

PAPUA NEW GUINEA'S PRAWN FISHERY IN 1983

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INTRODUCTION

1983 was a very successful year for Papua New Guinea's prawn fishery. There was an increase in total landings, and a big increase in 'catch per unit effort' (CPUE) - that is, the amount caught per hour spent fishing. There was also a strong Japanese market. This article summarises developments in the fishery in 1983, and gives some information about government policy on the management of the prawn fishery.

LANDINGS

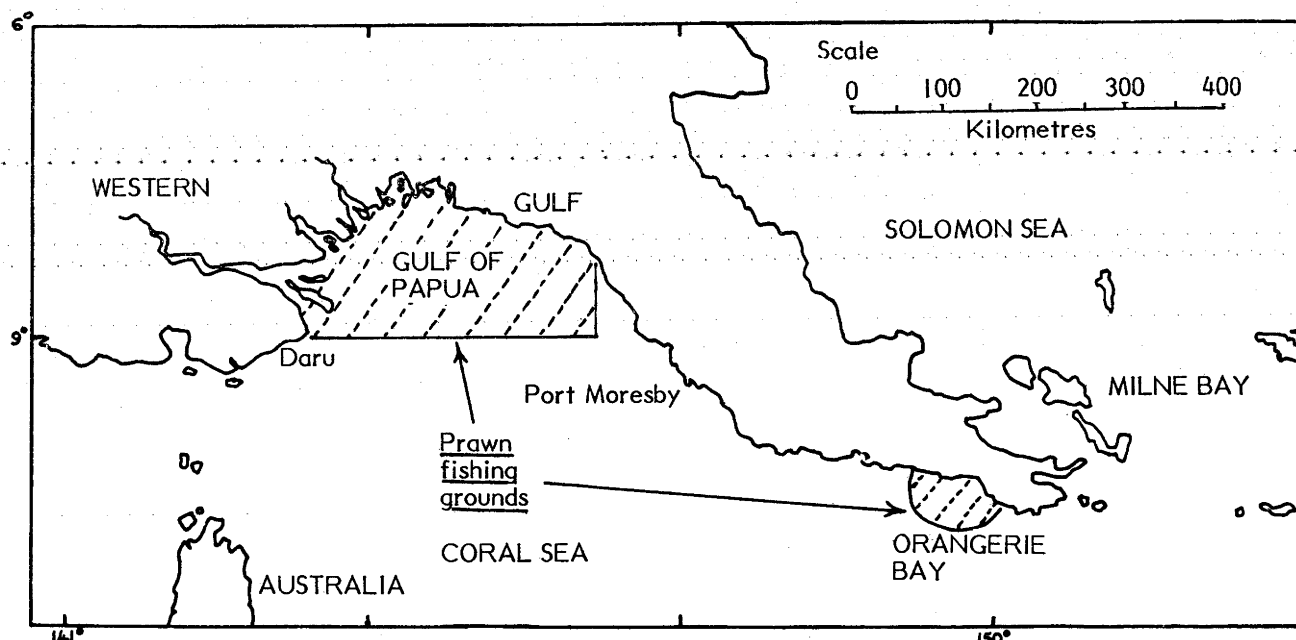
In 1983 trawlers operating in Papua New Guinea's prawn fishery landed a total of 1,190 tonnes (tailweight) of prawns. This was the largest catch since the fishery began, and was 33% more than the 1982 catch of 894 tonnes.

The prawn fishery in Papua New Guinea operates in two separate areas: the Northern Gulf of Papua area, and the Orangerie Bay area. The positions of these areas are shown on the map below.

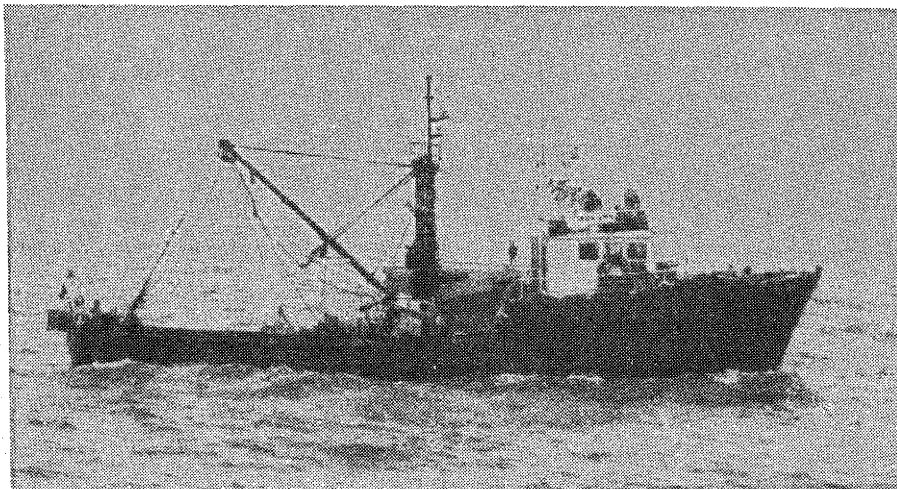
Northern Gulf of Papua area

The Northern Gulf of Papua is the most important area of the prawn fishery, with 97% of the catch being taken there in 1983. The area is fished by larger class vessels (greater than 100 GRT - Gross Registered Tonnes), most of which are owned by companies.

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Locations of the main prawn grounds in Papua New Guinea



*A typical prawn trawler
in the Gulf of Papua
prawn fishery*



*Emptying the net on the
deck of the trawler*

A major development in the fishery in 1983 was the formation of a 'joint venture company'. By contributing 3 vessels and shore assets, the Papua New Guinean Government took up a 33% share in the largest prawn company, New Guinea Marine Products Pty Ltd. The other two partners in the company are Japanese: Hokoku Marine Products Co and Nippon Suisan Kaisha Ltd. The joint venture company owns 6 vessels altogether.

While there was a big increase in total landings in the Northern Gulf of Papua in 1983, the fishing effort was less than in 1982. In 1982 the fishing effort was 60,307 hours spent fishing. In 1983 it fell to 56,977 hours. The main reason for the fall was the withdrawal of 3 trawlers from the fishery until the new 'joint venture company' was

formed. Two of the vessels re-entered the fishery in October, making a total of 13 vessels by the end of the year.

Catch per fishing effort (measured in kg prawns landed per hour of fishing time) increased in 1983 to a record level of 20.5 kg. This was 40% higher than the CPUE in 1982 (14.6 kg).

Orangerie Bay area

The Orangerie Bay area of the prawn fishery is fished by 2 smaller class vessels, owned and operated by Papua New Guinean groups who claim a traditional property right over marine (sea) resources in the area. In 1983, fishing effort was 1,393 hours, CPUE 28.1 kg, and total landings a little more than 39 tonnes.

SPECIES CAUGHT

The main commercial species of prawns caught in the Papua New Guinea prawn fishery are as follows:

- Banana prawns (*Penaeus merguensis*, *P. indicus*)
- Black Tiger prawns (*P. monodon*)
- Tiger prawns (*P. semisulcatus*)
- Endeavour prawns (*Metapenaeus ensis*, *M. demani*, *M. eboracensis*)
- Mixed prawns (other species not mentioned above)

The four species groups mentioned make up most of the catch. The main species in both fishing areas is the Banana prawn. In 1983, Banana prawns made up 55% of the catch in the Northern Gulf of Papua, and 98% in Orangerie Bay. The proportion of each species in the catch has stayed fairly stable over recent years.

TABLE 1: PERCENTAGE COMPOSITION OF THE CATCH (TAIL WEIGHT) FOR THE GULF OF PAPUA PRAWN FISHERY

Species Group	Average 1977 - 1982	1983
Banana	53.9	55.4
Black Tiger	7.4	8.7
Tiger	0.8	2.6
Endeavour	18.6	15.8
Mixed	19.4	17.4
Total	100.0	100.0

THE BY-CATCH

By 'by-catch' we mean all the other kinds of fish which are caught at the same time as the prawns. In Papua New Guinea almost all of the trawl by-catch is thrown back into the sea. However, most of it could be sold in Port Moresby for human and animal consumption. At present, the by-catch is sorted, and the larger, more easily sold species are frozen and transported back to



Sorting the catch, which sometimes includes lobsters, on the trawler

Port Moresby. The amount of by-catch fish kept on each fishing trip depends on the length of the trip, on how large the prawn catch is, and on how much freezer storage space is available on the boat.

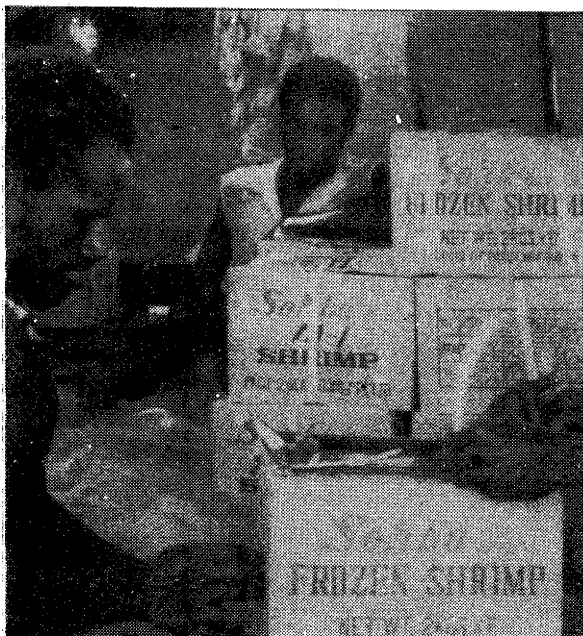
In 1983, about 350 tonnes of by-catch was landed in Port Moresby by the prawn fleet. This fish sells at 60 to 90 toea per kg, depending on species and market conditions. The estimated value of the by-catch was K265,000.

EXPORTS

In 1983, Papua New Guinea exported a total of 1,109 tonnes of prawns (tailweight). This was 22% more than in 1982 (912 tonnes). Most of the exported prawns went to Japan, though smaller quantities of lower valued species were sold in the United States, Australia, Hong Kong and Singapore.

Japan will continue to be Papua New Guinea's main market for prawns. However we are trying to find stable markets elsewhere, especially for those species of prawns which are less valuable in Japan.

The total value of prawn exports from Papua New Guinea in 1983 was K8.1 million - 69% higher than the 1982 value of K4.8 million. In Japan the average price was K8.20 per kg.



Packing prawns in master cartons on the trawler before being stored in the vessel's freezer

DOMESTIC SALES

Papua New Guinea's domestic prawn market is small compared to the export market. It is estimated that no more than 150 tonnes of prawns could be sold on the domestic market per year. The reason for this is that prawns are a very expensive food item.

In 1983 about 150 tonnes of prawns were sold locally. The average price was K6.65 per kg. Most of these sales were from retail outlets run by the fishing companies, and from the Government-owned Fish Marketing Corporation. The outlet run by the new joint venture company sold 60% of the total.

EMPLOYMENT AND TRAINING

Each of the larger class vessels are crewed by 2 or 3 foreign deck and engine officers and 10-15 Papua New Guinean deck and engine hands and trainee officers. A total of 204 Papua New Guineans and 32

foreigners were employed on all the vessels operating in the prawn fishery in 1983. Also, 27 Papua New Guineans and 11 foreigners worked in shore support services, management and marketing.

The Government, through the Department of Labour and Industry, requires that the companies operating in the fishery have training programmes and localization plans. The companies pay for training at institutions within this country and for specialist training overseas. In general, the training and localization programme has been successful. However, the suggestion that most management and crew positions could be localized by 1987 is probably too optimistic.

TAXES AND PROFITS

Apart from company tax and personal income tax which the fishing companies and their employees must pay, the companies must also pay export tax. This tax is charged on all marine products exported from Papua New Guinea.

Export tax is set at 5% of the value of the catch. It was introduced to the prawn fishery in 1982. In 1983 about K405,000 was collected in export tax payments.

Vessel and crew licence fees are set at very low levels. In 1983 about K1,130 was collected from this source.

All the taxes collected from the fishery are paid into the Government's Consolidated Revenue Fund.

The companies operating in the fishery made reasonable profits in 1983.

MANAGEMENT

As in previous years the Fisheries Division of the Department of Primary Industry continued to check very carefully the stocks of prawns in the fishing areas in 1983. This has been a fairly easy task because of the small number of vessels operating in the fishery. In order to keep their fishing licences, vessels must report their catches and fish only in permitted areas. The operators of the vessels have

usually obeyed these rules, therefore catch data and other related data are very accurate.

CPUE data show that the prawn fishery could handle a higher fishing effort. However, if fishing effort increases too much, the CPUE could fall. For this reason, very careful thought is being given before licencing new vessels in the fishery.

Government policy suggests that it is unlikely that any more foreign-owned boats will be licenced. Preference will be given to existing national companies to expand their operations and to Papua New Guinean individuals to enter the fishery on a commercial basis. Also Papua New Guineans are being encouraged to buy shares in the foreign controlled companies. For example, in 1983, Gulf Marine Pty Ltd, the Papua New Guinean share holders, took over the shares of their Japanese partner in the company Gulf Sobhu Pty Ltd. Gulf Marine Pty Ltd was renamed in 1984. It is now known as Gulf Papua Fisheries Pty Ltd and is wholly owned by the Gulf Provincial Government. It now operates 3 vessels in the Northern Gulf of Papua.

THE FUTURE OF THE FISHERY

Because the prawn fishery in Papua New Guinea is mostly foreign-controlled, and most production is exported, the management policy now is to keep the prawn catch as high as possible, without reducing the stocks. In this way, export earnings for Papua New Guinea are as high as possible, and the prawn stocks are being conserved.

As the foreign presence in the fishery is gradually reduced, this policy may be changed. However, Papua New Guinea's prawn fishery will stay as a limited entry fishery as it has done in the past.

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