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

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Tuvalu

Annual Report to the Western and Central Pacific Tuna Commission

Part 1: Information on Fisheries, Research and Statistics

Tuvalu

1. Executive Summary:

The year 2010 has been a good year with respect to the development and review of national fisheries policies and legislations, small increase in investment through licensing and thereby revenues earned and expansion of domestic fleet.

Key trends of tuna fisheries in Tuvalu for 2010:

- (i) Increased number of Tuvalu flag vessels from 1 to 3
- (ii) Purse seine effort by the national fleet have doubled and so as the catch in 2010 relative to 2009
- (iii) Skipjack dominate purse seine catches followed by yellowfin tuna – increase by over 100%
- (iv) Tuvalu's two flag longline vessels commenced operation end of the first quarter in 2010; fishing occurred mainly in areas outside Tuvalu's EEZ
- (v) Longline efforts and catches decreased for longline activities in 2010 in Tuvalu's EEZ
- (vi) Record high in fishing licenses issued for purse seine, longline and pole and line for 2010
- (vii) Pole and line activities were lowest in 2010
- (viii) Artisanal catches show improvements in 2010 with yellowfin dominating

There remain challenges with respect to sufficient resources and resourcing to ensure implementation of data collection, management, analyses and reporting. Furthermore, logsheet reporting and reporting from Tuvalu licensed fishing vessels remain poor; while, observer coverage and VMS reporting appears to making good progress. Tuvalu intends to seek direct budgetary support from government national budget and if failed, seek alternative funding support from elsewhere. That said, Tuvalu has benefitted from routine assistance from SPC and FFA with respect to update of TUFMAN dbase and ongoing training of local staffs in data management and maintenance of national database.

2. Background:

There has been slight progress made in domestic operations in 2010 mainly as a result of small increase in domestic fleet and associated catches in purse seine fishing. At the same time fishing licenses issued for 2010 reached record high of over 300 licenses; more than 100% increase for longline licenses for the 2009 and 2010 period. Despite this increase the catches of key species show moderate increase only.

Reporting of data and compliance (by both the distant and national fleets concerning their fishing activities) remains challenging despite progress work to better coordinate data collection, management and analyses. There are also capacity difficulties within the department of fisheries with respect to close monitoring of reporting and data management.

Recognizing operational challenges in data management and resources available to the department to progress its work, Tuvalu will in 2012 and beyond, endeavor to invest more resources into ensuring compliance on data provision and reporting consistent with requirements of the WCPFC. These efforts are consistent with the implementation of renewed domestic policies and legislations in the sustainable development, management and conservation of its tuna resources.

3. Flag State Reporting:

Tuvalu continues to explore ways to increase the economic return derived from the tuna fishery. In 2010 Tuvalu government entered into a new joint venture and has resulted in acquisition of additional two longline fishing vessels. This brings the number of Tuvaluan flag fishing boats to 3. All these 3 boats fish in the Tuvalu EEZ as well as waters of neighboring countries and Papua New Guinea through bilateral arrangements, and through FSM Arrangement for its one purse seiner.

Catch and Effort Data

Purse seine fleet – 2010 is the second year of fishing operation for the one Tuvalu purse seine vessel. The 2010 catch was larger than the 2009 catch in terms of tonnage. The difference in landed catch was significantly large - 138% higher than 2009 catch. This increase corresponds well with the increase in the fishing effort from 133 fishing days in 2009 to 234 days in 2010. Skipjack made up the bulk of the catch (80%). Yellowfin tuna accounted for 19% and less than 1% of the catch was big eye tuna.

Table 1; fishing effort (trips/days) and catch (mt) by species landed by the purse seine fleet for the reporting period (2006-2010). (Source Tuvalu TUFMAN)

YEAR	NUMBER OF VESSEL	NUMBER OF TRIPS	NUMBER OF DAYS	CATCH (IN METRIC TONNES)			
				SKIPJACK	BIG EYE	YELLOW FIN	TOTAL
2006	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0
2009	1	5	113	3,991	2	435	4,428
2010	1	11	234	8,459	35	2,071	10,565

Long line fleet - For the first time Tuvalu now has a long line fleet comprising of two fishing boats. Both vessels commenced their fishing operations late in the first quarter of 2010. However, no log-sheets have been received from the two long liners and the company had been reminded to submit all the outstanding reports as quickly as possible.

Fishing Pattern and Distribution

Purse seine fleet – the lone purse seine began its fishing operation in mid 2009 and had been fishing mainly within and around Kiribati waters. In 2010 fishing effort and area coverage had expanded and also shifted westward. In 2010 the fleet (of one boat) fish largely in the waters of Papua New Guinea and Marshall Island. Fewer fishing effort had occurred in Kiribati EEZ and to a lesser extent in the Tuvalu EEZ. It is not known what caused this westward shift in fishing by the fleet in 2010.

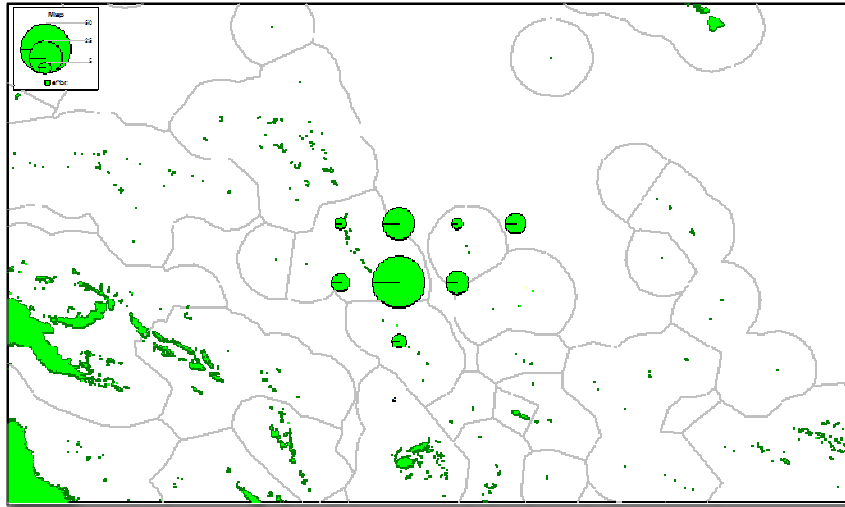


Figure 1: Distribution of fishing effort (days) by the national PS fleet in 2009

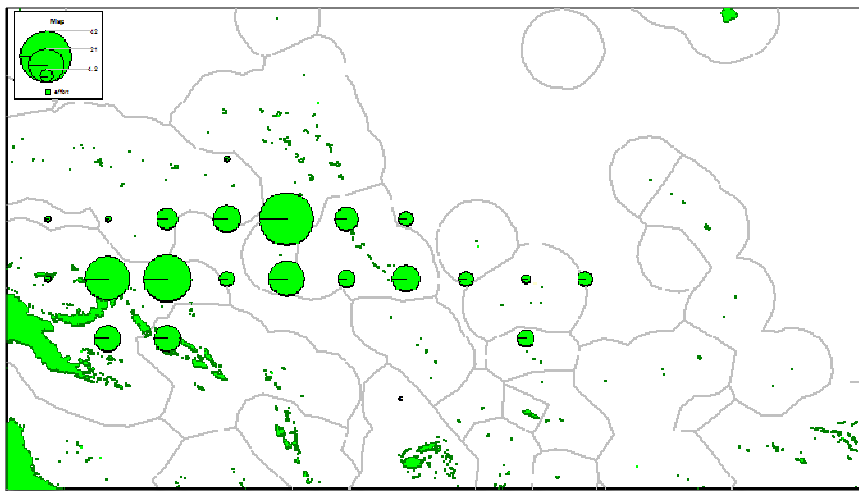


Figure 2: Effort (days) distribution by the national purse seine fleet in 2010

Artisanal Fishery and Annual Catches:

Tuvalu's artisanal fishery comprises of small scale operators who commonly land their catches locally and local fish markets on a daily basis. These operators target a wide range of different fishes and tuna species on a relatively small scale. Fishing for tuna is basically done by surface trolling. Skipjack tuna usually makes up the majority of the trolling catch (by weight) followed by the yellowfin tuna. However, in 2010 the combined catch of yellowfin tuna was much higher than that of the skipjack combined catch. In fact the 2010 catch is a record for the yellowfin tuna. The improved in storage facilities available to fishermen is one of the main reasons for the

increased catch observed in recent years. Because trolling concentrates only on the surface, the bigeye tuna is rarely encountered.

Table 2: Annual catches (tons) landed by artisanal fishermen for the period 2006 to 2010. These are actual catch figures obtained through record held by the various local fish markets. (Source: Fisheries Department database).

Year	YFT	SKJ	Others	Total
2006	3.3	9.1	2.3	14.7
2007	9	17.2	3.3	29.5
2008	10.5	11.7	3.4	25.7
2009	11.6	15.6	3.8	31
2010	21.1	15.2	2.7	39

The figures in the above table represent only catches landed to the fishing centers and do not account for fish sold outside fish markets. Data collection activities in various coastal spots appear difficult considering logistical difficulties and insufficient resources. Also fish landed by artisanal fishers based out on Funafuti have not been added because of some concerns with the quality of the collected data.

4. Coastal State Reporting

Fishing licenses issued by the Tuvalu fisheries between 2006 and 2010

Tuvalu continues to provide fishing opportunities to interested foreign fleets consistent with domestic policies and relevant provisions in the UNCLOS, where coastal states will cooperate to allow others to exploit its resources in the event it is unable to do so. Nonetheless, the number of fishing licenses continued to grow across the 3 fleets and in 2010 a record high totaling 320 fishing licenses were issued. The margin of increase is greatest for the long line fleet which rose by 121% from that in the previous year. Overall it is the purse seine fleet that has the highest number of fishing licenses with 158 (49%) followed by the long line fleet with 135 licenses (42%). The pole and line registered only 17(3%) licenses.

Table 3: Annual fishing licenses issued by the department of fisheries for the reporting period (2006-2010). Fishing licenses issued for the domestic fleet are excluded. (Source; TUFMAN Tuvalu version 6.09)

Year	Long Line	Purse Seine	Pole and Line	Carriers	Bunker	Total
2006	30	47	0	0	0	77
2007	81	105	5	0	0	191
2008	43	130	6	2	0	181
2009	61	144	12	7	1	225
2010	135	158	17	6	4	320

Purse seine – Catch & Effort Trends

Similar to the past several years the purse seine fleet in 2010 is dominated by the two fleets - the US and the Korean. The US purse seine fleet accounted for 63% while the Korean fleet contributed 21% to the total fishing effort in 2010. The total catches in 2010 dropped by approximately 23% from the peak in 2009. The reduced catch is consistent with the drop in fishing effort by about 10% (in 2010) from the record effort of 1,709 days recorded in 2009. The skipjack accounted for 92% of the total catch in 2010 and 6% consisted of yellowfin tuna. The other 2% was bigeye tuna.

Table 4: Combined fishing effort (days) and the total annual catch (mt) made in Tuvalu EEZ by the PS fleet between 2006 and 2010. (Source TuFMAN)

Year	Days	Skipjack (mt)	Yellowfin (mt)	Bigeye (mt)	Total (mt)
2006	673	12,628	1,597	918	15,143
2007	951	40,114	2,708	501	43,323
2008	1,376	35,797	3,495	710	40,002
2009	1,709	65,792	2,120	834	68,746
2010	1,546	48,796	3,393	776	52,966

Fishing effort distribution – similar to any other year the 2010 fishing effort by foreign purse seine fleet scattered all over Tuvalu’s EEZ. However there are certain parts of the EEZ observed to be “hot spots” to the PS fleet. These hot spots change from time to time as illustrated by the maps below - most certainly due to fish movement.

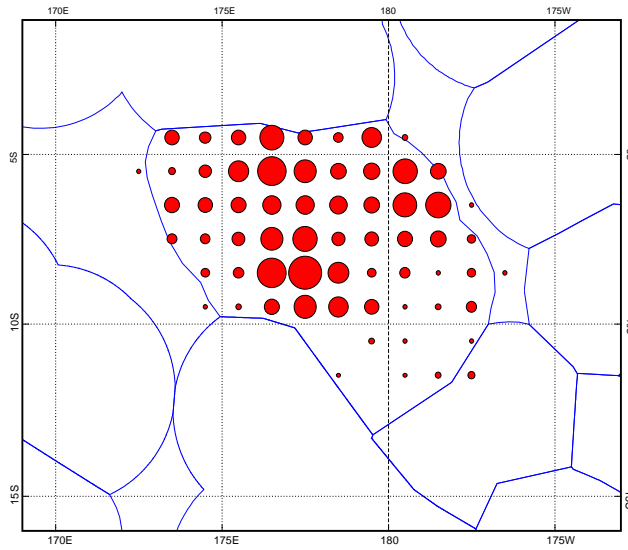


Figure 3; Effort (days) distribution of the foreign PS fleet, 2010.
(Source; CES, 2011)

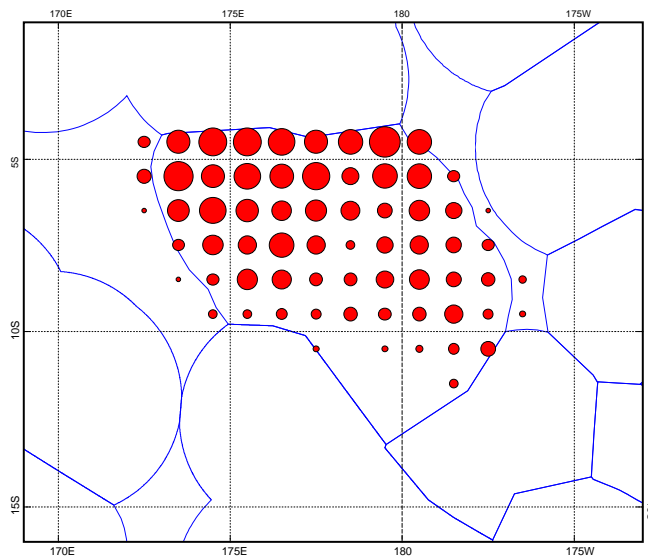


Figure 4: effort (days) distribution for foreign PS fleet, 2009
(Source: CES, 2011)

Longline Fleet annual catches – Annual catches peaked in 2007 consistent with high fishing effort reported in that year (refer to effort distribution). The 2010 combined annual catch for the long line fleet is the second lowest for the reporting period. The trends are inconsistent considering 2010 is a record year in terms of fishing licenses granted and issued to this fishery.

One possible explanation is the poor logsheet reporting and it is likely most of the catches are not appropriately reflected in the above trends. Nonetheless it is important to note that total annual catch for 2010 as presented in the table below is only provisional. Catch composition also changed. Usually yellowfin comprises the majority of the catch but in 2010 yellowfin catch has dropped to the second lowest and contributed the least, accounting for 24% of the total catch.

Table 5: Combined annual catches reported by the foreign long line fleet for the reporting period. (Source; TUFMAN Tuvalu)

Year	Albacore	Big eye	Skipjack	Yellowfin	Total
2006	8	33	0	27	68
2007	287	562	2	764	1,616
2008	125	176	1	289	591
2009	311	234	4	362	912
2010	146	154	0	97	397

Long line - Fishing Effort and distribution – no distribution of fishing effort by the LL fleet in 2010 was available at the time of writing this report. On the basis of available data the conclusions drawn is such that effort distribution for the LL fleet similar to PS fleet is also scattered across the entire Tuvalu’s EEZ. However effort tends to aggregate more in some areas than others. Such effort aggregation changed from one year to the next. The highest number of effort recorded in Tuvalu EEZ was reported in 2007.

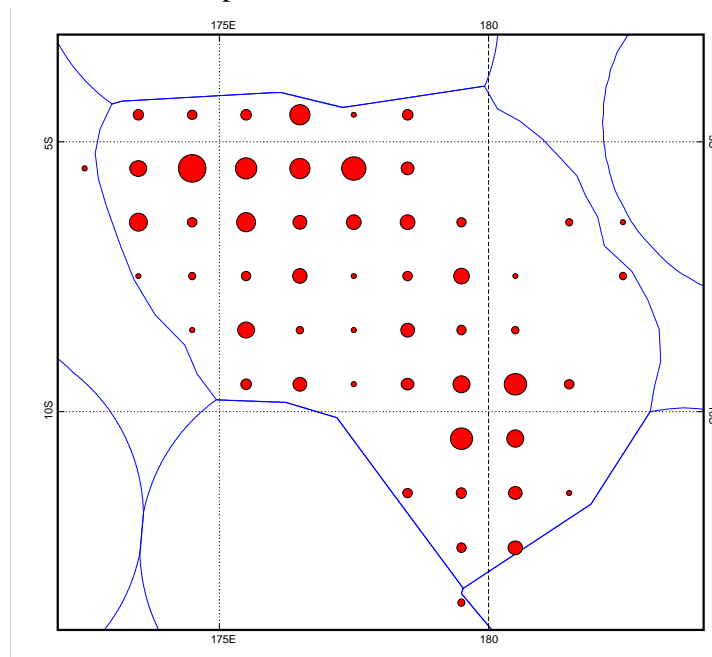


Figure 5: Effort distribution by the LL fleet in 2009. (Source; regional database, CES)

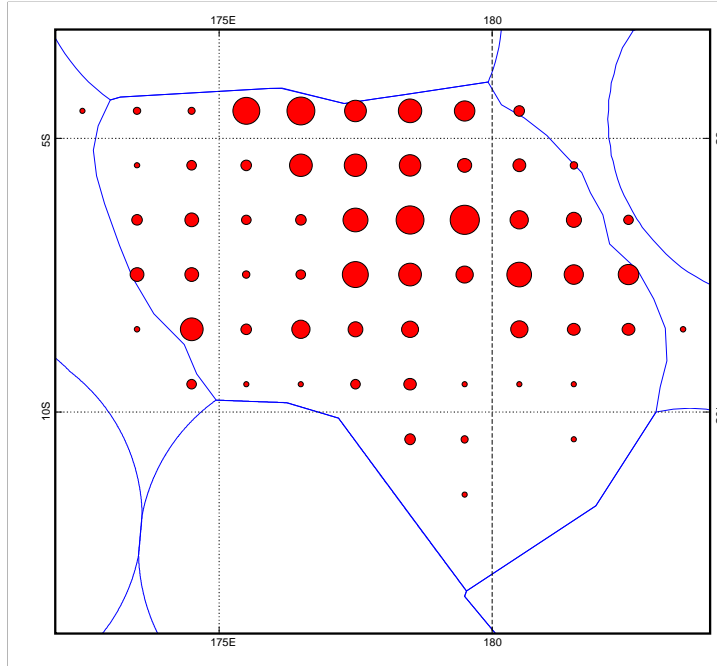


Figure 6: Effort distribution by the LL fleet in 2008. (Source; regional database, CES)

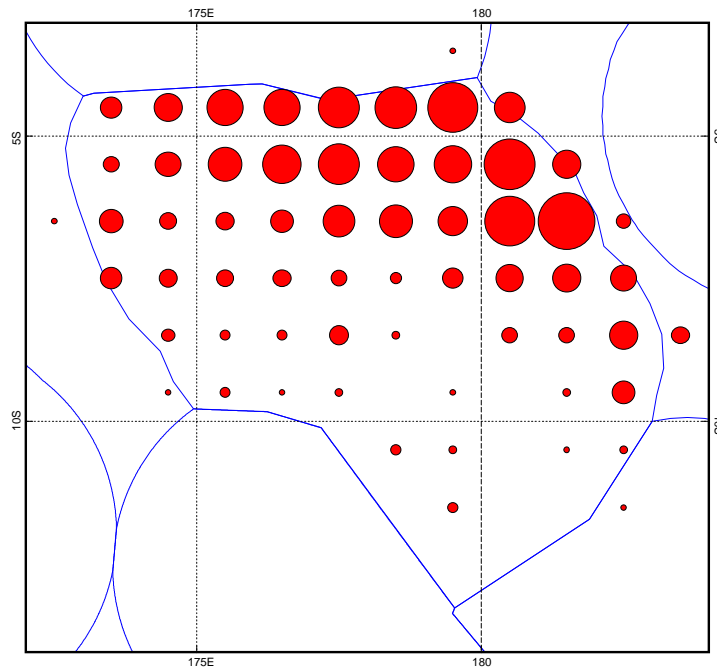


Figure 7; Combined fishing effort (days) distribution for the LL fleet in 2007. (Source; regional database, CES)

Pole and Line annual catches – Japan is the only P&L fleet operating in Tuvalu EEZ. There was no 2010 catches received by Tuvalu or reported by the Japan pole and line fleet at the time the report was written. Regardless, the annual catches have been declining after a peak of 430 tons in 2007. It is understood that many reports are yet to be received and the department is now in the process of locating and collecting all the outstanding reports not only for the Japanese long line but all other fleets that fish and operate in Tuvalu EEZ.

Table 6: annual catches caught by the P&L fleet in Tuvalu EEZ. (Source; TUFMAN Tuvalu).

Year	Number of fishing permits	SKJ	YFT	Total
2006	0	164	0	164
2007	5	430	0	430
2008	6	180	0	180
2009	12	1	0	1
2010	17	0	0	0

5. Catch Disposal

All Tuvalu flag vessels offload their catches at ports outside Tuvalu. There was little transshipment occurred in domestic ports in 2010 and when they occurred, bycatch discards remain a challenging issue. The foreign fishing boats continue to throw unmarketable fish (undersized and damaged fishes) overboard against domestic policies and laws.

Tuvalu is currently preparing its national plan of action (NPOA) on sharks and turtles and bycatch are essential sections in the current tuna management and development plan. Generally little to interactions of sharks, turtles and sea birds been reported by licensed fishing vessels.

6. Onshore Developments

No onshore fisheries related physical infrastructures were constructed in the country during 2010. Despite that small increase in number of flag vessels to Tuvalu present an opportunity to entice onshore development as a result of investment undertakings. It is expected to happen into the future with increase in domestic fleets.

Tuvalu is currently undertaking work with assistance of FFA to establish competent authority and progressing small scale offshore development project focusing on skipjack and other species in territorial waters including seamount fisheries.

7. Future Prospects

Next year Tuvalu will implement the PNA VDS and intent to trade its allowable fishing day efforts under the scheme and slowly works to phase out bilateral access arrangements. Tuvalu's new management and development plan also require implementation of its hard limits with TAC for each longline, purse seine and pole and fishery and will implement rights-based management regime to control and manage its domestic fisheries. These new hard limits are provided for under its revised Tuna Management and Development Plan.

8. Status of Tuna Fishery Data Collection Program

Fishing logbook is required by law onboard every fishing boat (large commercial boats). This does not include the small scale operators or the artisanal fleet. Under our fisheries laws fishing logbooks shall be submitted or surrendered to the fisheries department no later than one month after the completion of fishing trip. Despite that there remain anomalies and inconsistencies in complying with this requirement, which is stipulated in the license terms and conditions. Some tuna data targeting artisanal sector are also collected annually by the local fisheries department under its own initiative. However due to funding and manpower shortages coverage is very limited and only confined to Funafuti.

Observer – the national observer program kicked off last year as part of Tuvalu's commitment in fulfilling its obligation as a member of the PNA group. SPC has been helpful and active in the establishment of the program and also in the training and certification of Tuvalu observers. The program is now supported and maintained through a small levy included as part of the license fee.