COUNTRY STATUS REPORT

# A review of Indonesia's Indian Ocean Tuna Fisheries


CSIRO Marine Research ■

Research Institute of Marine Fisheries ■

Bogor Agricultural University ■



ACIAR Project FIS/2001/079

December 2003



Craig H. Proctor

I. Gede S. Merta

M. Fedi A. Sondita

Ronny I. Wahju

Tim L.O. Davis

John S. Gunn

Retno Andamari



Australian Government

Australian Centre for International Agricultural Research

DEPARTEMEN KELAUTAN DAN PERIKANAN

CSIRO MARINE RESEARCH

INSTITUT PERTANIAN BOGOR

A review of Indonesia's Indian Ocean tuna fisheries.

Bibliography.
Includes index.
ISBN 1 876996 49 8.

1. Tuna fisheries - Indian Ocean. 2. Tuna fishing - Indonesia. 3. Tuna fisheries - Catch effort - Indonesia. 4. Fishery management - Indonesia. I. Proctor, Craig, 1957- . II. CSIRO. Marine Research.

639.2778309598

Illustration of yellowfin tuna, *Thunnus albacares*, by Roger Swainston © CSIRO Marine Research, Australia

## TABLE OF CONTENTS

**LIST OF TABLES**

**LIST OF FIGURES**

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACIAR | Australian Centre for International Agricultural Research |
| AFFA | (Dept. of) Agriculture, Fisheries, Forestry Australia |
| Astuin | Association Tuna Indonesia |
| CBS | Central Board of Statistics (Badan Pusat Statistik) |
| CCSBT | Commission for the Conservation of Southern Bluefin Tuna |
| CSIRO | Commonwealth Scientific and Industrial Research Organisation |
| DFO | District Fisheries Office |
| DGA | Directorate General of Aquaculture (Direktorat Jenderal Perikanan Budidaya) |
| DGCF | Directorate General of Capture Fisheries (Direktorat Jenderal Perikanan Tangkap) |
| Dinas PKKD | Dinas Perikanan dan Kelautan Kota Denpasar |
| Dinas PKPB | Dinas Perikanan dan Kelautan Propinsi Bali (Denpasar) |
| Dinas PKPI | Dinas Pengelolaan Kawasan Pendaratan Ikan (Muara Angke) |
| Dinas PPK | Dinas Peternakan, Perikanan dan Kelautan (Propinsi DKI Jakarta) |
| Dinas TPI | Dinas Tempat Pelelangan Ikan (Muara Baru) |
| EEZ | Exclusive Economic Zone |
| FAO | Food and Agriculture Organisation |
| FEO | Field Extension Officer |
| GGT | Gilled, Gutted, and Tailed |
| IOTC | Indian Ocean Tuna Commission |
| IPB | Institut Pertanian Bogor (Bogor Agricultural University) |
| kg | kilogram |
| KUD | Koperasi Unit Desa |
| LPPMHP | Laboratorium Pembinaan dan Pengujian Mutu Hasil Perikanan (Laboratory of Fish Inspection and Quality Control) |
| MT | Metric tonnes |
| NTT | Nusa Tenggara Timur |
| OFCF | Overseas Fisheries Cooperation Foundation (Japan) |
| PCI | Pacific Consultants International |
| PFO | Provincial Fisheries Office |
| PPSC | Pelabuhan Perikanan Samudera Cilacap |
| PPSJ | Pelabuhan Perikanan Samudera Jakarta |
| PT. PSB | (Persero Terbatas) Perikanan Samudera Besar |
| RCCF | Research Centre for Capture Fisheries |
| RIMF | Research Institute for Marine Fisheries |
| SBT | Southern Bluefin Tuna |
| STBLKK | Surat Tanda Bukti Lapor Kedatangan Kapal |
| TPI | Tempat Pelelangan Ikan (Fish Auction Place) |
| UNDP | United Nations Development Program |
| WASKAN | Pengawas Perikanan (Dept. for the Supervision of Fisheries) |
| WASKI | Pengawas Kapal Ikan (Dept. for the Supervision of Fishing Vessels) |
| WCPFC | West and Central Pacific Fisheries Commission |

# 1. EXECUTIVE SUMMARY

The Indonesia-Australia Meeting on Indian Ocean fisheries, held in Bali in 2000, identified priority areas for future research co-operation and collaboration between Australia and Indonesia in the field of tuna and shark fisheries. A strategic plan was formulated with a vision that by 2008 Indonesia will have statistically robust data collection, synthesis and reporting systems, and the fishery stock assessment capacity to enable Indonesian scientists to provide robust data summaries and stock assessments of Indonesia's Indian Ocean fisheries to management organisations such as the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT).

As the first stage in this strategic plan an ACIAR collaborative project was established between CSIRO (Australia), the Ministry of Marine Affairs and Fisheries (Indonesia) through the Research Centre for Capture Fisheries (RCCF)/Research Institute for Marine Fisheries (RIMF) and the Directorate General of Capture Fisheries (DGCF), Bogor Agricultural University (IPB), the Indian Ocean Tuna Commission (IOTC) and Japan's Overseas Fisheries Cooperation Foundation (OFCF). The project had two principle components:

1. A review of the status of Indonesia's industrial and artisanal fisheries for tuna and tuna-like species (including billfish) operating in the Indian Ocean.
2. An expansion the monitoring program[1] for tuna and billfish catches by Indonesia's industrial longline fleets to cover the three key landing ports of Benoa, Muara Baru, and Cilacap.

The primary focus of this review component was an investigation of the extent and accuracy of Indonesia's tuna fishery data for the Indian Ocean, and the existing systems for data collection and reporting on tuna fisheries at district, provincial and national levels, for both the industrial and (to a lesser degree) artisanal sectors. The purpose behind this focus was to identify the factors that have limited Indonesia's ability to meet its obligations, with respect to provision of accurate fisheries data, to IOTC and CCSBT. In parallel with this investigation of data collection and reporting, the review also examined the nature and extent of the fisheries themselves.

Much of the information in this review was obtained through visits to the 3 key industrial tuna landing ports of Benoa (Bali), Muara Baru (Jakarta), and Cilacap (south Central Java) and also to 9 small-scale 'artisanal' ports. The report is built on the results of interviews, discussions, and workshops with a broad range of stakeholders (including government fishery managers, port authorities, scientists and peak industry bodies), as well as literature reviews and analysis of historical data.

[1] The monitoring component of our project is reported separately (Anon 2003)

The following is a summary of some of the findings of this review:

- Indonesia's industrial tuna longline fleets, operating in the Indian Ocean, have grown dramatically in the past 10 years and continue to increase in size. Among the three industrial ports there are currently between 1100 and 1500 vessels. Achieving a more precise estimate proved difficult because of vessel registry anomalies and vessels operating from more than one home-port.
- Indonesia's artisanal fleets are characterised by large numbers of non-motorised or outboard-powered vessels less than 10 GT. vessels, but several of the larger artisanal landing places surveyed also had significant numbers of inboard powered vessels up to 25 GT.
- Primary fishing gears for pelagic species in the Indonesia's artisanal fisheries operating in the Indian Ocean are troll-line, purse seine, and drift gill-net.
- Main fishing areas in the Indian Ocean for the longline fleets operating from the 3 industrial ports extend from off the northwest coast of Sumatra, waters to the west and south of Java, and waters eastwards from Bali to south of West Timor (extending as far south as $15^0$ S).
- The fishing range of artisanal fishing fleets is largely determined by size and power of vessel and the vessel's ice-holding capacity. Fishing trips of non-powered or out-board powered vessels are generally short of 1 - 2 days, and restricted to the coastal waters within close proximity to the home port/landing place. Larger in-board powered vessels may be out for 1 – 3 weeks, fishing in areas further a field.
- The most recent estimates of Indonesia's Indian Ocean catches of tuna and tuna-like species in the industrial and artisanal sectors are by IOTC for year 2000; 59,805 tonnes (industrial), and 117,579 (artisanal) (Herrera 2002). Our review did not attempt an update of these estimates, largely because of the limitations of the data available within the Indonesian system (see below).
- Skipjack tuna (*Katsuwomus pelamis*) and the small tunas (including eastern little tuna *Euthynnus spp.* and the frigate and bullet tunas *Auxis spp.*) make up a large proportion of pelagic species landed in the Indian Ocean artisanal sector. However, production statistics and information obtained through the artisanal port surveys suggest significant quantities (2000 – 3000 tonnes per annum at some ports) of juvenile yellowfin (and possibly bigeye) tuna are also landed each year.
- The principal export market for the Indian Ocean caught tunas (yellowfin, bigeye, and southern bluefin tuna) caught by the Indonesian industrial fleets is Japan. Around 20,000 tonnes of fresh tuna product (whole and processed), was exported from Benoa and Muara Baru in 2000. The proportion exported to Japan from each port was 88% and 61 % respectively. Singapore, United Kingdom and USA are the other main export destinations of fresh tuna product. Exports of frozen tuna product (loin, fillet, steak) from Indonesia are mostly to USA, Japan, Singapore, and the Netherlands.

- The majority of tuna landed at the artisanal landing places is distributed through auction to local markets and to local processing (e.g. boiled, salted, dried). The highest quality fish are often distributed to larger centres in adjoining districts or provinces (e.g. tuna transported by truck from Pelabuhanratu to Jakarta).

*Data collection and reporting*

- The current national system of fisheries statistics collection and reporting is designed for providing production statistics and not for providing data suited to science-based stock assessments
- The national system has remained essentially unchanged since its development and implementation by FAO fisheries statistician, Dr Yamamoto, in 1974 - 1976, although DGCF has recently commenced a program of modifications.
- Weekly, monthly, quarterly, and annual surveys of landings as well as company-provided monthly reports, at both industrial and artisanal landing places. The collection of data is primarily at subdistrict and district level, and may involve port authorities. The flow of data synthesis and reporting is through provincial to national level. The primary end product of the system is the DGCF annual report "Statistics of Capture Fishery Indonesia".
- Tuna species (yellowfin, bigeye, southern bluefin and albacore), together with billfish species, are generally reported as an aggregated single category "Tuna" in Indonesia's fisheries statistics. DGCF has recently introduced modifications in the reporting systems to provide a higher level of species separation for tunas and billfish.
- The production statistics are characterised by high levels of inter-annual variability and inconsistencies.
- Efforts are made, through 'validation meetings' between national and provincial offices, to ensure the annual statistics reports contain minimal errors. However, there appears to be a shortage of validation and cross-checking at lower levels (in particular, at the points of collection of raw data).
- The catch data that are used to compile catch statistics are also generally used by district and provincial governments to determine the amount of tax (*retribusi*) that must be paid by fishing companies/vessel owners. This linkage to tax increases the likelihood of under-reporting of catch, and accordingly, some fisheries offices employ estimation procedures that remove reliance on data provided by companies/vessel owners.
- The catch estimation procedures employed by the data collection agencies vary between landing centres, both among the industrial ports and among artisanal landing places. The national system has standard reporting forms but, in practice, the ways the data are compiled for those forms are not standard.
- Since 1995 there has been a log-book system for tuna long-line vessels at Benoa and Muara Baru, administered by the supervisory office for fishing vessels, WASKI. However, the usefulness of this log-book system for providing data for science-based stock assessments is limited by the

'indirect' nature of the information provided i.e. rarely obtained direct from vessel skipper or fishing master, but more often from vessel owner or agent.
- Shortages in resources (personnel, equipment, operating funds) appear to impact heavily on the efficiency of national system of data collection and reporting.
- At the industrial ports, and to a lesser degree at artisanal landing places, there is duplication in effort with many different offices collecting and reporting similar sorts of catch related information.
- Reporting between offices at the different levels is primarily by hard-copy report and there is currently little electronic transfer of data.

*Recommendations*

This review of Indonesia's fisheries data collection and reporting systems found that the resource and data quality issues summarised above are significant impediments to Indonesia being able to fulfil the reporting requirements to international management organisations such as IOTC and CCSBT. In addition, the lack of effort data (in particular for longline fisheries) and a lack of skilled fisheries scientists and fisheries statisticians need to be addressed if Indonesia is to achieve the goal by 2008 of being able to have statistically robust data collection, synthesis and reporting systems, and the fishery stock assessment capacity to allow Indonesian scientists to provide robust data summaries and stock assessments of Indonesia's Indian Ocean fisheries to those management organisations. Thus, this review recommends the Indonesian government invest in development and implementation of logbook and targeted observer programs in the longline fishery, and in training mathematically skilled scientists in fisheries stock assessment. These activities would benefit significantly from continued investment by ACIAR and CSIRO in ongoing collaborative projects.

This review also recommends that Indonesia develop plans to ensure the continuation of the current monitoring programs at the three key industrial ports. These programs are currently run as a collaboration between RCCF/RIMF, DGCF, IOTC, OFCF, and CSIRO, but funding from the international partners will cease in July 2005. Ideally these monitoring programs can be incorporated into the national system of data collection and reporting of fisheries statistics and be an ongoing collaboration between DGCF and RCCF and industry. However, we recommend that the monitoring programs be used as the primary source of data for industrial port landings or they be done in parallel with a national production statistics program and provide a means of rigorous validation of the latter.

## 2. INTRODUCTION

There are large commercial fisheries for tunas and billfish throughout the Indian Ocean, involving fleets from coastal states and distant water fishing nations, operating in coastal state EEZs and on the high seas. The Indian Ocean Tuna Commission (IOTC) estimated the nominal catch of tuna and tuna-like species (including billfish) in the Indian Ocean to be in the order of 1.3 million tonnes in 1999. Indonesia is considered to be among the most important tuna fishing countries in the Indian Ocean. IOTC's most recent estimate of Indonesia's catch of tunas and tuna-like species in the Indian Ocean was 177,384 tonnes in 2000 (Herrera 2002). Around 60,000 tonnes of this estimate is attributed to Indonesia's commercial longline fisheries, with more than 1000 longline vessels believed to be operating the Indian Ocean at that time. The remainder is attributed to artisanal catches. The principal species caught in the industrial longline and purse seine fisheries are yellowfin, bigeye, albacore, and southern bluefin (SBT) tunas, black and blue marlin and sailfish. Artisanal fisheries catch many of the same species using gillnets, small scale purse seines, troll-line, gill-net and seine-net (Merta 2000). Indonesia's tuna and billfish fisheries are of significant, but largely unquantified, economic value, both in terms of domestic markets and foreign currency earnings, through the export of products such as yellowfin, bigeye and SBT. The value of tuna exported from Indonesia in 2000 was reported to be around US$224 million (Simorangkir, 2003).

The waters between Indonesia and Australia in the northeast Indian Ocean, including those within the respective EEZs, are known to be important spawning grounds for many of the commercial tuna and tuna like species (Nishikawa et al., 1985). In particular, the area is the only known spawning ground for the southern bluefin tuna, a species managed by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). Thus, Indonesia and Australia share resources of SBT, and most likely also share stocks of bigeye, yellowfin, albacore tuna and black and blue marlin. It is clear that the Indonesian fishing fleets are of major importance in any management assessment of Indian Ocean stocks.

As regional fisheries management organisations such as the IOTC and CCSBT move towards ensuring the sustainability of tuna and tuna like species throughout the Indian Ocean, there is an increasing obligation on coastal states such as Australia and Indonesia to contribute responsibly to these management organisations, particularly through the provision of accurate data on their catches, and the nature and extent of fishing by their fleets. Without an improvement in these essential data inputs, the risk of over-exploitation of stocks is increased, as is the likelihood of management actions that require reduction in catches. Already, as a result of serious concerns about the SBT stock, the CCSBT is working hard to encourage all those countries currently catching SBT to join the Commission. All member countries are required to provide accurate/validated catch data on the take of SBT by their fleets, including information of the levels of effort.

On 2-3 March 2000 scientists and fisheries managers from Australia and Indonesia met in Bali to discuss shark and tuna issues of common interest to the

two countries. The meeting strongly supported increased cooperation in fisheries research and management of shared tuna stocks, including southern bluefin tuna, fished by Australia and Indonesia. It was agreed that the best approach to increased co-operation would be through institution building, technical co-operation, training and skill sharing, and developing capacity by improving practices and procedures for data management and reporting in support of fisheries management. A strategic plan was formulated with a vision, that by 2008 Indonesia would have statistically robust data collection, synthesis and reporting systems, and the fishery stock assessment capacity to enable Indonesian scientists to provide robust data summaries and stock assessments of Indonesia's Indian Ocean fisheries to IOTC and CCSBT.

A 15 month project was subsequently developed as the first step in the process of developing Indonesia's capacity to monitor and report on Indian Ocean tuna fisheries. The project was to produce a country tuna fishing status report on Indonesian tuna fisheries in the Indian Ocean, and develop the infrastructure to collect, store and analyse catch data from the longline fleet operating out of Benoa in Bali, and Muara Baru and Cilacap in Java. The project was funded from a number of sources including ACIAR, AFFA, IOTC, OFCF, and CSIRO.

The establishment of catch monitoring capacity at the three ports was a collaborative project between CSIRO, RCCF/RIMF, DGCF, IOTC, and OFCF. This work is reported separately[2] and does not form part of this report. In summary, an integrated monitoring program was established at the three major ports where tuna and billfish caught by industrial longline fleets operating in the Indian Ocean are landed and processed. The monitoring meets the requirements of CCSBT and IOTC for reporting of species and size composition of Indonesia's tuna and billfish catches. The program has trained enumerators, established computerized data entry of catch and size data collected by them, and set up a consolidated data base for all monitored landings, and the activities of the longline fleets operating from these ports. Over the last twelve months, data from the monitoring program have formed the basis of reports by Indonesian and CSIRO scientists to both the CCSBT and IOTC.

The purpose of this review was not to produce tuna production estimates for Indian Ocean tuna fisheries as, mentioned above, IOTC recently re-estimated longline and artisanal catches by Indonesian vessels in the Indian Ocean up to the year 2000 (Herrera 2002). Rather it was considered more productive to address the inconsistencies in the data, problems of under-reporting and the lack of species detail that frustrated Herrera's attempts to produce reliable production estimates by species and fishery. This report therefore concentrated on documenting the industrial and artisanal fisheries catching Indian Ocean tuna, including the history of the key ports and associated fisheries, port facilities and management, fleet structure and fishing activities, catch composition, distribution and markets. It then describes in detail the data collection and

[2] Final Report to ACIAR – Project FIS/2001/079. Indonesia's Indian Ocean Tuna Fisheries – Extension of Catch Monitoring at the Key Off-Loading Ports. CSIRO/RIMF/IOTC. October 2003.

reporting systems at all levels of government, and critically evaluates their capacity to produce fisheries data necessary for stock assessment and management, and then most importantly, details how these systems can be improved.

# 3. REPORT OBJECTIVES AND METHODOLOGY

## 3.1. Objectives

The primary objectives of this status report were to:

1. Investigate the nature and extent of tuna longline, pole and line, and artisanal fisheries operating in the Indian Ocean from the islands of Sumatra, Java, Bali, Flores and West Timor, and provide descriptions of
    - Fleet size and structure operating from each major port
    - Product distribution and destination (overseas and within Indonesia)
    - History of development of tuna fisheries in each area
    - Key targets species and by-catch
2. Describe the methods used to collect, aggregate and report on tuna and tuna-like species catch data, including the roles played by DGCF, Provincial and District Fisheries Offices, Port Authorities, and research institutions such as RCCF and RIMF. The investigations were to include examination of the nature and extent of data validation, verification and cross-checking in each agency.
3. Summarize the available catch data for tunas and tuna-like species held by provincial and national fisheries agencies, and assess the quality and suitability of the data for stock assessment requirements of IOTC and CCSBT.
4. Investigate the extent and nature of existing catch monitoring programs, and catch and effort data for tunas and billfish in Indonesia (including port sampling, observers etc).
5. Recommend strategies for improving the quality of catch and effort data, data collection and catch monitoring procedures.

## 3.2. Methods

The information presented in this report was obtained through:

1. Interviews with staff at the various levels of Government fisheries offices (national, provincial, and district), and at offices responsible for the management of the ports and landing places (primarily Port Authorities and WASKI), and with industry (fishing companies, processing companies, and the Indonesian tuna fishing association, Association Tuna Indonesia). Also, accessing the existing knowledge of research staff at RCCF, RIMF, CSIRO, IPB, IOTC, OFCF, and CCSBT.

2. Fisheries statistics reports[3] (monthly, quarterly, and annual) published by and/or provided by the aforementioned government offices, and other historical literature.

3. Observations made during visits to the landing ports.

The investigations for the industrial ports of Benoa, Muara Baru, and Cilacap were done by CSIRO and RCCF/RIMF staff, between late February 2002 and early June 2003. Surveys of 'artisanal' ports were done by project staff from IPB during the period August 2002 to March 2003.

The decision on which ports to survey was based on existing knowledge of important landing places for Indian Ocean caught tunas. The inclusion of the three industrial ports of Muara Baru (North Jakarta), Benoa (South Bali) and Cilacap (south coast Central Java) was obvious, but the selections of smaller scale 'artisanal' ports (Figure 2.1) were less so. Banda Aceh (northern Sumatra), Padang – Bungus (central west coast Sumatra), Pelabuhanratu (western Java), Prigi (eastern Java), Kedonganan and Jimbaran (southwest Bali), Ende (southeast Flores), and Kupang (southwest West Timor) were considered a good representative coverage of non-industrial major landing centres for the Indian Ocean sector. These ports not only provided wide geographical coverage, but also a broad representation of landing places with different dominant fishing vessel types. Banda Aceh was subsequently removed from the survey list, because of the political instability in the region and associated safety concerns. Two additional West Sumatra ports, Pariaman and Painan, were included to increase the coverage of smaller artisanal ports.

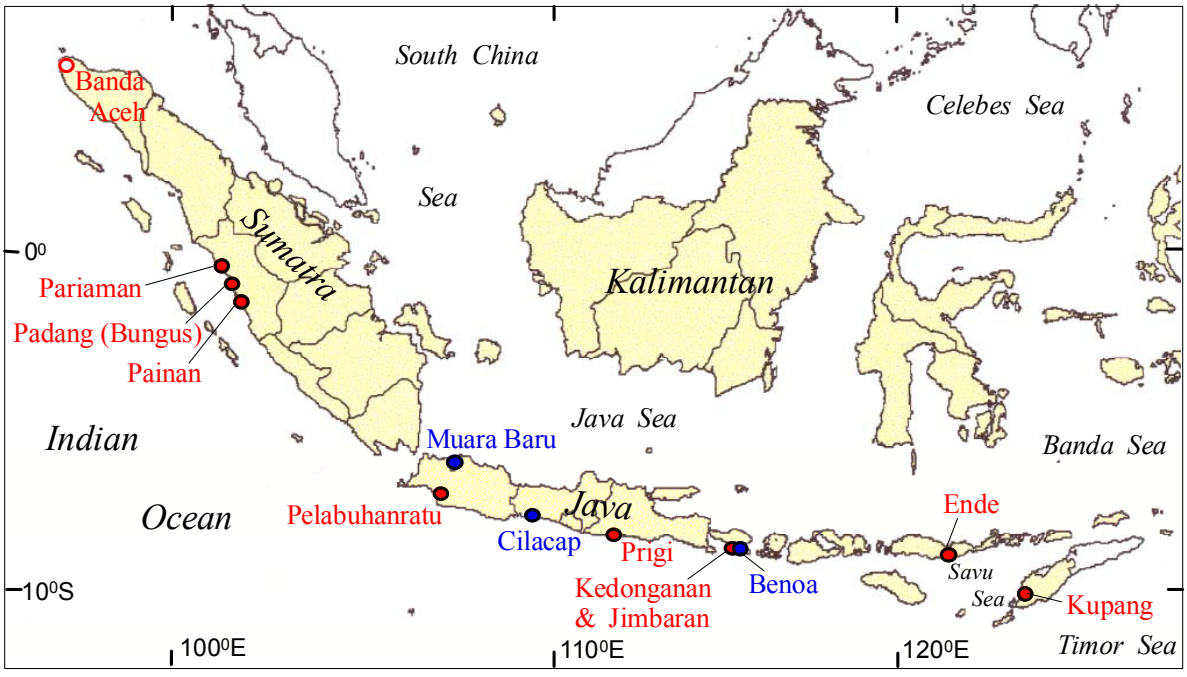


Figure 3.1. Western Indonesia showing the industrial (blue label) and artisanal (red label) landing places surveyed for this study. [Note: Banda Aceh is shown but was not surveyed due to safety concerns].

[3] Statistics sources are marked "ss#" in the text and listed in References (Section 8).

## 3.3 Species Names

The names (both in Bahasa Indonesia and English) of the common pelagic species caught in Indonesia's industrial and artisanal fisheries are provided in Appendix I.

Throughout this report there is frequent reference to the group name "Tuna". In Indonesia's fisheries related reports, "Tuna" usually includes all of the large tunas (*Thunnus* spp. – yellowfin, bigeye, SBT, and albacore), and the tuna-like species (marlins, sailfish, swordfish). Skipjack tuna are usually reported as a separate group "cakalang". "Tongkol" generally includes eastern little tuna (*Euthynus* spp.), the frigate and bullet tunas (*Auxis* spp.), and longtail tuna (*Thunnus tonggol*). "Tenggiri" includes the larger species of mackerel (*Scomberomorus* spp.) – narrow barred king mackerel and Indo-Pacific king mackerel.

## 3.3 Vessel Gear Types

A list (both in Bahasa Indonesia and English) of the common fishing vessel/gear types in Indonesia's industrial and artisanal fisheries is provided in Appendix II.

## 3.5 Fishing Port Classification

The majority of Indonesia's fishing ports are under the management of the DGCF and are classified by the Directorate as one of four types, dependent on port size, the size of vessels it can accommodate, the geographical range of fishing activity of those vessels, and the volume of fish landings that routinely occur at the port.

The four types of port/landing place are:

| | | |
|---|---|---|
| Class A: | Pelabuhan Perikanan Samudera (PPS) | Oceanic Fishing Port |
| Class B: | Pelabuhan Perikanan Nusantara (PPN) | Archipelagic fishing port |
| Class C: | Pelabuhan Perikanan Pantai (PPP) | Coastal fishing port |
| Class D: | Pangkalan Pendaratan Ikan (PPI) | Fish landing centre |

The criteria for each type are summarised in Table 3.1.

Table 3.1. Types of fishing port in Indonesia (modified from DGCF, 1999).

| Criteria | **Types of fishing port** | | | |
|---|---|---|---|---|
| | Type/Class A | Type/Class B | Type/Class C | Type/Class D |
| | *Pelabuhan Perikanan Samudera* | *Pelabuhan Perikanan Nusantara* | *Pelabuhan Perikanan Pantai* | *Pangkalan Pendaratan Ikan* |
| | Oceanic fishing port | Archipelagic fishing port | Coastal fishing port | Fish landing centre |
| Number of ports in DGCF listings | 5 | 11 | 17 | 477 |
| Size of fishing boat | >60 GT | 15-60 GT | 5-15 GT | >10 GT |
| Service capacity per day | 100 units or 6,000 GT | 75 units or 3,000 GT | 50 units or 500 GT | Small scale fishing unit |
| Fishing area of the serviced boats | EEZ International waters | Archipelagic waters EEZ | Coastal waters Archipelagic waters | Coastal waters |
| Fish landing capacity (t=tonnes) | 200 t/day or 40,000 t/year | 40-50 t/day or 8,000-15,000 t/year | 15-20 t/day or 3,000-4,000 t/year | 10 t/day or 2,000 t/year |
| Market orientation | Local markets Export | Local markets Export | Local market Domestic markets | Local markets |
| Land use of port area | Port facilities Fishery industry Accommodation | Port facilities Fishery industry | Port facilities Small-scale fishery Industry | Port facilities |

Three of the five Class A fishing ports in Indonesia were surveyed for this report – Muara Baru (PPS Jakarta), Cilacap (PPS Cilacap), and Bungus (PPS Bungus). The other two are Belawan (PPS Belawan) on the northeast coast of North Sumatra, and Kendari (PPS Kendari) on the east coast of Southeast Sulawesi. These latter ports are not bases for vessels fishing the Indian Ocean.

Not all fish landing places are covered by this DGCF classification system. In general, ports that service and are a base for fishing vessels only, come under DGCF management and responsibility, and are therefore classified under this scheme. The ports that service other types of vessels (e.g. cargo, passenger), in addition to fishing vessels, are usually not under DGCF management and jurisdiction. The Port of Benoa is one such port (see below). There are also a great many (more than 4000 according to Yamamoto 1980) small scale landing places (coastal fishing villages), that are smaller than Class D, but are still subject to survey under the national system of fisheries statistics (Section 6).