PREPARATORY CONFERENCE FOR THE COMMISSION FOR THE CONSERVATION AND MANAGEMENT OF HIGHLY MIGRATORY FISH STOCKS IN THE WESTERN AND CENTRAL PACIFIC

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LETTER DATED 5 SEPTEMBER 2003 FROM THE HEAD OF THE DELEGATION OF JAPAN, MR AKIRA NAKAMAE TO THE HEAD OF THE INTERIM SECRETARIAT

Submitted by the delegation of Japan

5 September 2003

Mr. Michael Lodge
Head of Interim Secretariat
WCPFC

Dear Mr. Lodge,

With respect to the letter dated August 29, I send you the background paper describing increase in fishing efforts by purse-seiners in the western and central Pacific.

This background paper was initially submitted by Japanese delegates at the last SCTB meeting held in Mooloolaba, Australia. It was updated based on the new information from the Taiwanese fishing industry.

Please circulate this letter and attached paper to all delegates of PrepCon meeting.

Best regards

Akira Nakamae
Councilor, Fisheries Agency
Government of Japan

Annex 1

THE ESTIMATE ON IMPACT AS A RESULT OF INCREASE IN FISHING EFFORT BY SUPER PURSE-SEINERS IN THE WESTERN AND CENTRAL PACIFIC

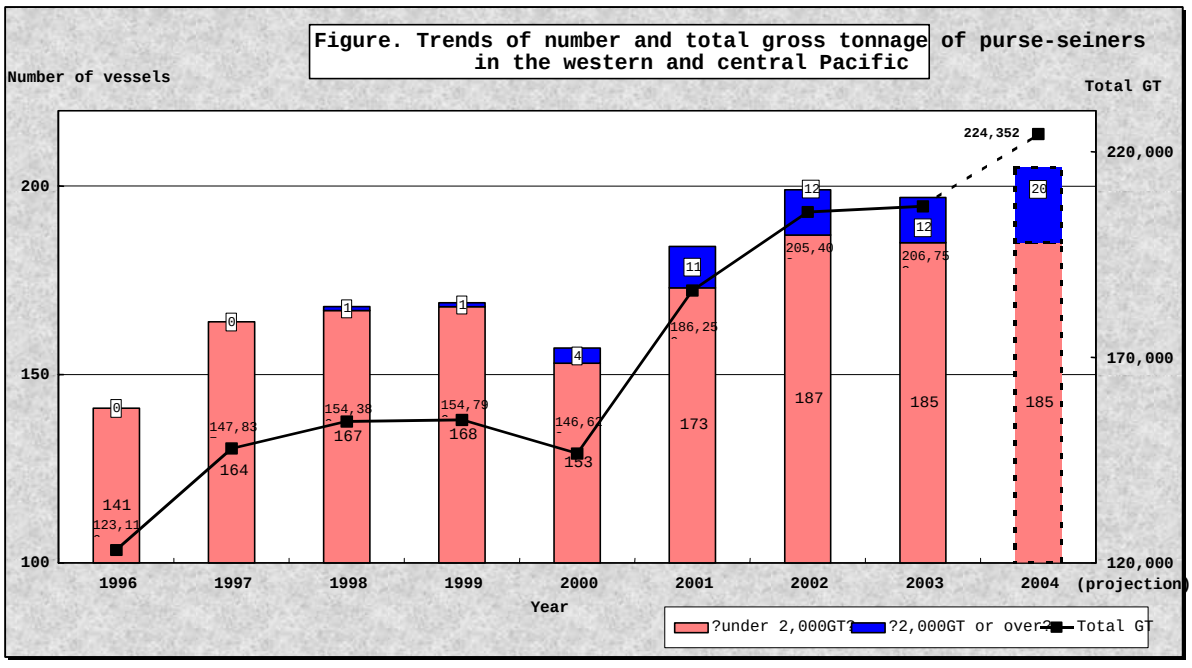
Lately, the fishing effort by purse-seiners is increasing in the western and central Pacific. This paper estimates the impact if this situation continues and catches increase.

1. Changes in fishing effort in purse-seine fisheries

In order to grasp the changes in fishing effort by purse-seiners in the western and central Pacific, FFA regional registration of purse-seiners from 1996 to 2003 was examined. The number of registered vessels increased by 40% from 141 in 1996 to 197 in March 2003. The total gross tonnage (GT) of fishing vessels increased by 68% from 123,116 GT in 1996 to 206,752 GT in 2003. From the above it is concluded that the number of purse-seiners has been increasing in the western and central Pacific, with their size becoming larger at a rapid pace. In particular, the purse-seiners of 2000 GT or over have increased from 0 in 1996 to 12 in 2003.

In addition to the above facts, Taiwan reportedly constructed 26-28 new purse-seiners and is now constructing at least 5 ones, while keeping the number of Taiwanese licensed purse seine vessels at 41. Namely, the 31-33 purse-seiners would be a net increase of the total fishing capacity. Of the newly constructed purse-seiners, 5 are over than 2,000 GT and additional 5 constructed purse-seiners are reportedly over than 2,000GT. Even though 11-13 out of 31-33 purse-seiners have not been registered in FFA regional registration yet (including 8 of them are over than 2,000GT), it is highly likely that newly constructed purse-seiners will start operation in the western and central Pacific soon.

Supposing that all the new purse-seiners that have not been registered FFA regional registration start operation from 2004, the total GT of purse-seiners will increase to 224,352 GT, although their number will be retained to 205 under the Arrangement for the Management of the Western Pacific Purse Seine Fishery (hereafter refer to as “the Palau Arrangement”). This tonnage will be more than double the 1996 level. (See Fig. 1).



2. The estimate of impact as a result of increase in fishing effort by larger than 2000GT purse-seiners

The possible impact of the increase of purse-seiners larger than 2000GT (hereafter refered to as “the super purse-seiners”) in the western and central Pacific on the catch and the future stock conditions in the region was estimated.

(Conditions for estimate)
The estimate was based on the following conditions.

(1) The upper limit of the number of purse-seiners in the western and central Pacific is set at 205 under the Palau Arrangement.
(2) After the total number reached 205, the increase of one super purse-seiner would result in the decrease of one purse-seiner less than 2,000 GT.
(3) The annual fishing effort per super purse-seiner is 11,000 MT for super purse-seiners, and 5,790 MT for purse-seiners smaller than 2,000 GT. The figure 11,000 MT has been estimated from interviews of those involved in the fisheries. The figure 5,790 MT is an average value calculated from SPC statistics. (It is highly probable that 11,000 MT is a conservative estimate. There exists information that one large-scale purse-seiner caught 900 MT in a week, which corresponds to totally over 20,000 MT annual catch.)
(4) The proportion of the catch by fish species is set at "skipjack: yellowfin tuna: bigeye tuna =77: 20: 3" on the basis of catch by species by purse-seiners in 2001.)

(Results of estimate)

A. Increase in the catch

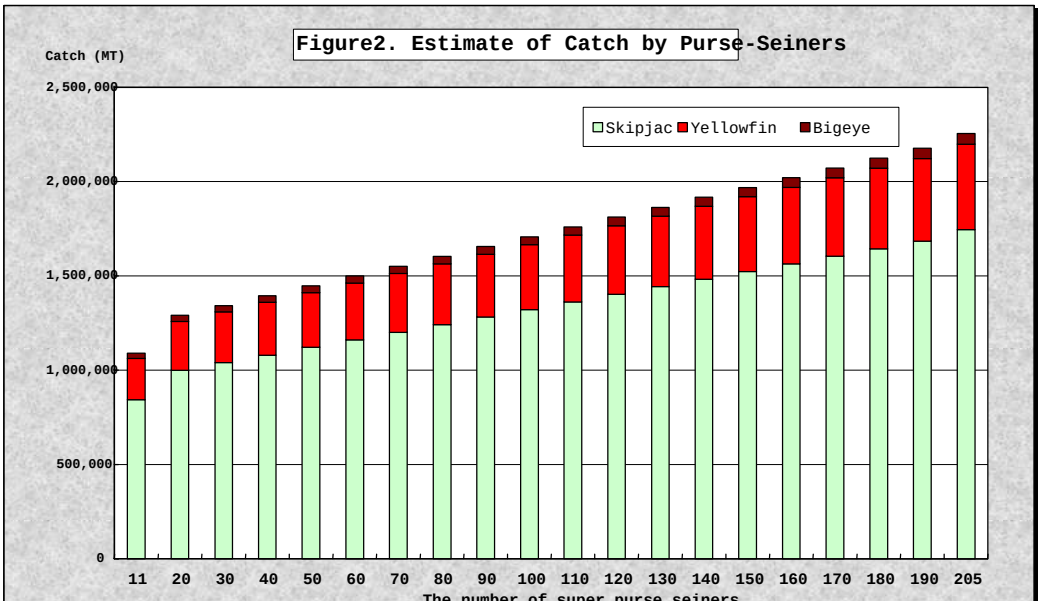
The catch which stood at 1,089,270 MT in 2001, increased as shown in Table 1 and Fig. 2, following the increase in super purse-seiners.

Table 1 Estimate of Catch by Purse Seine Vessel

Units: MT

	11 vessels (2001)	20 vessels	30 vessels	40 vessels	50 vessels	100 vessels	150 vessels	205 vessels
Total catch	1,089,270	1,291,150	1,343,250	1,395,350	1,447,450	1,707,950	1,968,450	2,255,000
Skipjack	843,412	999,726	1,040,066	1,080,407	1,120,745	1,322,450	1,524,153	1,746,026
Yellowfin	219,151	259,767	270,249	280,731	291,213	343,624	396,034	453,685
Bigeye	26,707	31,657	32,934	34,212	35,489	41,876	48,263	55,289

(Data: SPC Catch Statistics; Interview from the fishing industry)



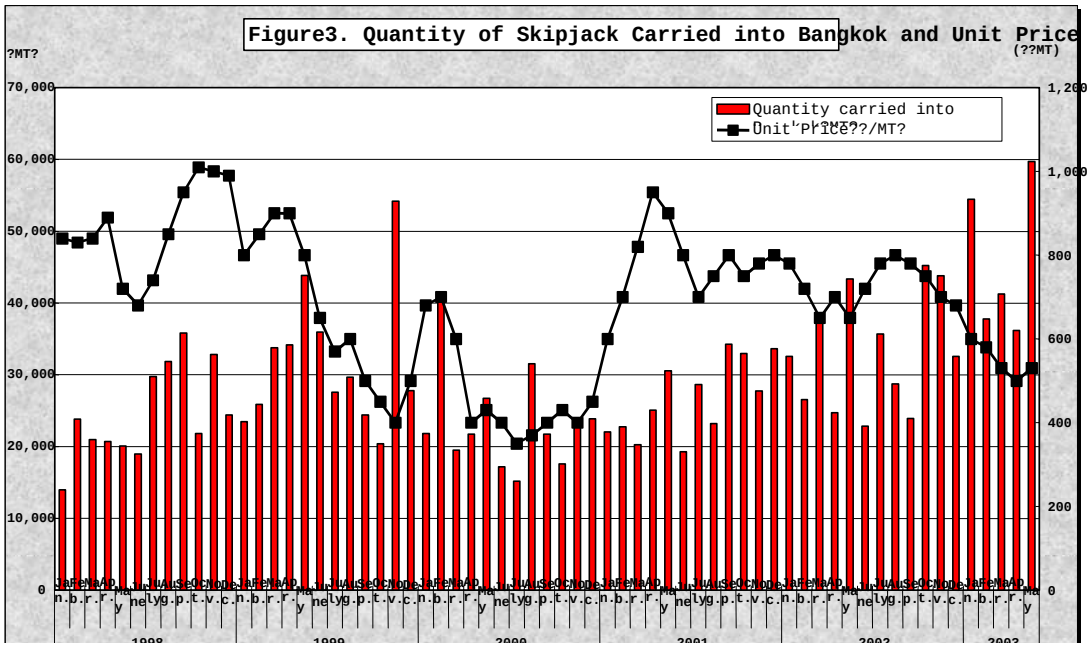
B. Impact on the resources

The impact on bigeye and yellowfin tuna resources by the increase in fishing mortality (F) as a result of the increase in super purse-seiners is shown in the Attached Document.

C. Market prices of skipjack

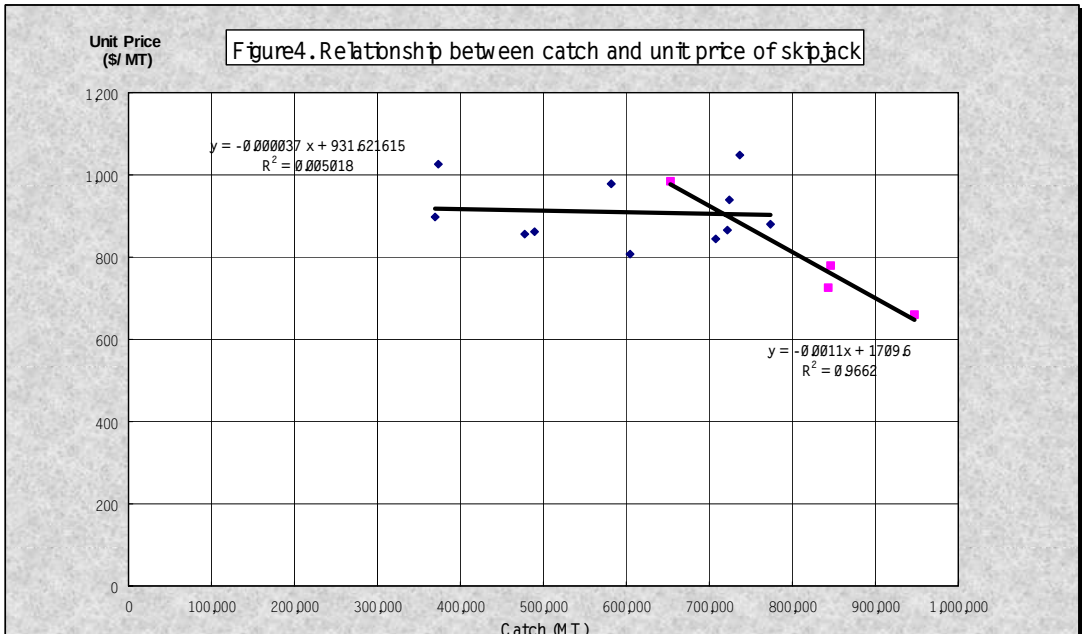
(1) The world market prices of skipjack are linked in parallel with the prices at the Bangkok market. As a result of increase of shipment of skipjack to the Bangkok market, the prices there have been falling, to $500/MT in April 2003 (See Fig. 3). This is causing sluggish prices at other skipjack markets (e.g. Pagopago and Yaizu).

It can be said that increasing catch in this area is causing a conspicuous market price decline of skipjack in the world because the catches of skipjack in the western and central Pacific account for a considerable portion of the world total catch.



(2) **The relationship between catch and unit price of skipjack in the western and central Pacific and Bangkok market prices**

If the catch is retained to a level between 400,000MT to 700,000MT, the prices will remain constant at around $900 (Y = -0.000037X + 931.621615), but the prices will tend to fall drastically when the catch exceeds 700,000 MT (Y =-0.0011X + 1709.6) (See Fig. 4). In other words, the present catch situation already represents a state of excessive exploitation from the viewpoint of price formation.



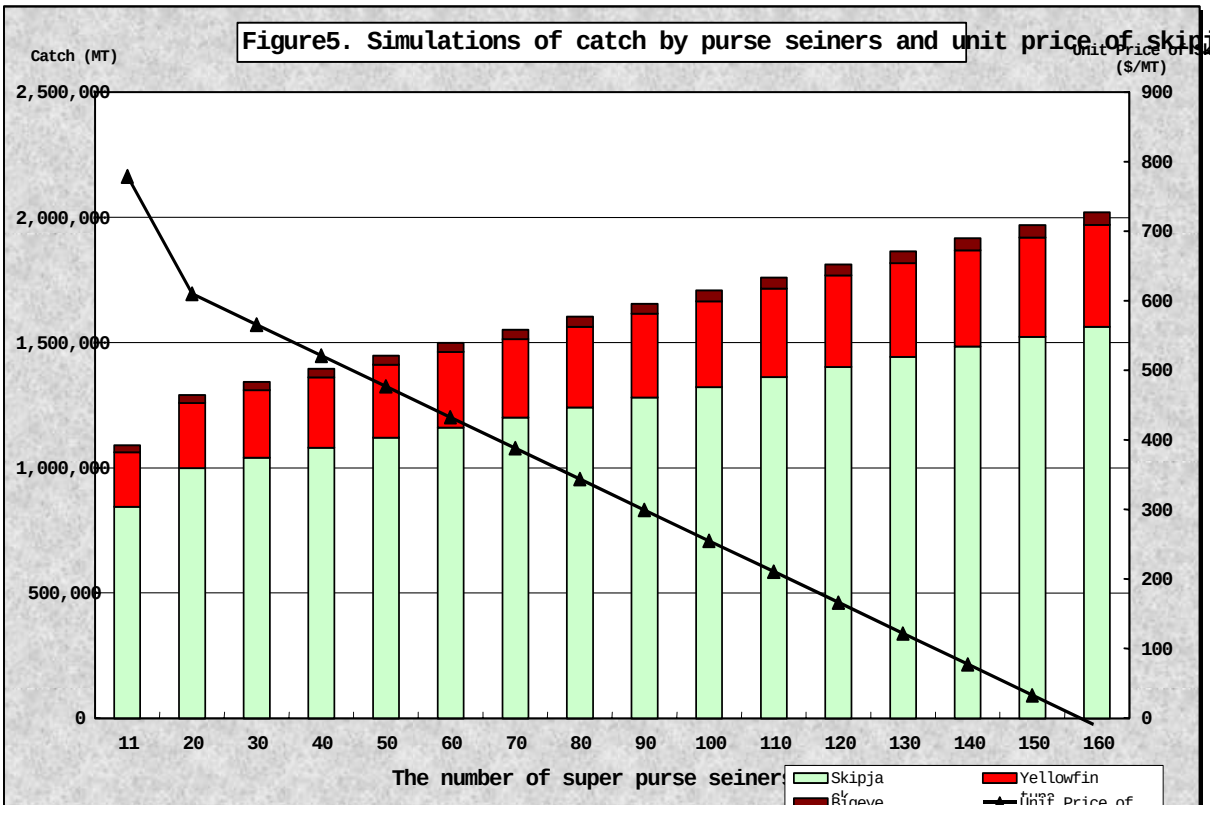
(3) Simulation was made on what impact will be caused on skipjack market prices in case the catch by purse-seiners continues to increase in the western and central Pacific. The simulation was based on combination between the catch by super purse-seiners following the increase of super purse-seiners as in the above A and unit price of skipjack market prices in Fig. 4. As a result, the prices of skipjack will decline drastically following the increase in the number of super purse-seiners. The figure in terms of calculation would drop to zero when the number of super purse-seiners exceeds 150 (See Table 2 and Fig. 5) (In reality, however, it cannot be assumed that the operation continues to the point where unit prices fall to zero because ship owners will withdraw from fishing operation if the unit prices fall to certain levels.)

Table 2 Simulations of catch by purse seine vessels and unit price of skipjack

Units: ton, $/ton

	11 vessels (2001)	20 vessels	30 vessels	40 vessels	50 vessels	100 vessels	150 vessels
Skipjack catch volume	843,412	999,726	1,040,066	1,080,407	1,120,745	1,322,450	1,524,153
Skipjack unit price	779	610	566	521	477	255	33

(Data: SPC Catch Statistics; Interview from the fishing industry)



3. Discussion and recommendations

(1) The Palau Arrangement only establishes the upper limit of the total number of purse-seiners. It is clear that increase in the fishing effort caused by introduction of super purse-seiners cannot be prevented in the present situation.

(2) There is a concern that stock conditions of bigeye and yellowfin tunas will further deteriorate as a result of increase in fishing effort. Bigeye and yellowfin tunas are major target species for longline fisheries, and the deterioration of the resources can cause serious consequences to longline fisheries.

(3) Supply of skipjack is already in the state of saturation. If catch increases in the future, there is a possibility that fishery on this species will collapse as a result of sharp fall of prices. In reality, it is likely that the unit prices of skipjack will fall at a faster pace than calculated values. The reason is that it is estimated that, if income of fishing enterprises decrease as a result of the decline in unit prices, they will further step up catches in order to cover up the losses, which, in turn will prompt further decline in unit prices--a kind of vicious circle. There is a concern that the fall in unit prices of skipjack will cause immense adverse impact on fishermen's earnings who are operating artisanal fisheries in island States.

(4) Accordingly, it is crucial to introduce, as urgently as possible, restrictions on fishing effort for super purse-seiners in the western and central Pacific from the viewpoint of sustainable use of the resources of bigeye and yellowfin tunas as well as ensuring maintenance of skipjack prices.

(5) On the other hand, regulation of the catch only of bigeye and yellowfin juvenile tunas is not feasible because purse-seiner is a type of fishing method where it is difficult to catch specific fish species on a selective basis.

(6) Further, with respect to the type of operation, purse-seiners operate mainly in a way to catch fishes gathered around numerous drifting objects that flow from the islands. Hence, it is not realistic to regulate purse-seine fishing that catches fishes gathered around drifting objects. Moreover, even if FAD operation is prohibited, it is not effective because by all appearances it is difficult to distinguish to what extent purse-seiners catch fishes gathered around drifting objects.

(7) From the foregoing, it is crucial to freeze the status quo of fishing effort in super purse-seiners in the western and central Pacific in order to implement effective management of super purse-seiners. Otherwise, serious consequences can be anticipated on resource management and fishing entrepreneurial operations.