE fishery.

Gear	LONGLINE					
Fleet	Kiribati-flagged vessels					
Species	2004	2005	2006	2007	2008	
YELLOWFIN	??	??	??	??	7	
BIGEYE	??	??	??	??	44	
ALBACORE	??	??	??	??	0	
OTHER	??	??	??	??	2	

*Source: TUFMAN database

Notes

1. These catch estimates also apply to the following areas. The WCPO Area (the Pacific Ocean west of 150°W)
2. The breakdown of catches for the WCPFC Convention Area north and south of the equator is not yet available.
3. The catch provided is for Kiribati flagged vessels authorized to fish in the commission area in Oct, 2008. The catch estimate base on only a 3 months catch data since the vessels was just given authorization in Oct, 2008.
4. Kiribati-flagged longline vessels are based in other ports in the Pacific, for example, Koror, Palau.
5. Catch estimates were determined from logsheet data, but data coverage is very low.

Purse seine fishery

In the purse seine fishery only one purse seine was active in 2008 and that is KAO No. 1. The vessel spent most of its time fishing west of Kiribati (See Figure 3). The only time the vessel fished in Kiribati is only during strong El Nino season. Since 2006 there is a relative increase in the yellowfin and bigeye catch in subsequent years. In 2008 around 250mt of bigeye was taken.

Detail of the annual catch estimates for 2004-2008 is depicted in Table 1 (c).

Table 1(c). Annual catch (mt) by species for the KIRIBATI PURSE SEINE fishery.

Gear	PURSE SEINE					
Fleet	FSM Arrangement – KAO No. 1					
Species	2004	2005	2006	2007	2008	
SKIPJACK	3,817	4,990	3,367	4,178	3,937	
YELLOWFIN	658	1,877	1,157	1,169	1,570	
BIGEYE	126	238	139	103	249	

*Source: TUFMAN database

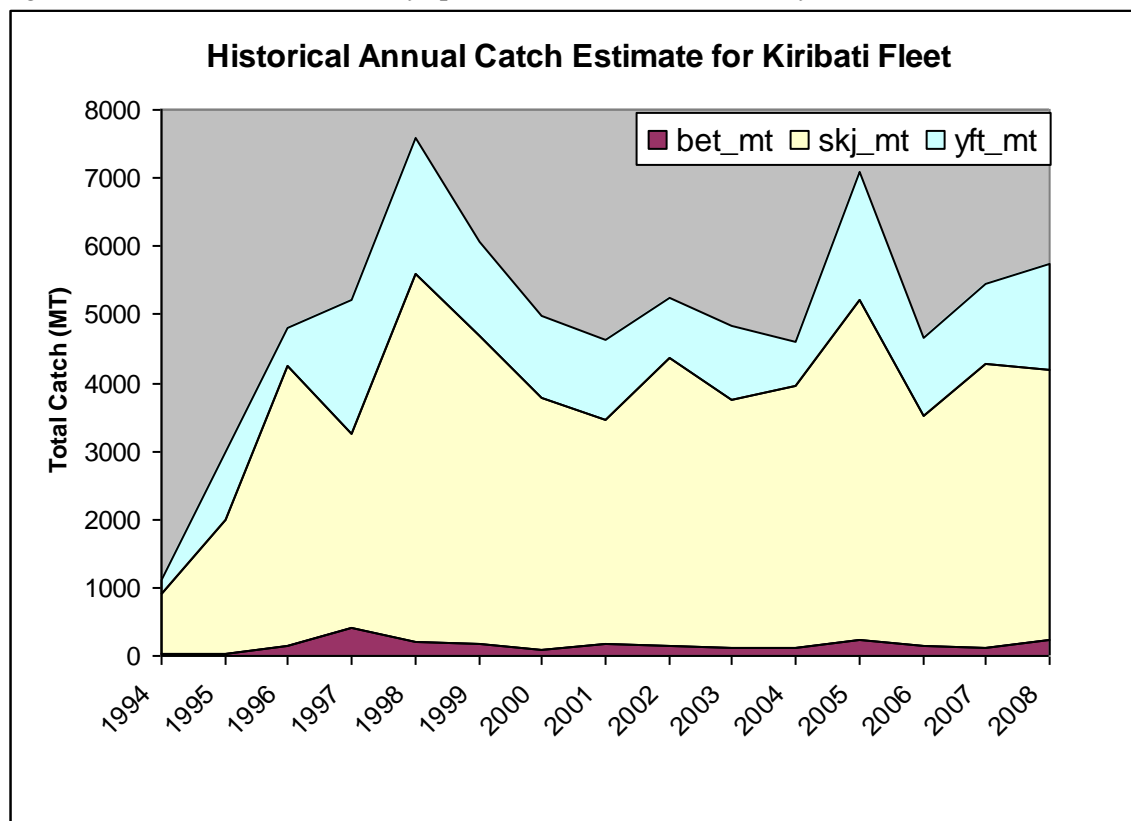
Notes

1. These catch estimates also apply to the WCPO Area (the Pacific Ocean west of 150°W)
2. Catches were taken from logsheet data and the coverage of the logsheet data is considered to be 100%.

Figure 1, provides the historical catch estimates for KAO No. 1 from 1994 until 2008. The chart it shows a substantial increase in catch by KAO No. 1 for the years 1998 and 2005 only. This could be attributed to fishing conditions conducive to purse seining which is normally associated with *El Nino* phenomenon.

Looking at the chart, skipjack continues to dominate the catch composition and followed by yellowfin. Yellowfin catch relatively increases during the years 1997/1998 and 2005 *El Nino* season.

Figure 1: Historical annual catch by species for Kiribati one and only PS fleet



Artisanal troll fishery

The artisanal fishery mainly uses 40 HP outboard motors and most of the time they fished in close proximity to the islands. Even though they mainly fished for tuna, sometimes they have to fish for lagoon or reef fish because of bad weather.

Table 1(d). Annual catch (mt) by species for the ARTISANAL TROLL fishery.

Gear	ARTISANAL TROLL				
Fleet	<i>Local vessels</i>				
Species	2004	2005	2006	2007	2008
SKIPJACK	940	940	940	8,223	8,238
YELLOWFIN	1,120	1,120	1,120	4,347	4,329
BIGEYE	0	0	0	0	0

* Source: Fisheries Division - Economic and Social Survey

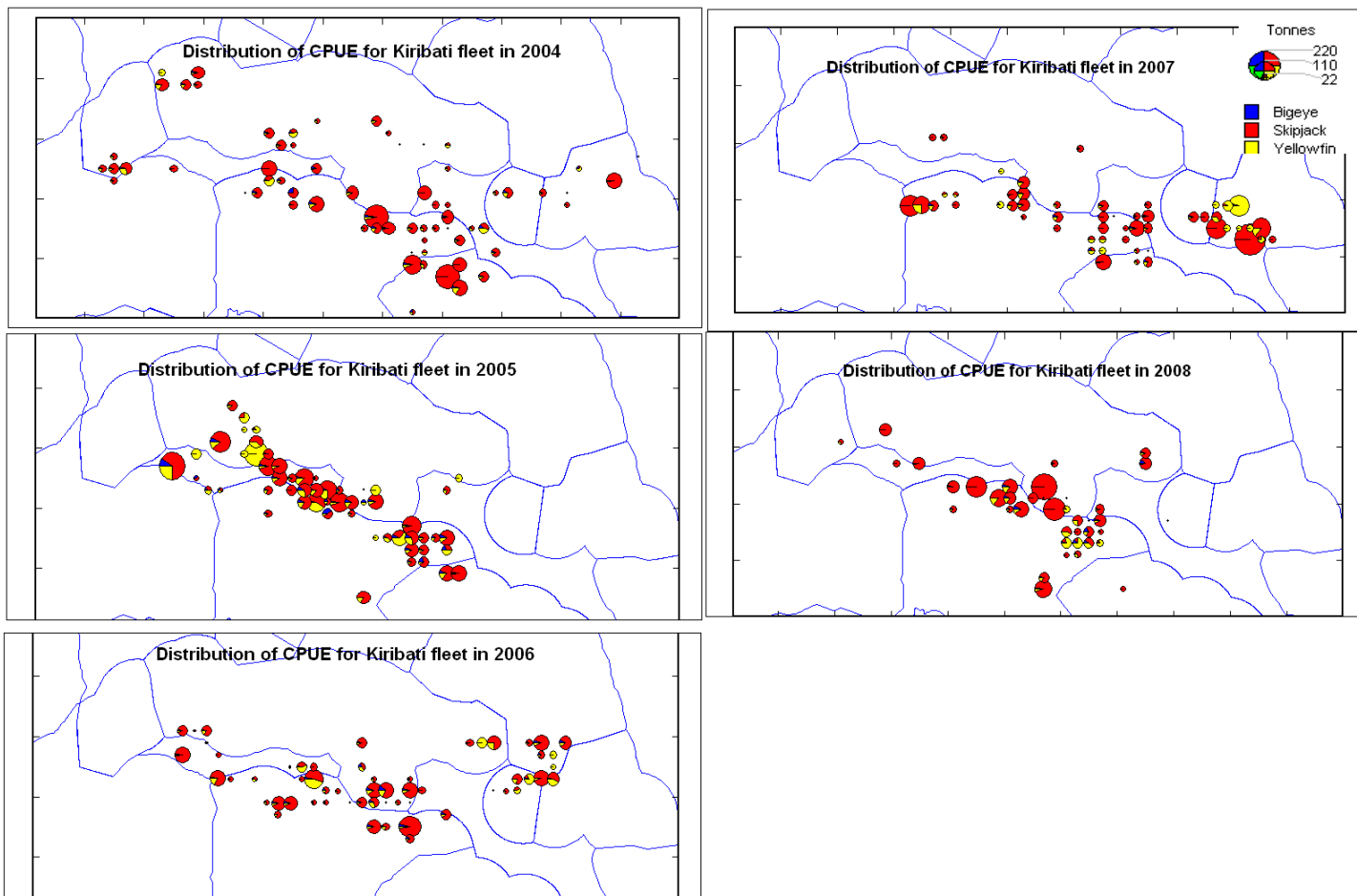
Notes

1. These catch estimates also apply to the WCPO Area (the Pacific Ocean west of 150°W)
2. Catches were estimated base on the result of an artisanal survey. Note in 2008, only one island surveyed however catches estimate for other islands based on past survey's result.

3. FLAG STATE REPORTING

As seen in Figure 2, Kiribati fleet CPUE distribution shows to be concentrated west of Kiribati. Generally, fishing is concentrated around PNG, FSM and high seas. In 2007, fishing efforts moved to Kiribati waters in which yellowfin catch was high in some cases, however fishing in 2008 was again concentrated around PNG and FSM waters.

Figure 2: Annual Distribution of target species catch and effort for Kiribati fleet active in the WCPFC Convention Area for 2004-2008



*Source: Catch and Effort System (CES) from SPC/OFP

4. COASTAL STATE REPORTING

The number of foreign fishing vessels licensed to operate in Kiribati waters fluctuates considerably from year to year however the trend shows an increase. In 2008 over 400 foreign fishing vessels were licensed in Kiribati and this shows an increase of 18% to the 2007 figure. Such increase could be associated to the significant increase in the US Treaty purse seine fleet during that year.

There is a relative decrease in the number of longline fishing vessels if compared to 2004. This could be related to the unfavorable financial situation facing the industry in relation to fuel cost and the relative decrease in catch in the region that cause some of the longline vessels tied up in port.

Table 4 provides a summary of license issued to foreign vessels in Kiribati from 2004 to 2008.

Table 2. Summary of license issued in 2004-2008

Gear	2004	2005	2006	2007	2008
BU	11	9	9	11	9
LL	259	229	188	184	186
PL	26	4	2	7	25
PS	159	159	154	157	178
RC	0	0	0	0	27
Total	455	401	353	359	425

Purse seine catch in Kiribati waters in 2008 was around 192,000mt. This shows an increase of 16% to the 2007 catch of 164,900mt. In 2008 the majority of the fishing countries experienced increases of catch relative to the previous year. Countries that experienced substantial increase in catch include China, Ecuador, El Salvador, Spanish, Korea, Taiwan and US. Some of the reasons for such increase could be attributed to the increase in fleet number and better fishing technologies through the use of new equipments and faster and more efficient fishing boats. Fishing effort in days is also increase in 2008 if compared to 2007. In 2008 a total of 5,500 days expended in Kiribati waters relative to 4,600 days expended in 2007.

Detail summary of catch and effort by purse seine foreign fishing fleets in Kiribati waters is depicted in Table 3 (a).

As for the longline fleet, there was a significant decrease in catch during 2008 to only 882mt if compared to the 2007 catch of around 6,500mt. This represents a substantial decrease in catch by around 86%. This should not be the case noting the fact that the number of licensed longlines was increased in 2008. The drop in catch could be related to the economic meltdown experienced in the world that could limit fishing operators to continue fishing, the fishing environment not conducive to fishing, and the non-compliance by fishing operators to submit operational catch data.

Detail summary of catch by longline foreign fishing fleets in Kiribati waters is depicted in Table 3 (b).

In relation to their distribution of effort in Kiribati waters, the Korean and Taiwanese purse seines predominantly fished in the Gilbert while the US fleets their fishing efforts seems to be distributed between the Gilbert and Phoenix Group and moderately fished in the Line Group.

As for longline fishing vessels, their fishing effort is distributed equally in the three fishing zones and this is the fact for the Korean longline fishing fleet. Usually, fishing started in the northern Line group during the early part of the year and toward mid-year fishing effort shifted southward before shifting westward to the Phoenix and around August/September they moved further west to the Gilbert area before moving in a northeastward direction.

Detail distribution of foreign purse seine and longline efforts is depicted in Figure 3.

Catch composition of purse seine fishery in Kiribati waters is depicted in Table 4. Target species predominantly represent over 99.7% of the total catch while non-target species represents only 0.3%. On the other hand catch composition for the targeted species, skipjack represents 76.9% in 2006 and increase further to reach 92.1% in 2007 however in 2008 skipjack species composition dropped to 90.7%. During the three years, yellowfin composition steadily decreases from 17% in 2006, and 7% in 2007 and 5% in 2008. As for bigeye catch composition, 4.3% was recorded in 2006, 0.6% in 2007 and

4.2% in 2008. This could reveal that bigeye catch in Kiribati is becoming unpredictable and this could be related to the current status of bigeye stock, while yellowfin gradually dropping each year.

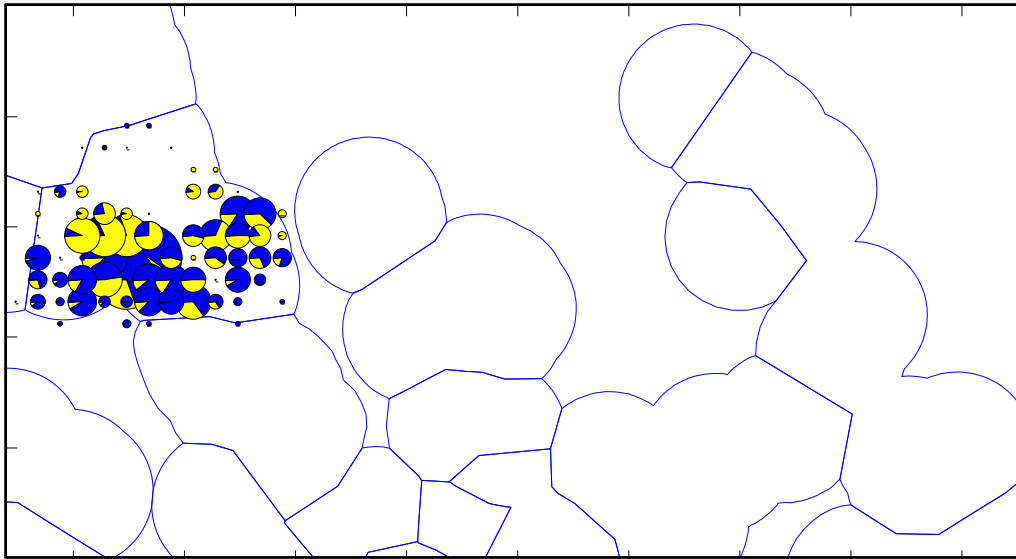
Tables 3 (a). Annual catches by foreign purse seine fleets in the Kiribati EEZ, by flag and species, 2004 – 2008
(Source : Raised logsheet data collected by Kiribati MFMRD; 2008 data are provisional estimates)

Fleet	Year	Days	CATCH (metric tonnes)				
			SKJ	YFT	BET	OTH	TOTAL
China	2004	51	563	0	0	0	563
	2005	293	5,061	765	43	0	5,868
	2006	178	3,488	0	0	0	3,488
	2007	8	341	33	5	0	378
	2008	124	1,158	1,302	146	0	2,606
Ecuador	2004						0
	2005						0
	2006						0
	2007	229	5,170	690	2,166	0	8,026
	2008	175	5,034	595	1,869	0	7,498
El Salvador	2004						0
	2005						0
	2006						0
	2007	113	1,691	396	355	0	2,443
	2008	179	6,903	376	1,083	0	8,361
Spain	2004	209	3,479	1,196	842	0	5,517
	2005	18	784	79	202	0	1,065
	2006						0
	2007	26	1,117	623	471	0	2,211
	2008	204	8,765	1,762	2,158	0	12,685
FSM Arrangement	2004	1,138	34,855	2,800	608	0	38,263
	2005	1,249	42,065	6,441	836	0	49,342
	2006	1,191	34,954	2,887	1,531	0	39,372
	2007	1,064	35,101	5,770	1,626	0	42,497
	2008	964	19,684	9,926	1,564	0	31,174
Japan	2004	339	5,058	1,067	454	0	6,578
	2005	229	3,937	683	66	0	4,686
	2006	387	9,538	1,129	65	0	10,733
	2007	58	1,596	152	0	0	1,748
	2008	24	371	87	0	0	458
Korea	2004	88	456	30	2	0	488
	2005	1,329	41,404	5,400	177	0	46,981
	2006	1,879	53,562	10,576	787	0	64,926
	2007	1,448	45,566	11,445	490	0	57,501
	2008	1,523	36,894	25,154	1,056	0	63,103
New Zealand	2004	357	4,310	1,559	516	0	6,384
	2005	250	5,352	1,377	196	0	6,924
	2006	247	4,917	714	285	0	5,916
	2007	238	7,469	857	240	0	8,566
	2008	109	2,347	1,141	230	0	3,719
Chinese Taipei	2004	465	11,436	559	26	0	12,020
	2005	717	17,190	2,481	196	0	19,868
	2006	597	12,500	772	38	0	13,310
	2007	447	10,241	1,417	160	0	11,818
	2008	880	11,385	9,873	882	0	22,140
USA	2004	1,238	12,932	4,464	1,550	0	18,945
	2005	1,262	22,768	9,002	3,109	0	34,879
	2006	666	15,466	2,180	1,126	0	18,771
	2007	629	15,342	1,170	2,265	0	18,776
	2008	1,064	20,096	10,005	562	0	30,663
Vanuatu	2004	430	12,833	341	28	0	13,202
	2005	846	31,277	6,345	494	0	38,116
	2006	300	9,469	1,478	118	0	11,065
	2007	346	9,457	1,449	82	0	10,988
	2008	258	4,943	4,417	220	0	9,579
TOTAL EEZ	2004	4,315	85,921	12,015	4,025	0	101,961
	2005	6,193	169,837	32,574	5,318	0	207,730
	2006	5,445	143,894	19,737	3,949	0	167,581
	2007	4,606	133,092	24,001	7,858	0	164,952
	2008	5,505	117,579	64,638	9,769	0	191,986

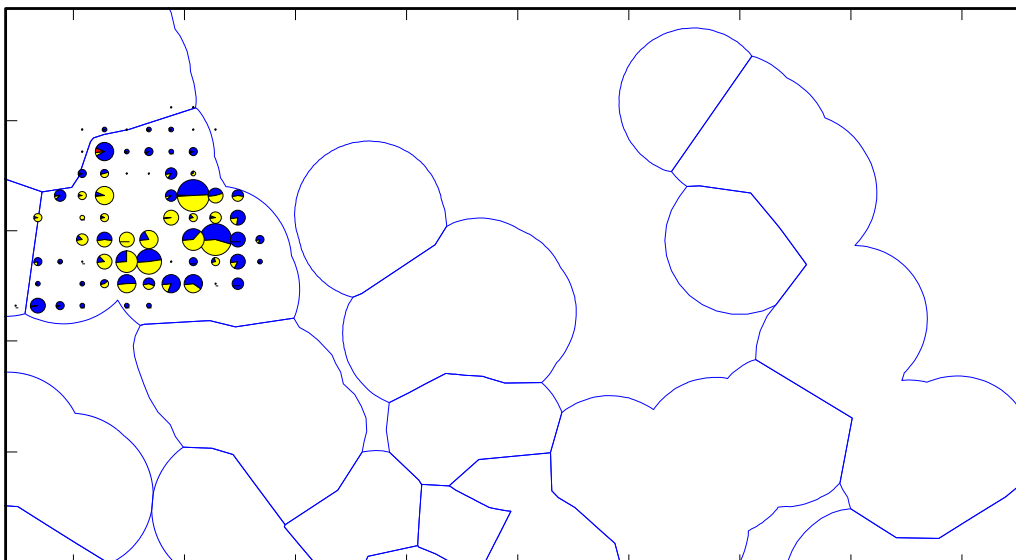
Tables 3 (b). Annual catches by foreign LONGLINE fleets in the Kiribati EEZ, by flag and species, 2004 – 2008
 (Source : Raised logsheet data collected by Kiribati MFMRD; 2008 data are very provisional)

Fleet	Year	Tuna Catch (metric tonnes)		
		YFT	BET	TOTAL
China	2004	93	171	264
	2005	28	21	49
	2006	1	0	1
	2007	21	25	46
	2008			0
Japan	2004	274	767	1,041
	2005	55	56	111
	2006	10	0	10
	2007	0	0	0
	2008	0	0	0
Kiribati	2004	0	0	0
	2005	0	0	0
	2006	0	0	0
	2007	0	0	0
	2008	7	44	51
Korea	2004	3,500	3,801	7,301
	2005	1,139	1,871	3,010
	2006	1,957	2,816	4,773
	2007	2,480	3,445	5,925
	2008	285	523	808
Chinese Taipei	2004	587	843	1,430
	2005	196	354	550
	2006	104	138	242
	2007	0	0	0
	2008	0	0	0
Vanuatu	2004	195	464	659
	2005	80	433	513
	2006	96	660	755
	2007	67	449	516
	2008	1	22	23
TOTAL EEZ	2004	4,649	6,046	10,695
	2005	1,499	2,734	4,233
	2006	2,168	3,615	5,783
	2007	2,568	3,919	6,487
	2008	292	589	882

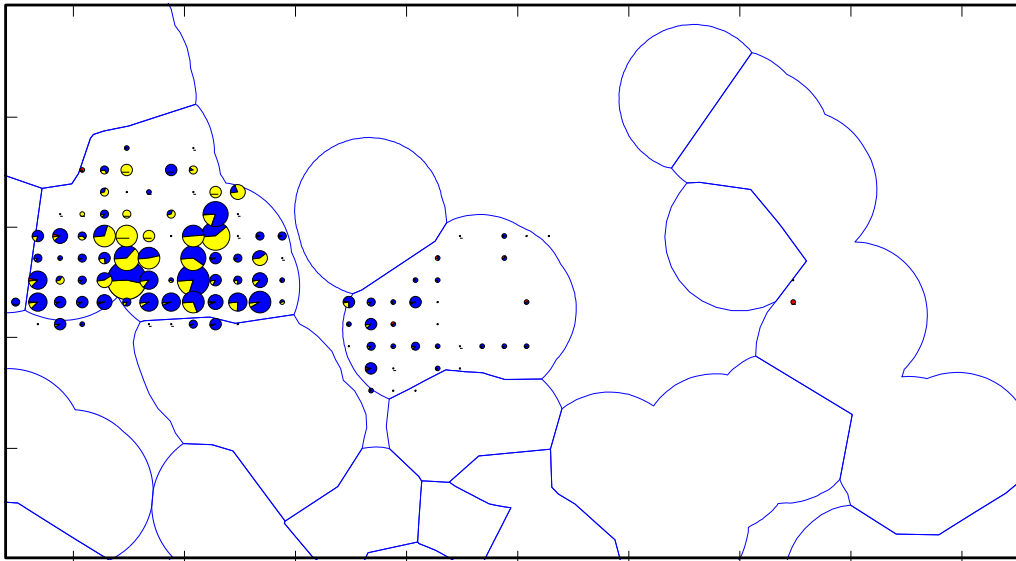
Figure 3. Distribution of catch by major distant water fishing nations in Kiribati waters during 2008



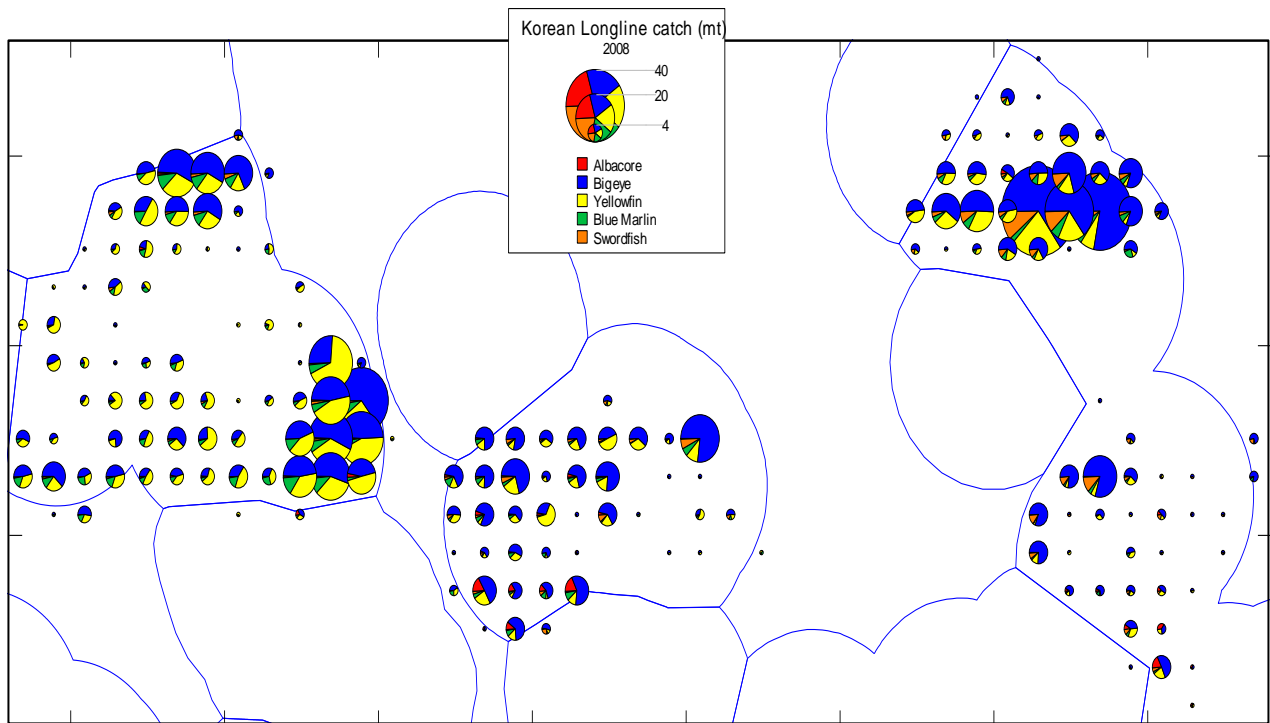
Distribution of catch by Korean purse-seine vessels fishing in Kiribati waters during 2008 (Blue=Skipjack; Yellow=yellowfin; Red=Bigeye)



Distribution of catch by Chinese Taipei purse-seine vessels fishing in Kiribati waters during 2008



Distribution of catch by US purse-seine vessels fishing in Kiribati waters during 2008



Distribution of catch by Korean longline vessels fishing in Kiribati waters during 2008

Table 4. Summary of purse seine species catch composition

		Purse Seine Species Catch Composition		
Category	Species	2006 %	2007 %	2008 %
Target Tuna	Skipjack	76.9273%	92.1033%	90.7464%
	Yellowfin	17.0594%	7.0751%	4.7532%
	Bigeye	4.2972%	0.5629%	4.2330%
Billfish	Blue marlin	0.1223%	0.0153%	0.0300%
	Black marlin	0.0494%	0.0037%	0.0000%
	Other Billfish	0.0028%	0.0058%	0.0193%
Sharks and Rays	Blue shark	0.0000%	0.0000%	0.0000%
	Mako sharks	0.0030%	0.0000%	0.0000%
	Oceanic whitetip shark	0.0080%	0.0000%	0.0000%
	Silky shark	0.0518%	0.0221%	0.0438%
	Other sharks and rays	0.0033%	0.0004%	0.0185%
Other finfish	Bullet/Frigate tunas	0.0000%	0.0000%	0.0000%
	Kawakawa	0.0038%	0.0000%	0.0000%
	Rainbow Runner	1.0746%	0.0890%	0.0429%
	Wahoo	0.0147%	0.0055%	0.0858%
	Common dolphinfish	0.1991%	0.0086%	0.0193%
	Triggerfish	0.0766%	0.0763%	0.0077%
	Barracudas	0.0009%	0.0002%	0.0000%
	Escolars	0.0000%	0.0000%	0.0000%
	Lanctfishes	0.0000%	0.0000%	0.0000%
	Ocean sunfish	0.0063%	0.0000%	0.0000%
	Oilfish	0.0000%	0.0000%	0.0000%
	Opah	0.0000%	0.0000%	0.0000%
	Pomfrets	0.0063%	0.0000%	0.0000%
	Small baitfish	0.0855%	0.0302%	0.0000%
	Other fish	0.0078%	0.0016%	0.0000%
Target tuna		98.2839%	99.7413%	99.7326%
Billfish		0.1746%	0.0249%	0.0494%
Sharks and rays		0.0661%	0.0225%	0.0622%
Other finfish		1.4754%	0.2114%	0.1558%
Total non-target		1.7161%	0.2587%	0.2674%

5. DISPOSAL OF THE CATCH

Catch for all Kiribati national longline and purse seine fleets were all unloaded in overseas ports like Japan. The only catch that was loaded in Kiribati was those that belonged to our local artisanal fishermen which they normally sell their fresh fish in the local market.

In the case of foreign fishing vessels that fished in Kiribati waters, there was no unloading of fish taking place in any of the Kiribati designated port as all of their catches were destined to overseas markets. However, unloading was only conducted by purse seine that transshipped their frozen catches onto fish carriers. These carriers then take their loaded cargo of fish to overseas markets.

6. FUTURE PROSPECT OF THE FISHERY

Because of the importance of tuna resources to Kiribati, the country is very serious to making sure that the fishery is managed and developed in a sustainable manner.

In another development Kiribati plans to bring in more fishing vessels under a joint venture umbrella as one way of extending the benefits to its local people through employment opportunities.

7. STATUS OF TUNA FISHERY DATA COLLECTION SYSTEM

Logsheets data collection

The retrieval and collection of catch report forms or logsheets from licensed fishing vessels was the major setback and this affected our effort to provide good catch estimates for 2008. The problem more-less linked to the longline fishing vessels since they normally stay at sea for over one year coupled with poor compliance by fishing operators to submit these logsheets on timely manner.

National observer program

Kiribati observer program continue to operate and in 2008 there was an increase in the number of observer placements made on foreign fishing vessels. Purse seine observer coverage in Kiribati waters is 16.5% and around 14% to the longline fishery. However, coverage in the longline fishery is probably too high due the very provisional data on fishing days derived from submitted logsheets.

Table 5. Summary of national observer placements (2004-2008)

Year	LL	PS	FFA	Total
2004	3	8	2	13
2005	4	8	3	15
2006	4	13	3	20
2007	2	19		21
2008	3	21	2	26

Unloading/Transshipment

Korea continues to dominate transshipment in Kiribati. Other countries that are also involved in this activity include Taiwan, Chinese and FSM Arrangement fishing boats. From the 120 fishing vessels that came to port, a total of 105 vessels were sample by our national fisheries observers. The sampling coverage of fishing vessels that came into port was quite high (88%).

All port sampling data were provided to SPC-OFP for re-processing.