May 2011

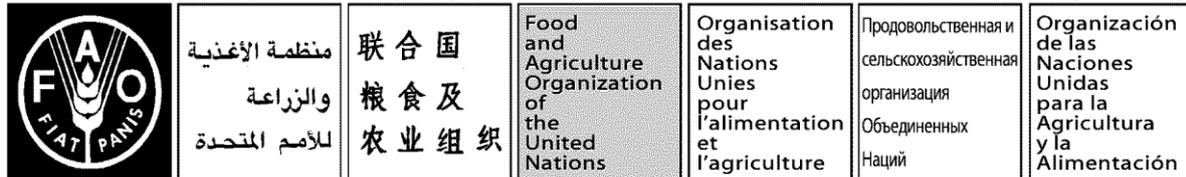| FAO	منظمة الأغذية والزراعة للأمم المتحدة	联 合 国 粮 食 及 农 业 组 织	Food and Agriculture Organization of the United Nations	Organisation des Nations Unies pour l'alimentation et l'agriculture	Продовольственная и сельскохозяйственная организация Объединенных Наций	Organización de las Naciones Unidas para la Agricultura y la Alimentación

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REGIONAL COMMISSION FOR FISHERIES (RECOFI)

Sixth Session

Rome, Italy, 10-12 May 2011

REVIEW OF CAPTURE FISHERY STATISTICS IN THE RECOFI REGION:TRENDS AND PATTERNS

SUMMARY

This document updates information on catch trends as extracted from the RECOFI capture production database. Total catch resumed to grow after the 2007 decrease. Differences in catch composition and trends between the two RECOFI statistical divisions are briefly discussed.

Several RECOFI Member Countries submit the annual catch data in a timely manner and with an acceptable species breakdown. Members that still report quite aggregated catch data are requested to improve the species breakdown at which their national catches are registered, focusing in particular on the key species identified by the WGFM as supporting the main fisheries in the Commission area.

Catch trend of priority species was briefly described with consideration on the need of management actions.

GENERAL INFORMATION

1.   The RECOFI capture production database was established at the request of the Commission and it is managed on its behalf by the FAO Fisheries and Aquaculture Statistics and Information Service (FIPS). Its first issue was made available in August 2005 and the seventh annual issue has been released in March 2011, including data for a 24-year period (1986-2009). The latest version can

be downloaded at the FISHSTAT+ web page[1] and is also available on CD-ROM[2]. Recently, FIPS has made the RECOFI database accessible also through an Online Query Panel[3] at the FAO Fisheries Department web site.

2.   The majority of the eight RECOFI Members submit the requested *National Summary (NS1)* and/or the *STATLANT 51A (FAO-RECOFI)* questionnaires in a complete and timely manner, although there is still no or late reporting by a few countries. In these cases, estimates made by FAO are introduced in the database and marked by an 'F'.

3.   After some major increases occurred in 1997, 2000 and 2004, the number of species items[4] with catch quantities included in the database seems to have reached a plateau (see Figure 1). Also the percentage of unidentified catches - that are usually lumped together in the "Marine fishes nei" species item – stabilized around 7 percent of total catches, a low share in comparison to the whole Western Indian Ocean (Fishing Area 51) where "Marine fishes nei" was over 18 percent of total catches in 2009.
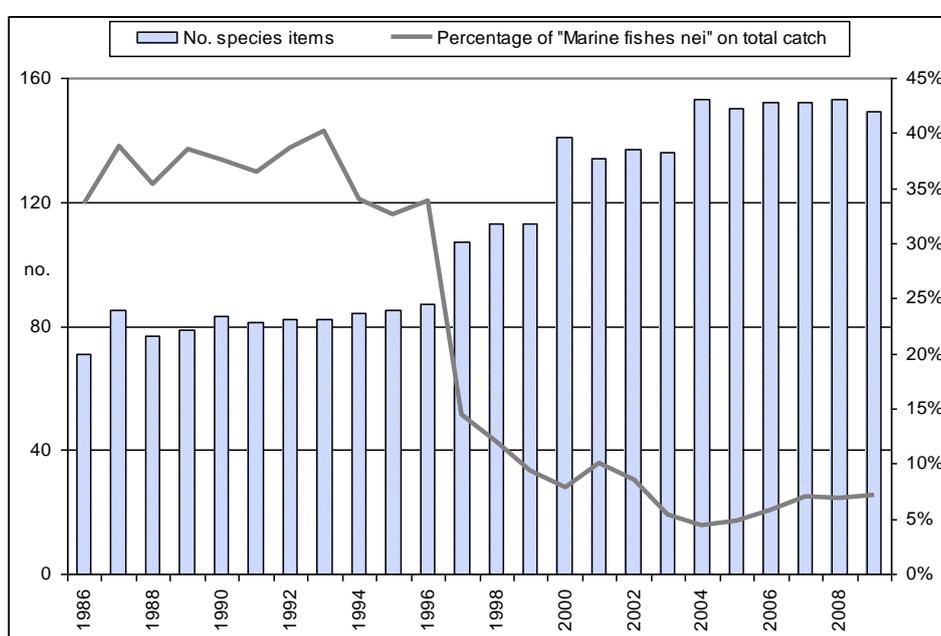

Figure 1. Species breakdown and unidentified catches in the RECOFI database

4.   In order to ensure uniformity of data included in the RECOFI database, to facilitate analyses of catch trends by species and to establish data series that provide useful information for fishery management, it would be desirable that those Member Countries that still report quite aggregated catch data strengthen efforts to improve the species breakdown at which their national catches are registered and reported, focusing in particular on the 17 key species/groups of species identified by the WGFM as supporting the main reference fisheries in the Commission area (see Appendix 1 in RECOFI/VI/2011/6)**.**

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[1] http://www.fao.org/fishery/statistics/software/fishstat/en

[2] FISHSTAT+ CD ROMs can be requested to <Fish-Statistics-Inquiries@fao.org>

[3] http://www.fao.org/fishery/topic/16140/en

[4] "Species items" is the term used to identify the statistical taxonomic unit, which can correspond to species, genus, family or to higher taxonomic levels.

CATCH TRENDS IN THE RECOFI AREA

5.   In the last two years, total capture production in the RECOFI area resumed to grow after the 2007 drop due to a marked decrease of Iranian catches (-12 percent) in that year (Figure 2 and Table 1). In comparison to 2007 total catches, major positive variations in 2009 were registered by Bahrain, Saudi Arabia, Iran and Oman (9, 7.1, 5.6 and 4.5 percent respectively), whereas the only significant decrease was reported by Qatar (-7.4 percent); marine catches by Iraq dropped in 2008, but in 2009 recovered at the same level of 2007.
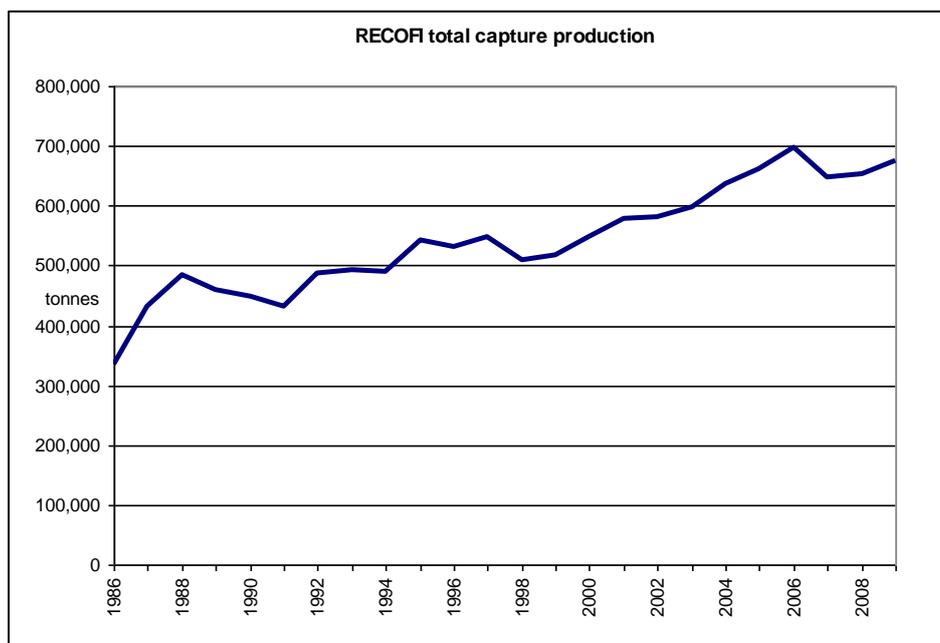
Figure 2. Trend of total capture production in the RECOFI area

Table 1. Capture production by country in the RECOFI area (four-year intervals and last four years)

Country	1986	1990	1994	1998	2002	2006	2007	2008	2009
Bahrain	8,057	8,105	7,628	9,849	11,204	15,590	15,014	14,177	16,358
Iran (Islamic	121,77	199,00	218,94	226,50	269,02	374,47	329,57	341,98	348,12
Iraq	5,000 F	3,754	4,221	13,463	14,100	12,959	12,319	4,486	12,246
Kuwait	7,630	4,454	7,752	7,798	5,360	5,635	4,373	4,373 F	4,373 F
Oman	96,353	119,78	118,57	106,17	142,66	147,66	151,74	151,91	158,55
Qatar	1,980	5,702	5,086	5,279	7,155	16,376	15,190	17,688	14,064
Saudi Arabia	16,057	11,355	20,271	25,979	33,223	42,036	40,048	43,493	42,881
United Arab	79,321	95,129	108,60	114,73	97,574	82,500	78,300	74,075	77,705
Total RECOFI	336,16	447,28	491,07	509,77	580,30	697,23	646,55	652,18	674,30

  Note: "F" indicates a total estimated by FAO

6.   Catch trends by the two statistical divisions ("51.2.0–Gulf" and "51.3.1–Oman Sea", see Figure 3) in which the RECOFI area is subdivided, showed several ups and downs since 1986 (Figure 4). In the last two years, trends by division have remained quite stable with greater catches in the Gulf. However, only two countries (i.e. Iran and Oman) are fishing in both RECOFI statistical divisions and fluctuations of Iranian catches in the two divisions strongly influence the trends of total capture production by RECOFI statistical division.
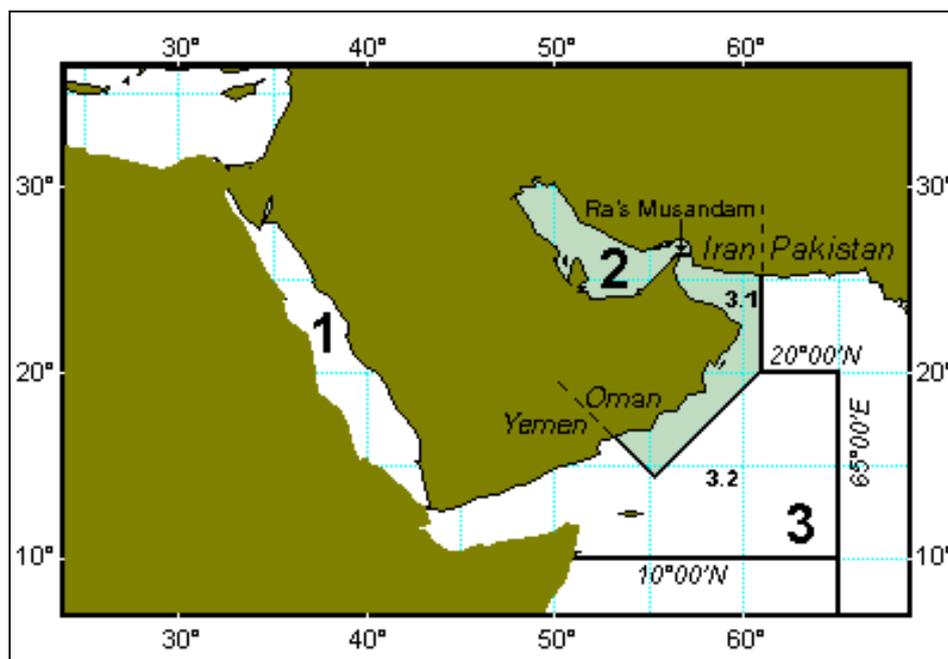
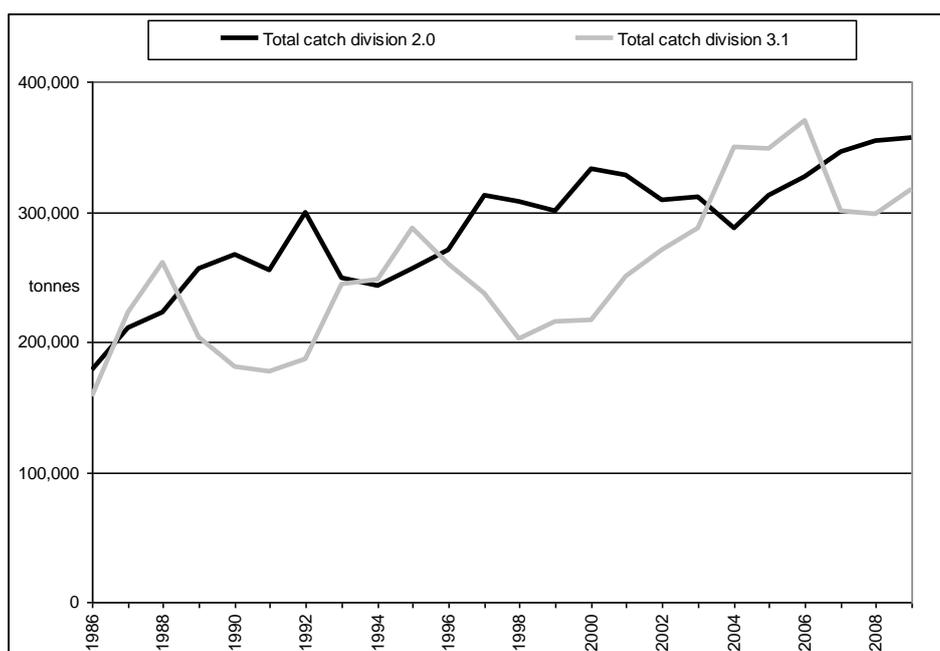Figure 3. Map of the RECOFI statistical divisions

Figure 4. Trends of capture production by RECOFI statistical division

7.   The two divisions show different catch compositions as a consequence of their distinct morphological and oceanographic conditions. In Figure 5 are shown the trends by statistical division of the four major species groups since 1997, the year in which the unidentified catches decreased drastically (see Figure 1). In the Gulf, a shallow and semi-closed sea, coastal fishes and crustaceans are the main target and valuable species, whereas in the deeper and more open Oman Sea tunas and tuna-like species represent the bulk of the catches.
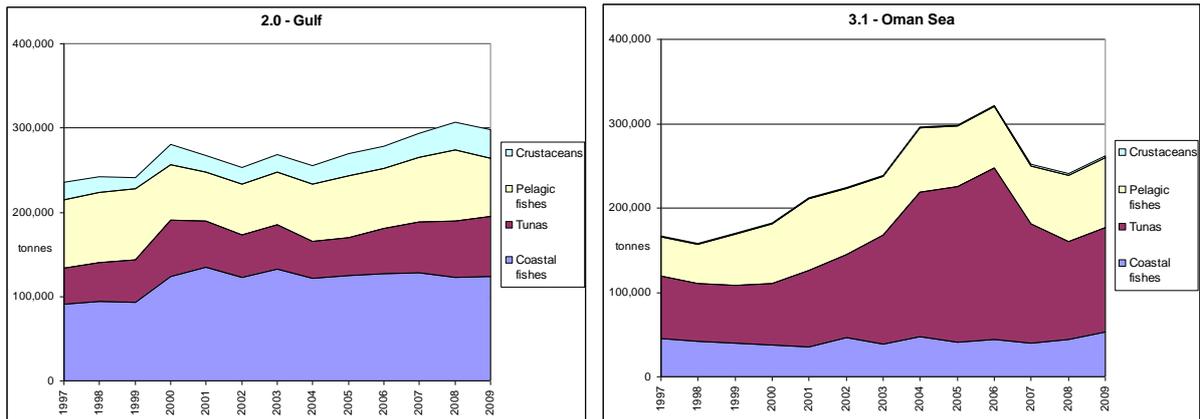
Figure 5. Catch composition (2005-07) in the two statistical divisions by major species groups

8.   Tuna and shrimp catches in the Gulf have been increasing at a good pace in the last three-four years, and total catches of groupers and emperors species groups have remained stable around 52,000 tonnes interrupting the decrease from the maximum reached in 2001 at 68,000 tonnes. Lessen catches of pelagic species other than tunas (e.g. Indian oil sardine and Carangidae species) by Iran in 2009 reduced the overall total of this group in the Gulf.

9.   In the Oman Sea division, it was noteworthy the 2006 peak (172,000 tonnes) of Iranian tuna catches followed by three years in which catches stabilized around 100,000 tonnes per year. Catches by Oman of important coastal species like emperors, seabreams and groupers, as well as the pelagic Indian mackerel, marked a maximum in 2009.

CATCH TREND OF PRIORITY SPECIES

10.   The Second Session of the RECOFI Working Group on Fisheries Management (Cairo, Egypt, 27-30 October 2008) identified the priority species which stocks support fisheries of common interest in the RECOFI area. The following graphs indicate catch trend of those species identified in this list. Here, the priority species are grouped into six; 'Shrimps, swimming crabs, cuttlefish', 'Sardine and anchovies', 'Emperors', 'Groupers and Hinds', 'Large pelagics', and 'Other species'. In principle, stacked bar graphs were used when portion of catch was reported in aggregation and could not separable within a group. Otherwise, trends were shown in line for each species/ species group. Data in RECOFI database was used.

11.   Capture production of Penaeid shrimps showed increasing trend in the last decade after 20 years of relatively constant level with large fluctuation. Without effort/ operation data, it is not possible to clarify whether this increase reflect stock increase or effort increase. Both blue swimming crabs and cuttlefish showed general increasing trend. However, the increase of cuttlefish catch stopped since 2003 and the catch dropped substantially in 2009. Careful monitoring and management action may be required depending on other information, including catch rate in 2010 and 2011.
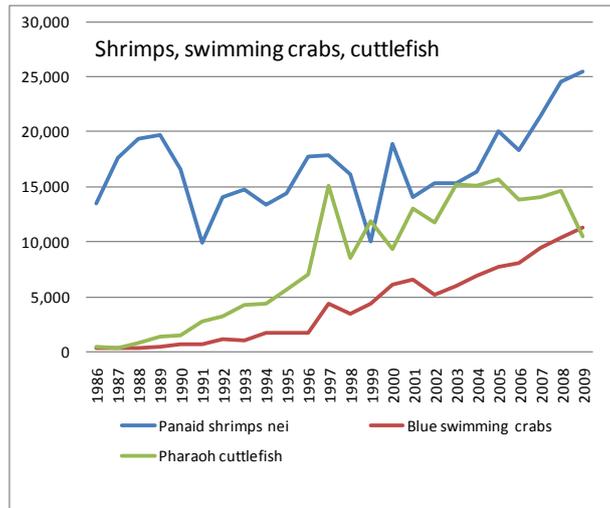
Figure 6. Catch trends of shrimps, blue swimming crabs, and Pharaoh cuttlefish

12.   Sardine and anchovies were reported in aggregation as 'Clupeoidei' (red part in graph 7.) around 1990, but since mid 1990s the catch report of two species were well separated. While overall catch of this group has stayed at relatively constant level, marked and continuous decline of anchovies is concerned.
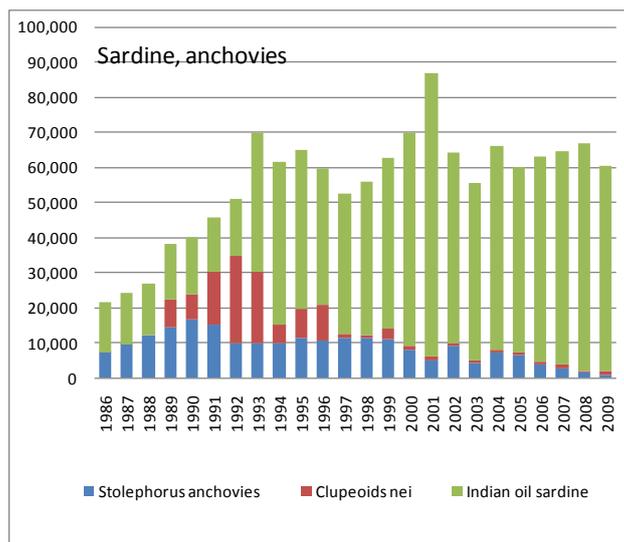

Figure 7. Catch trends of Stolephorus anchovies and Indian oil sardine

13.   In the case of Emperors, three species were identified as the priority species, the majority of catch did not have species separation and was reported as 'Lethrinidae'. As a whole, recent catch has stayed stable with slight increasing trend.
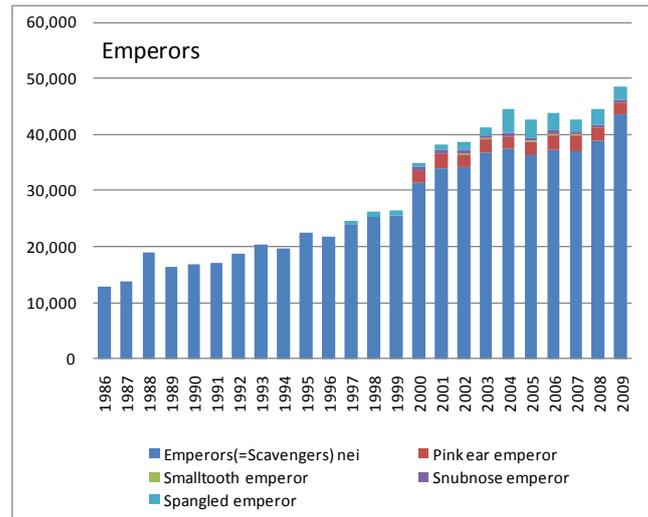
Figure 8. Catch trends of Emperors

14.   Like the case of Emperors, catch groupers and hinds were in general reported without species level details. Big increase in 2000 was caused by a large increase of 'Groupers, seabasses nei' figure of one country, and was considered as artificial, probably due to modification of national sampling and/ or classification scheme. However, this group showed continuous and substantial decline of catch and immediate management may be required to prevent further depletion.
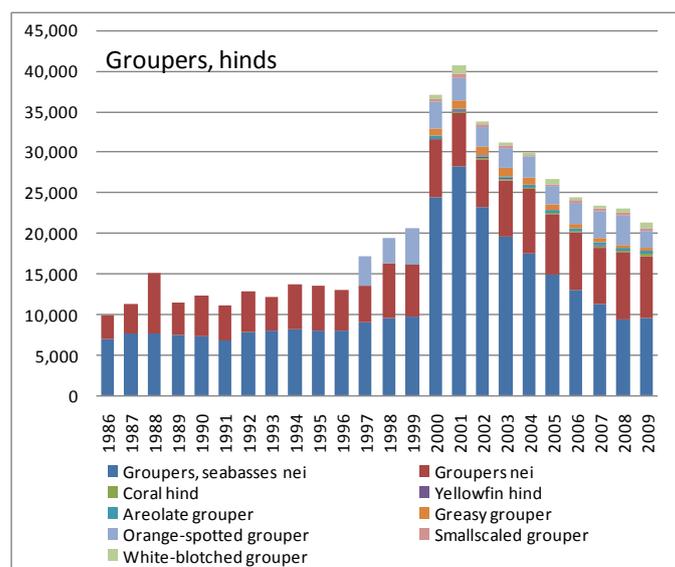

Figure 9. Catch trends of Groupers and hinds

15.   There were no specific trend observed in capture productions of narrow-barred Spanish mackerel, longtail tuna, and Requiem sharks nei. Although longtail tuna catch showed substantial increase since 2005, due to migratory nature of this species, it may not be recommendable to increase effort targeting on this species.
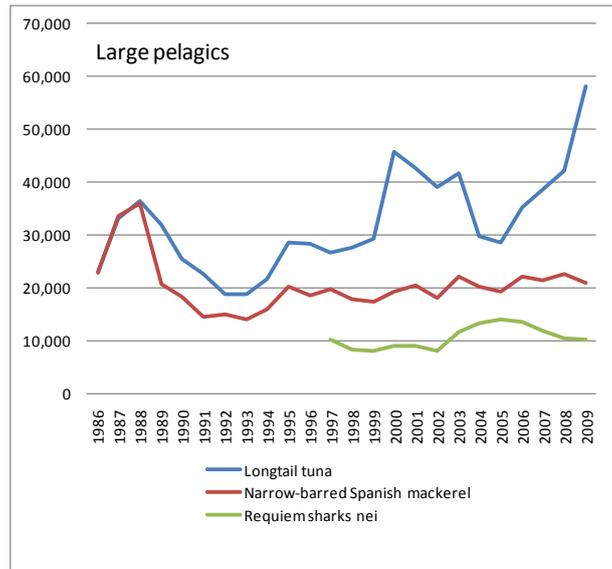
Figure 10. Catch trends of large pelagic, i.e. narrow-barred Spanish mackerel, longtail tuna and Requiem sharks nei.

16.   Catch of remaining priority species showed either relatively stable with slight decline (bulger, golden trevally, and White-spotted spinefoot) or continuous increase with large fluctuation (Indian mackerel). None of them may require prompt management action.
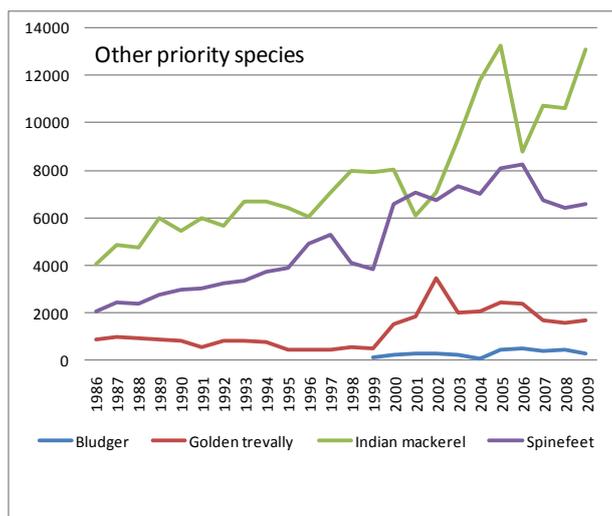

Figure 11. Catch trends of bulger, golden trevally, Indian mackerel and White-spotted spinefoot

17.   In summary, the declining trend of groupers catch is concerned and the management action to prevent further reduction should be considered promptly. The cuttlefish catch should be monitored carefully, together with planning of management action if the declining trend would continue.