

# A Brief Overview of Fisheries Statistics of the Emirate of Abu Dhabi



هيئة البيئة - أبوظبي  
Environment Agency - ABU DHABI  
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## 1- Summary

Since 2001, the Fisheries Statistical Unit has collected and analysed information on fisheries including catch and fishing effort data. This bulletin gives an overview of the landings, fishing effort, value, species composition and catch rates of the main commercial species groups over the period 2001 – 2004.

Over the period 2001 – 2003, there was an increasing trend in the number of fishing trips made by lanshes (6,259 in 2001 to 8,106 in 2003) and tarads (11,340 in 2001 to 16,405 in 2003). Also, the total catch landed by both lanshes and tarads increased from 5,813 in 2001 to 9,024 tonnes in 2003.

In order to reduce effort in the demersal fishery, the number of traps



(gargoor) licensed was limited to 125 per lansh in late 2003. Furthermore, a ban on the use of gargoor by tarads was implemented. As a direct result of these restrictions, the total number of fishing trips by lanshes dropped from 8,106 in 2003 to 6,444 in 2004. The number of fishing trips by tarads remained virtually unchanged (16,405 in 2003 and 16,645 in 2004).

The annual catch rates of some of the most important commercial species groups also decreased in 2004 compared to 2003. The total catch landed by both lanshes and tarads dropped from 9,024 in 2003 to 6,658 in 2004.

## 2- Introduction

A key mission of the Environment Agency – Abu Dhabi is to manage, protect, rehabilitate, enhance, and develop fisheries, marine resources and the marine environment in the Emirate of Abu Dhabi, consistent with the principle of sustainable development and subject to allocations and programs established through local and national regulatory processes and policies. A key task of this mission is the collection of information on the status of the fish stocks through an elaborate fisheries statistical program.

In this regard a fishery statistical data collection program was established since 2001 with the following objectives:

- ◆ Development and implementation of a system for receiving, processing, storing, retrieving, analyzing, tabulating and interpreting data in a manner that is compatible with the Agency's objectives.
- ◆ Maintaining and updating of records of fishery statistics
- ◆ Preparation of periodic and annual statistical reports and reporting on the data and results.

Under this program, a wide range of fisheries data including fish landings, fishing effort, species composition and value of landings are documented. Information on the fisheries is collected from surveys and from other government departments (MAF, Coast Guard) and affiliated institutions (Fishermen's Cooperative Society) based upon special arrangements.

This statistical bulletin presents the fisheries statistics for the Emirate of Abu Dhabi from 2001 to 2004. Its purpose is to disseminate basic data on the fisheries of Abu Dhabi and is intended to be used by a wide audience including fishermen, fisheries cooperative societies, researchers, enforcement agents, planners and decision makers. The bulletin will be produced on an annual basis subsequent to this first issue.



### 3- Description of the fishery

Fisheries in the Emirate of Abu Dhabi are artisanal with the fleet constituting of small-sized boats operating traditional fishing gears. There are two types of fishing vessels namely; tarads and lanshes.



Tarads are open fibreglass dories measuring 6-8 m. in length which are equipped with one to two outboard engines. The duration of fishing trips is usually between 2-4 hours with a maximum trip length of one day. The number of crew varies from 1-4 persons.



Lanshes are traditionally built wooden dhows of about 15 m. in length. They are decked and equipped with inboard diesel engines. Fish is stored whole on ice in insulated cool boxes. Fishing trips usually last between 3 and 6 days. The number of crew varies from 4-8 persons.



The maximum number of fishing boats licensed to operate in Abu Dhabi's waters was maintained at 1100 vessels during 2004 (only existing fishing vessels may apply for license renewal). As of September 2004, 735 tarads and 345 lanshes were licensed. Whilst there are a wide variety of methods, the main fishing gear type used to target demersal species is the Gargoor which is a dome shaped wire trap. Gargoor are licensed to fishermen on lansh vessels only, with a maximum of 125 gargoor per vessel. Hadaq (hand line) is usually operated in combination with the Gargoor fishing method.





Other demersal fishing methods such as Al Sakkar (inter-tidal barrier net), Al Hadhra (inter-tidal enclosure trap) and Al Dafara (encircling net) are mainly operated by tarad fishermen as these gears are confined to shallower waters. Al Yarroof (beach seine) and Al Salieya (cast net) are mainly operated by foot fishermen. Al Halaq (purse seine net) is the most important gear type used by tarads to target pelagic species.



There is a wide variety of commercial fish landed; over 100 species from more than 35 families are caught by the gears operated in the different fisheries in the Emirate of Abu Dhabi. The most important families are Groupers Serranidae (Hamour), Emperors Lethrinidae (Shaari), Snappers Lutjanidae (Naiser), Sweetlips Haemulidae (Farsh), Seabreams Sparidae (Faskar), Jacks Carangidae (Jesh) and Mackerels Scombridae (Kanaad).



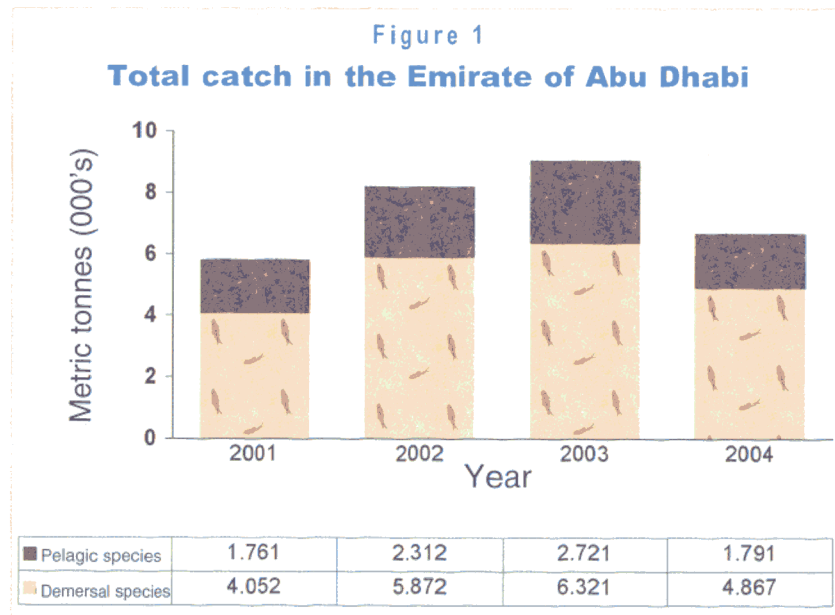
#### 4- Catch, effort, species composition and value of landings

The total catch landed in the Emirate of Abu Dhabi increased from 5,813 tonnes in 2001 to 9,024 tonnes in 2003, and decreased to 6,658 tonnes in 2004 (Fig. 1).

The increase in catch during 2001 - 2003 was associated with an increase in the number of fishing trips made by both lanshes and tarads (Fig. 2).

In 2004, the total catch dropped 26% compared to 2003 mainly as a result of a reduction in the number of trips made by lanshes (Fig. 1).

Demersal species contributed for 71% to the total catch.



An overall increase in landings was registered for both tarad (11,340 in 2001 to 16,405 in 2003) and lanshes (6,259 in 2001 to 8,106 in 2003) from 2001 to 2003.

The number of landings made by lanshes decreased by 20% in 2004 compared to 2003 whereas the effort by tarads remained stable.

The species composition of the total catch in 2004 was dominated by the emperors (Shaari, 30%) and grouper (Hamour, 18.6%) (Fig.3).

The wholesale value of the total catch in 2004 was 48.9 million AED. The grouper (Hamour) was the most valuable species, accounting for 35% of the ex-vessel value of the total landed catch during 2004. Although kingfish (Kanaad) represented less than 7% of total catch by weight, it made up nearly 12% of the total in terms of value (Fig.4).

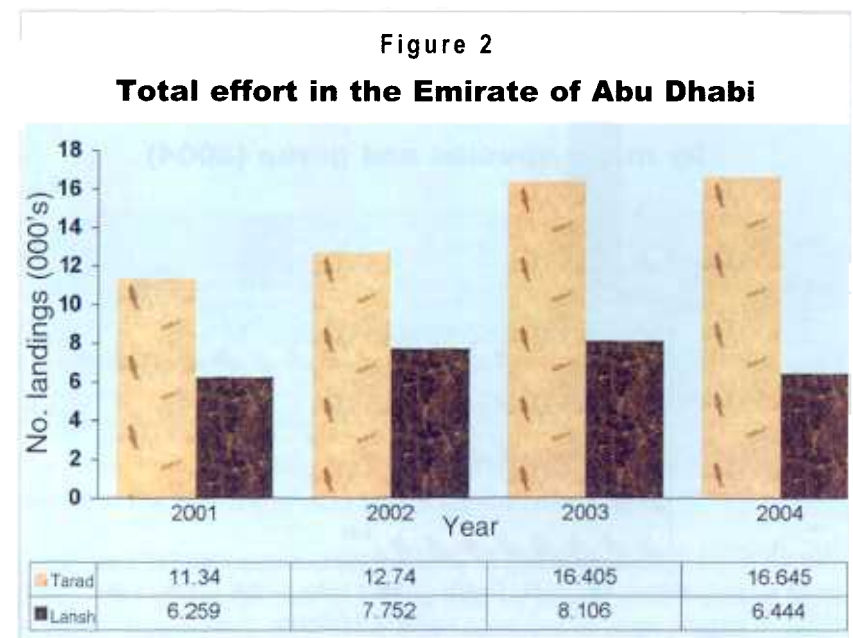


Figure 3

**Species composition of the total catch (2004)**

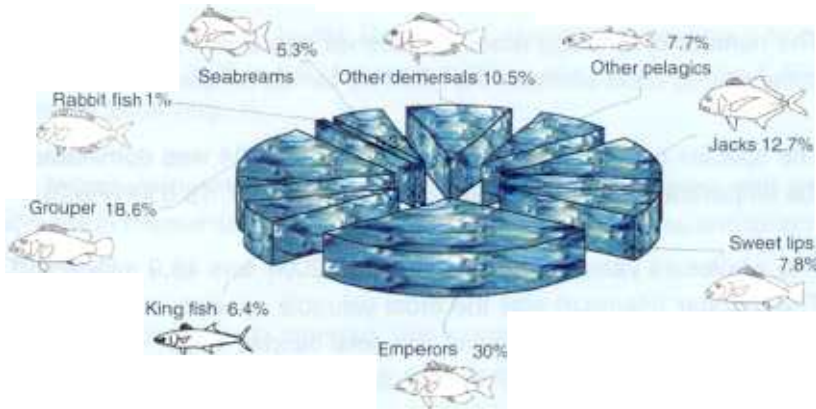


Figure 4

**Value of the total catch (AED millions) by major species and group (2004)**

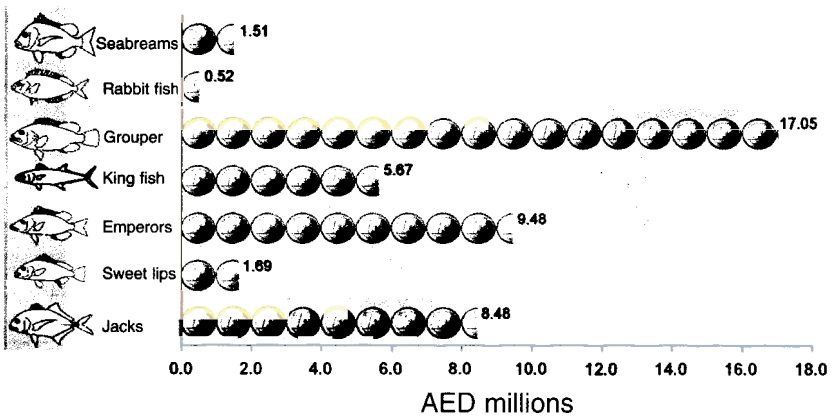


Figure 5

**Total catch by landing site (2004)**

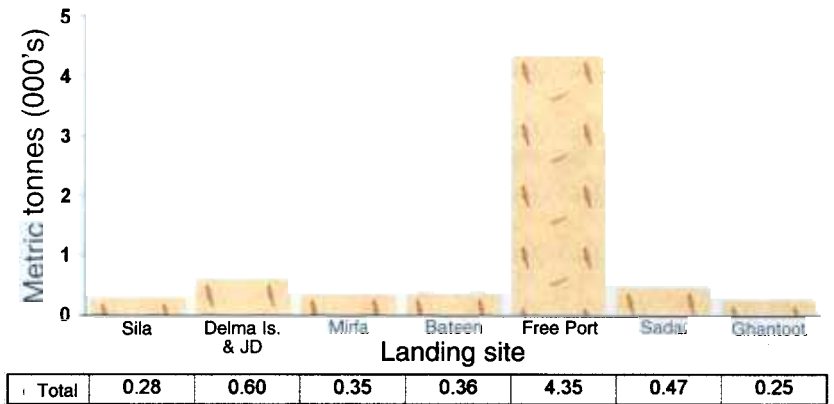
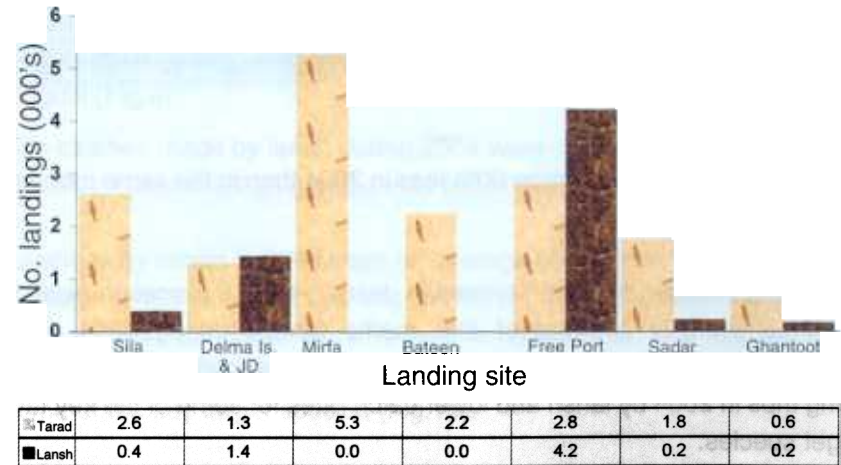


Figure 6

**Total effort by landing site & boat type (2004)**



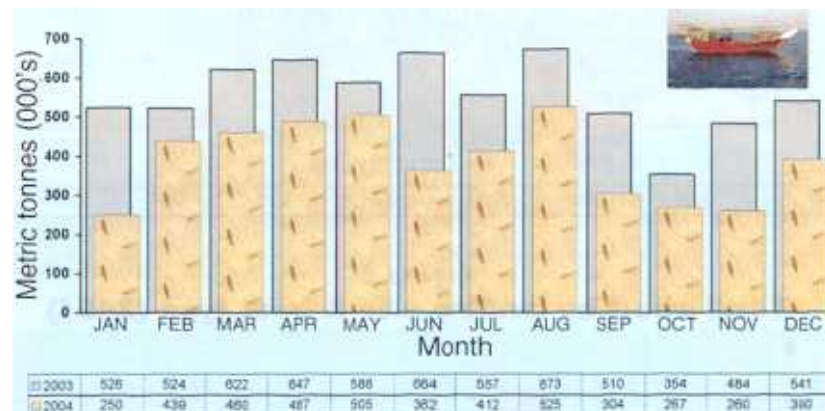
The Free Port accounted for 65% of the total catch of 6,658 tonnes landed in the Emirate of Abu Dhabi during 2004 (Fig.5).

The Free Port also accounted for 66% of the total fishing effort by lanishes. The highest number of fishing trips by tarads were made at Mirfa (5,283), representing 32% of all tarad landings in 2004 (Fig.6).

## 5- Catch, effort and species composition by boat type

Figure 7

**Total catch by month for lansh (2003 & 2004)**

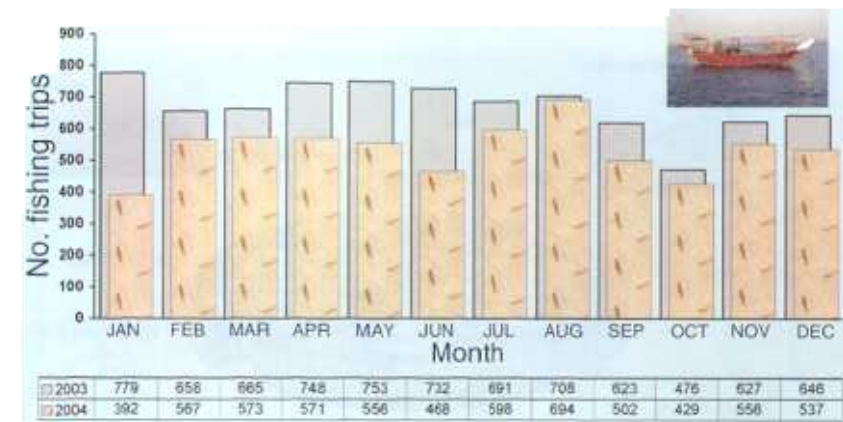


Lanshes landed on average 30% less in 2004 than in the same months of 2003.

Landings ranged from 250 tonnes in January to 525 tonnes in August with a monthly average of 389 metric tonnes during 2004. The decrease in landings may be attributed to the reduced number of fishing trips in 2004 by lansh and lower catch rates for some of the key target species.

Figure 8

**Total effort by month for lansh (2003 & 2004)**

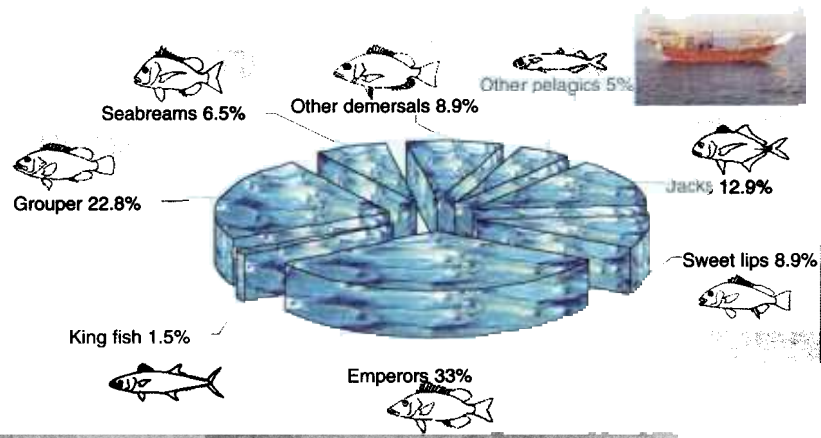


An average of 537 fishing trips was made by lansh on a monthly basis during 2004. Effort was lowest during January and greatest during August (Fig.8).

The catches made by lansh during 2004 were dominated by Emperors (33.0%), Gouper (22.8%) and Jacks (12.9%) (Fig.9).

Landings by tarads in 2004 were on average 15.1% less than 2003. An average of 166 tonnes of fish was landed by tarads on a monthly basis during 2004. Landings were lowest in September and highest in December. The decline was associated with reduced catch rates for some of the key target species (Fig.10).

**Figure 9**  
**Species composition (%) of the catch made by lansh (2004)**

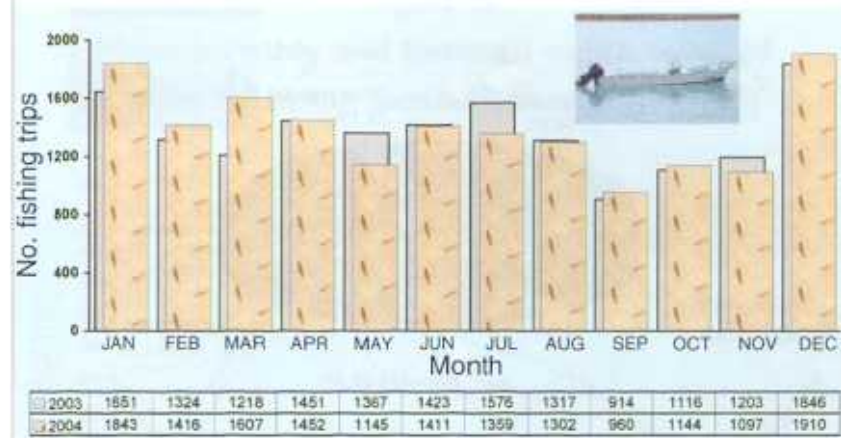


**Figure 10**

**Total catch by month for tarad (2003 & 2004)**



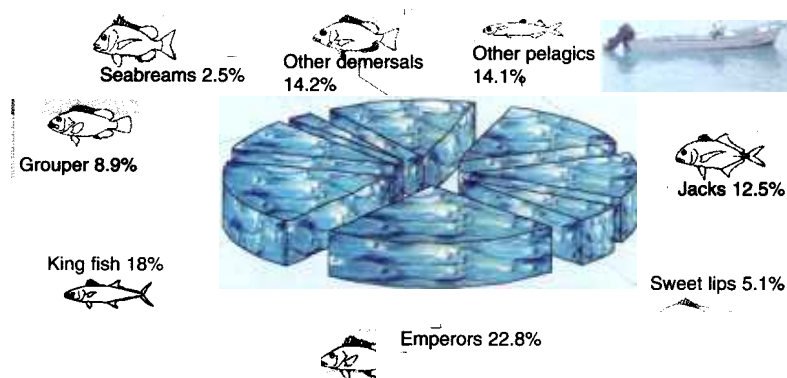
**Figure 11**  
**Total effort by month for lansh (2003 & 2004)**



An average of 1,387 fishing trips was made by tarads on a monthly basis during 2004.

The maximum number of trips was made in December and the minimum number of trips per month occurred during September. There was no significant difference in the number of trips by tarads between 2003 and 2004.

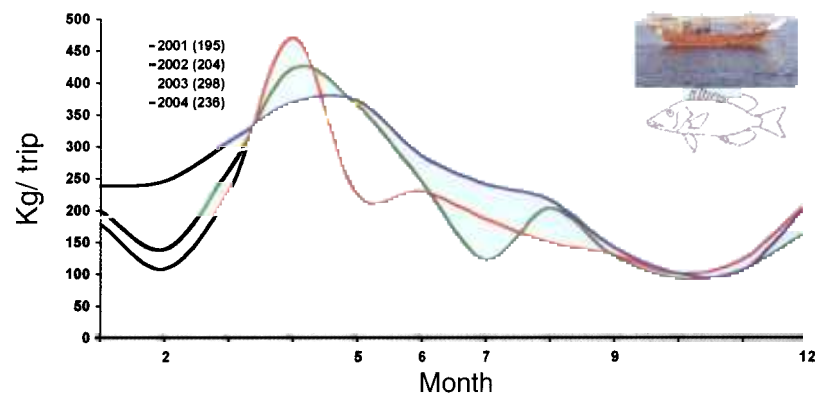
Figure 12  
**Species composition (%) of the catch made by tarad (2004)**



Emperors were the most important species in landings made by tarad, representing 22.8% of the total catch landed during 2004, followed by Kingfish (Kanaad) at 18%.

## 6- Catch rates of principal target species in the lansh fishery

Figure 13  
**Mean monthly and (annual) catch rates of Emperors in the lansh fishery, 2001-2004**



The mean annual catch rates of emperors (Shaari) dropped from 298 to 236 kg per trip in the lansh fishery from 2003 to 2004. There were defined peaks in the catch rate during April - May for all years with the exception of 2003 (Fig. 13).

There was a decline in the average annual catch rates of the grouper Hamour from 172 (in 2003) to 163 kg per trip in 2004 for the lansh fishery. Peaks in the catch rate occurred between February and April. During these 3 months the average catch rate for Hamour increased by 173% to 264 kg/trip compared to 153 kg/trip in the other months (fig. 14).

The average annual catch rates of the jacks (Jesh, Zuraidy, Guftar) for the lansh fisheries dropped from 120 kg per trip in 2003 to 91 kg per trip in 2004 (Fig. 15).

Figure 14

**Mean monthly and (annual) catch rates of Groupers in the lansh fishery, 2001-2004**

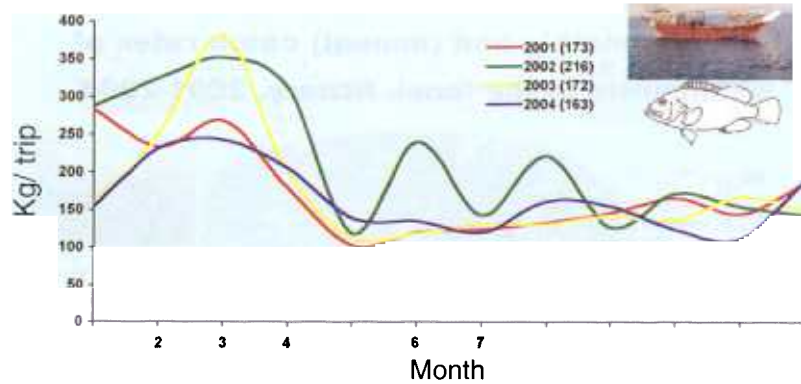
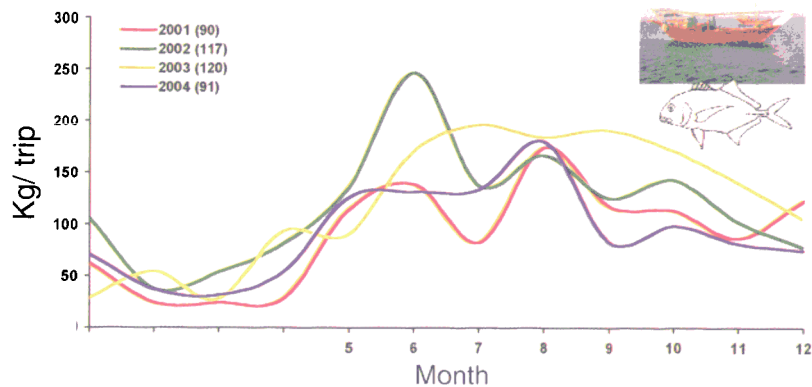


Figure 15

**Mean monthly and (annual) catch rates of Jacks in the lansh fishery, 2001-2004**

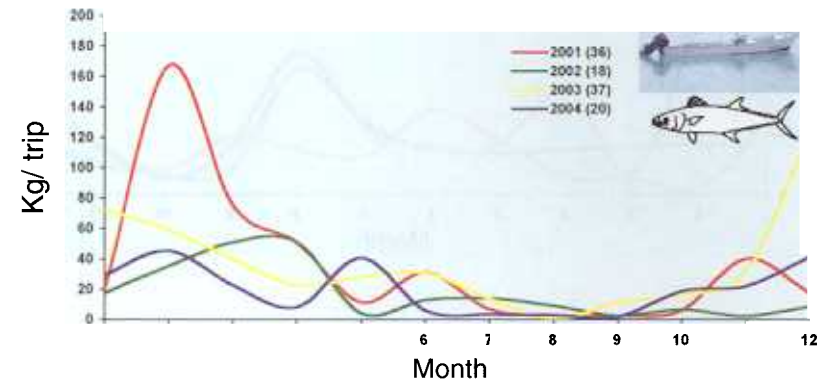


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**7- Catch rates of principal target species in the lansh fishery**

Figure 16

**Mean monthly and (annual) catch rates of Kingfish in the tarad fishery, 2001-2004**



The annual catch rate for tarad fisheries targeting kingfish (Kanaad) dropped in 2004 to 20 kg/trip compared to 37 kg/trip in 2003. During the season of Kanaad fisheries (October, 1 to April, 30), tarad fishermen attained an average catch rates of 39 kg per trip from 2001-2004. During off-season months the catch rate averaged 12 kg per trip (Fig.16).

There was a slight decrease in the average annual catch rate of emperors (Shaari) from 29 (in 2003) to 27 kg per trip in 2004 for the tarad fishery (Fig. 17).

There was a decrease in the average annual catch rate of the jacks (Jesh, Zuraidy, Guftar) from 22 to 16 kg per trip in the tarad fishery from 2003 to 2004. Catch rates were elevated over the summer months (Fig. 18).

Figure 17

**Mean monthly and (annual) catch rates of Emperors in the tarad fishery, 2001-2004**

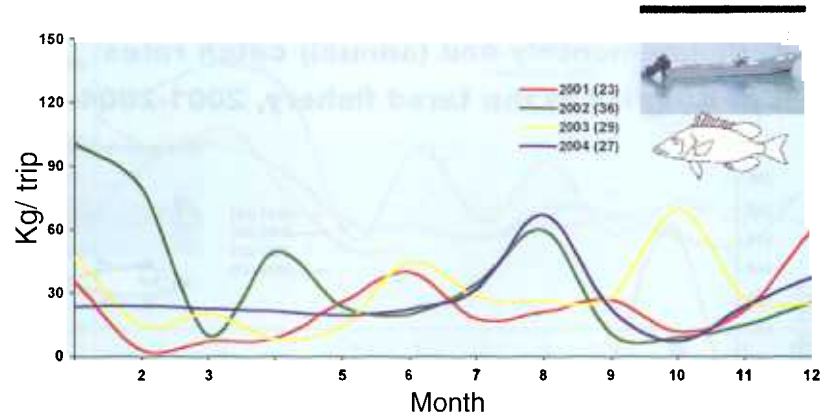


Figure 18

**Mean monthly and (annual) catch rates of Jacks in the tarad fishery, 2001-2004**

