



**INDONESIA'S MONITORING AND REPORTING SYSTEMS FOR TUNA
LANDINGS AT PORT OF BENOA**

C.H. Proctor

T.L.O. Davis

R. Andamari

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Abstract

There is currently no specific reporting, by Indonesian offices, of the volume of southern bluefin tuna landed and processed at Port of Benoa. Aggregated data for tunas are collected at the level of processing company/landing place by two separate offices, WASKI and Dinas (at regency/municipal level). WASKI reports total catch/landing figures that are not specific to tuna. It is the quarterly and annual 'Tuna' data reported by Dinas (regency/municipal) that forms the basis of long-line tuna production statistics reported by the provincial level (Denpasar) Dinas fisheries office and, in turn, the 'Tuna' production figure that appears in the annual reports of national fisheries statistics produced by Directorate General of Capture Fisheries. The only apparent formal cross-checking of these data occurs at the top level of the information flow – between DGCF and the provincial Dinas office. DGCF has initiated steps to increase the level of species specific reporting for tunas.

1. Introduction

In early 2002 CSIRO Marine Research commenced a 15 month collaborative study (funded by the Australian Centre for International Agricultural Research) with Indonesia's key fisheries research agencies (Research Institute for Marine Fisheries and Research Centre for Capture Fisheries) and the Institute Pertanian Bogor to produce a country tuna fishing status report on Indonesian tuna fisheries in the Indian Ocean. This study includes a review of existing data collection and reporting systems for long-line tuna catches landed at the three primary off-loading ports of Benoa (Bali), Muara Baru (North Java) and Cilacap (southern Central Java).

Investigations for this country status report are still in progress but nearing completion. This paper presents our preliminary findings on the systems of catch data collection and reporting for long-line caught tuna landed at the port of Benoa. Of Indonesia's main fisheries ports, Benoa is the primary landing and processing port for Indian Ocean caught southern bluefin tuna (SBT) (CCSBT/SC/0209/1, Davis and Andamari 2002). Some SBT is landed and processed at Muara Baru and Cilacap but the proportion that this species makes up in total tuna landings at these ports is very small.

Most of the information presented here was obtained through face to face interviews with key staff at the various government fisheries agencies and port authority offices. Additional information was obtained from copies of annual and quarterly reports provided by these offices.

As detailed in document CCSBT-ICM/0304/6 (Davis and Andamari 2003), CSIRO Division of Marine Research, in collaboration with the Research Institute of Marine Fisheries, has been monitoring the catch of SBT at Benoa since 1992. This monitoring scheme was replaced by a more extensive IOTC catch monitoring program in June 2002. This paper does not include a detailed discussion of either of these monitoring programs - only the monitoring and reporting that is routinely done by Indonesian Government fisheries agencies and port authority offices. This paper is primarily intended as an information document that will hopefully provide the Commission with a better understanding of the methods of data gathering and reporting by the various offices and of the hierarchical flow of information between the different levels (port, regency/municipality, provincial, national).

2. Port of Benoa

Unlike the ports of Muara Baru and Cilacap that are under the jurisdiction of and responsible to the Directorate General of Capture Fisheries (DGCF), the Port of Benoa is one of 37 ports in Indonesia that are managed by companies that are State owned enterprises. There are four of these companies and the one that manages Benoa is "PT. (Persero Terbatas) Pelabuhan Indonesia III" or "Pelindo III" (= Indonesia Port Corporation III). The central office of Indonesia Port Corporation III is in Surabaya. The fishing industry is only one of several maritime activities accommodated at this port. In addition to the fishing vessel unloading wharves and processing facilities, there are other areas with facilities and services dedicated to container cargo vessels and passenger liners.

The monitoring and reporting of fishing vessel activity and catch landings/processings at Port of Benoa are done by several different offices and, for ease of description, the operations of these offices are detailed under separate headings below. The order of these descriptions in no way signifies any ‘order of importance’ – the order is largely determined by the proximity of the offices to the point of landing. The reporting links between these various offices and points of data collection are illustrated in Figure 1.

3. WASKI

(Unit Pengawas Kapal Ikan = Unit for the Control/Supervision of Fishing Vessels)

Of the various offices at Port of Benoa that manage and monitor vessel activity within the port, WASKI is the only office that is dedicated solely to fishing vessels and fishing related facilities. WASKI has been the primary control/surveillance office for fisheries operations at Port of Benoa since 1995. Prior to this time, the Benoa Port Authority Office (*Kantor Penguasa Pelabuhan*) did all monitoring of fishing vessel activity. WASKI is a subdivision of the Office of Fisheries and Marine Affairs for the Province of Bali (*Dinas Perikanan dan Kelautan Propinsi Bali, DPKPB*) and its operations are funded by the Provincial Government of Bali.

WASKI has the responsibility for checking that fishing vessels entering and using the port have current certificates of registration and that vessels departing the port on fishing trips have current certificates of seaworthiness. In addition to collecting vessel specific details (vessel name, vessel size, vessel owner, certificate numbers, etc.) that are entered onto a “Form C” (*Lembaran Laik Tangkap Operasional*) WASKI officers also endeavour to obtain details of the catch landed by vessels, either before or during the catch unloading. Fishing log-book forms (*Laporan Penangkapan Ikan*), “Form A” (see Fig. 2), is used for this purpose. This form is supposed to be completed by the vessel skipper at the completion of each fishing trip, and the form has provision for records of the amount export and reject quality fish landed. Species listings include southern bluefin, yellowfin, bigeye, and albacore tunas, as well as a separate listing for billfish. However, it is common for these forms not to be completed by the skipper or other senior member of the vessel’s crew and instead, WASKI officers have to obtain the catch information from the vessel’s agent or from information provided by the processing company that is handling the vessel’s catch. Another limitation is that WASKI only has sufficient staff resources to monitor 30 – 50 % of the long-liner landings at Benoa.

Some, but not all of the companies (12 processing companies in Benoa) that process the long-liner catches routinely provide processing tally-sheets to WASKI. Each company has its own tally-sheet format but these sheets are generally tailored for records of individual fish weights into size categories (e.g. ≤ 13 kg, 14 – 19 kg, 20 – 29 kg, > 30 kg) and totals (in kgs) are provided for “fresh/export” and “reject” quality fish in each size class. Species differentiation on these sheets is often limited to just “bigeye” and “yellowfin” tuna.

WASKI produces quarterly reports, which are primarily vessel activity reports, containing a list of all vessels that have berthed during each month, vessel size, vessel gear type, and vessel arrival and departure dates. The only catch information provided

in the quarterly reports is a single “production” figure of kilograms of unloaded catch for each vessel entry (with no species information). So, although the vessel ‘fishing-log form’ and the tally-sheets provided by processing companies both have the potential for providing species specific data to WASKI, the only catch data that is reported by this office is an aggregate, non-species specific total catch figure for each landing event.

WASKI informed us that they recognise that up to 75% of vessel owner and processing companies under-report catch by as much as 30 –50 % to minimise tax.

WASKI sends copies of its quarterly reports to the provincial fisheries office, DPKPB, in Denpasar, and to the Directorate General of Marine Resources and Fisheries Control (DGMRFC) (*Direktorat Jenderal Pengendalian Sumber Daya Kelautan dan Perikanan*) in Jakarta. Prior to 2002, WASKI also sent copies of its reports direct to DGCF, but that is no longer the case. DPKPB forward copies of the WASKI reports onto the Denpasar Regency/Municipal Office of Agriculture and Marine Affairs (*Dinas Pertanian dan Kelautan Kota Denpasar*).

4. Dinas Pertanian dan Kelautan Kota Denpasar (*Denpasar Regency/Municipal Office of Agriculture and Marine Affairs*)

There are 9 regency/municipal offices throughout Bali that report fisheries production figures for their respective regencies/municipalities to the Bali provincial fisheries office, DPKPB. Dinas Pertanian dan Kelautan Kota Denpasar (DPKKD) is the regency/municipal office that reports for fishing vessel catches unloaded at Port of Benoa. DPKKD has a team of enumerators (17 in total, average of 4 monitoring on any one day) who visit the port daily and collect catch landing data during the unloading and processing operations. Data collected are only totals in kilograms for tuna aggregated, not separated by species, for each catch processed. This data is initially recorded as hand-written records into a log-book that is kept at an office at the main entry gate to the port. At some later stage these records are transferred to the DPKKD office in Denpasar. It is these data that are used the Regency/Municipal Government to calculate the tax (*retribusi*) that must be paid by each vessel owner/vessel company. The tax is based on total catch unloaded (export and reject quality fish combined) and is currently charged at 60 Rupiah/kg.

DPKKD produces quarterly and annual reports that are sent to DPKPB. These reports include quarterly ‘production’ totals for tuna (aggregated) that have been through the processors at Benoa. These figures probably include billfish as there are no separate listings for billfish in the DPKKD reports.

5. Dinas Perikanan dan Kelautan Propinsi Bali (*Office of Fisheries and Marine Affairs for Province of Bali*)

There are 35 provincial fisheries offices throughout the Indonesian archipelago, and each office compiles data on the fisheries production figures for all the regencies/municipalities within their respective provinces. One of the primary duties of the provincial office is to provide quarterly and annual reports to DGCF, using a standard set of reporting forms “Laporan Statistik LL-3” (Fig.3) - production figures (both in volume and Rupiah value) according to type of fishing gear and type of fish.

Laporan Statistik LL-3 are completed for each regency/municipality i.e. DPKPB submits the LL-3 forms to DGCF for each of the 9 regencies/municipalities within the Bali Province. These forms have only one tuna (species aggregated) entry column and no provision for separate recording for billfish.

DPKPB has two sources of information from which to calculate the statistics for tuna production that are submitted to DGCF: 1) the production figures it receives in the DPKKD quarterly and annual reports, and 2) data it compiles from packing lists, copies of which it obtains from the Laboratory of Fish Inspection and Quality Control (*Laboratorium Pembinaan dan Pengujian Mutu Hasil Perikanan*), LFIQC.

LFIQC is an office under the administration of DPKPB, but it is technically directly responsible to DGCF. The laboratory is located adjacent to the offices of DPKPB in Denpasar. Before an export company can export fish products from Bali they must obtain a health certificate (*Sertifikat Mutu*) from LFIQC. To obtain these certificates the export companies have to provide the LFIQC with packing lists that contain complete details of the type and amount of product in the consignments for export. For both fresh and frozen tuna these lists usually, but not always, have a breakdown of species, the number of pieces of each species in each carton, and the combined weight of pieces in each carton. These ‘pieces’ may be whole fish, but may also be tuna product (e.g. tuna steak, tuna loin, tuna fillet), usually derived from fish graded as reject in the initial processing. In addition to providing the product lists, the companies also have to provide samples of the tuna product for testing. The export companies are graded (grades 1 – 4) by LFIQC and depending on the history of quality of their product, a company may not have to submit samples for testing for every shipment.

DPKPB uses the tuna production data from the DPKKD reports as the measure of long-line caught tuna for Port of Benoa, and reports this data to DGCF via the forms “Laporan Statistik LL-3”. In addition to this reporting, DPKPB also produces quarterly and annual reports which it sends to DGCF, but again, the long-line tuna data that appears in these reports are the figures obtained from DPKKD and therefore have all large tuna (yellowfin, big eye, southern bluefin), and possibly billfish aggregated as the single category “Tuna”.

The export packing list data is used by DPKPB to determine the amount of tax payable by export companies to the Provincial Government (current tax is US\$2.45/tonne). DPKPB maintains Excel files with export production summaries based on the packing list data, but again, only with tuna species aggregated into product categories (“fresh tuna”, “frozen tuna”, “tuna loin”, “tuna meat” etc.). Document CCSBT-ICM/0304/7 (Davis and Andamari 2003) provides more detail about the Dinas export packing list data.

6. Direktorat Jenderal Perikanan Tangkap (*Directorate General of Capture Fisheries, DGCF*)

The Data and Statistics Section of DGCF in Jakarta is the end point in the reporting of fisheries production, for the whole of Indonesia. The annual reports, “Statistics of Capture Fisheries, Indonesia” produced by this office are an assimilation of all the data provided by the Dinas provincial fisheries offices via the forms “Laporan

Statistik LL-3". The reports are comprised of two parts; Part I – Marine Fishery statistics, and Part II – Inland Openwater Fishery statistics, and include not only fish production statistics but also summary statistics on the number, size, and gear-type of vessels that make up Indonesia's large and small scale fishing fleets.

DGCF is fully aware of the limitations of the current reporting systems, and is particularly aware of the need to include species specific reporting for tunas to meet IOTC reporting requirements. For this reason they have developed a new version of "Laporan Statistik LL-3" that has separate entry columns for yellowfin, southern bluefin, big-eye, and albacore. Their current plan is to introduce these new reporting forms to the Dinas provincial fisheries offices sometime during 2003. DGCF also recognises that the introduction of these new forms will necessitate a training program so that the regency/municipal Dinas enumerators are able to identify these different species with confidence and therefore not rely solely on information provided by the processing companies.

7. Other offices

There are two other offices at that monitor fisheries activities at Port of Benoa:

Kantor Penguasa Pelabuhan Benoa *(The Benoa Port Authority Office)*

As stated earlier, prior to 1995 this office did the monitoring of fishing vessel activity and fishing production that the office of WASKI does. The office is located not far from the WASKI office in the port precinct. Its authority covers all vessel activity at Benoa, including non-fisheries cargo and passenger liner activities.

Kantor Penguasa Pelabuhan Benoa (KPPB) informed us that their office routinely receives data from the tuna fisheries processing and export companies. This office produces monthly reports that include figures on volume of fresh and frozen tuna (not species specific) exports for that month, but only for domestic export i.e. to other Indonesian islands. In common with the international tuna exports, domestic exports are also subject to tax.

KPPB said that if they suspected under-reporting by the processing companies they send an officer down to the company to check. They also occasionally do cross-checks against the Dinas fisheries office data.

KPPB do not send copies of their reports to WASKI and vice-versa.

Kantor Pelindo - DINAS Usaha *(Office of Pelindo - Operations Division)*

Dinas Usaha is located in the Pelindo company office complex within the port precinct. This office monitors vessel traffic within the port and collects a 'landing tax' from vessel owners/vessel companies for each landing. It does not have any particular interest in the composition of fishing vessel catches per se – only in the combined weight of vessel and catch, as this combined weight determines the level of tax that must be paid (90,000 Rp./landing for vessels > 60 GT, 60,000 Rp./landing for vessels 31-60 GT).

We mention these ‘other offices’ as it further illustrates that there are many different offices at Port of Benoa with staff collecting similar types of information, but with little coordination of monitoring effort.

8. **Validation and Cross-Checking**

The only formal validation/verification process (that we are aware of) within all the data collection and reporting processes detailed above are once-per-year ‘validation meetings’ conducted between DGCF and the provincial Dinas fisheries offices. During these 4 – 5 day meetings cross-checks are done to ensure that the data provided by the Dinas offices to DGCF matches the data provided by the regency/municipal Dinas fisheries offices. DGCF currently has plans to extend the validation process by implementing annual validation meetings at the next level down i.e. between the provincial fisheries offices and the regency/municipal Dinas fisheries offices; meetings that will be held prior to those first mentioned.

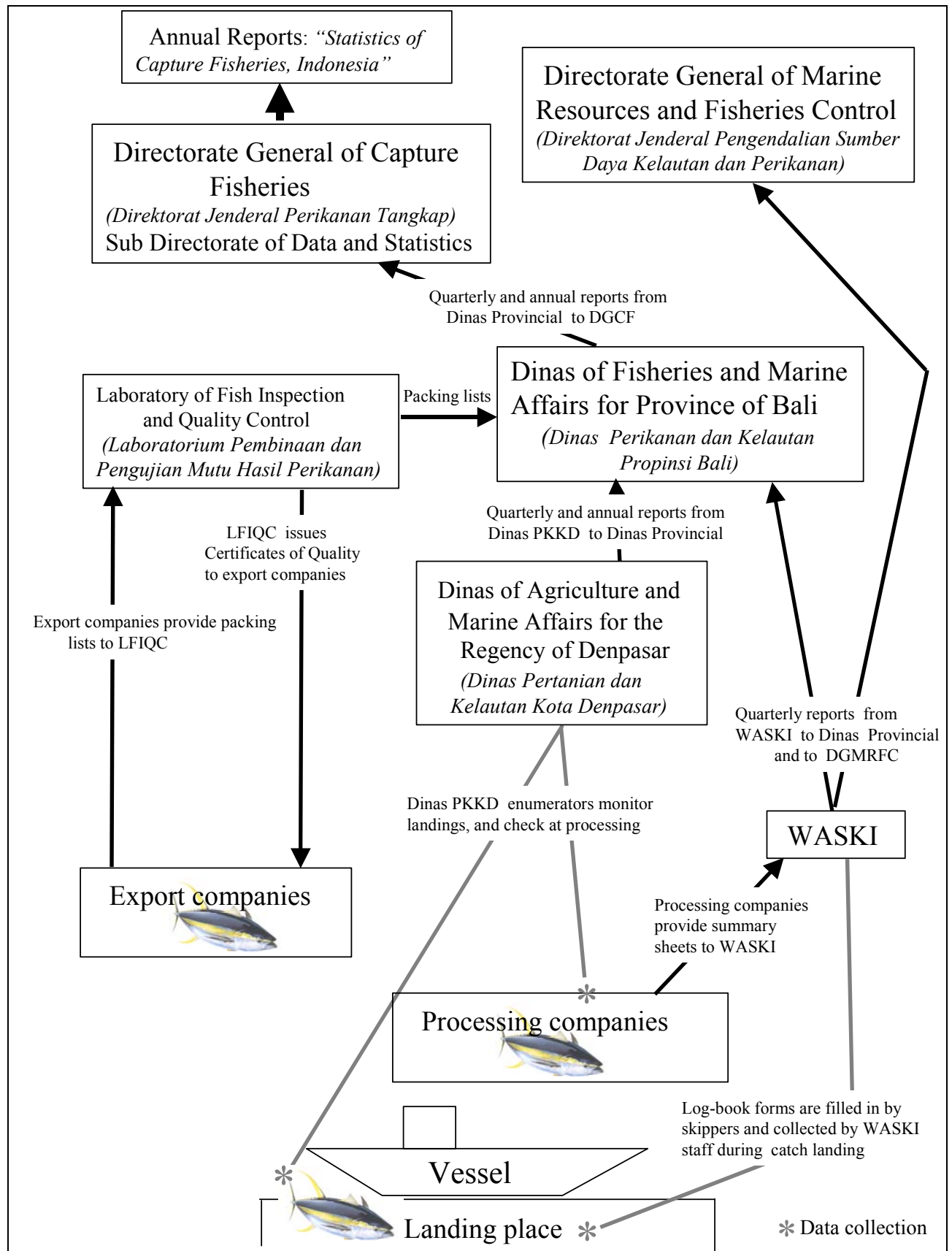


Figure 1. Data collection and reporting – Port of Benoa

DEPARTEMEN KELAUTAN DAN PERIKANAN RI
DIREKTORAT JENDERAL PENGAWASAN DAN PERLINDUNGAN LAUT
DINAS PERIKANAN DAN KELAUTAN PROPINSI BALI
UNIT PENGAWAS PENANGKAPAN IKAN
PELABUHAN BENOA

FORMA A.

KODE PELABUHAN : 044
BASE PORT CODE

TELP. (0361) 721047

LAPORAN PENANGKAPAN IKAN
FISHING LOG

FORMULIR - AMCS (DIISI OLEH AHLI PERIKANAN / ABK)

1. Nama Kapal :

2. Nomor IUP :

3. Nomor Ijin (Spi / Sipi) :

4. Tanggal berangkat :

5. Tanggal tiba :

6. Jumlah basket / blong :

7. Bahan bakar : Ton

8. Es : Ton

9. Umpan : Kg/ekor

10. Air Tawar : Ton

11. Daerah penangkapan :

12. Jumlah tarikan : Kali

Jumlah Hasil Tangkapan Jenis / Species	Export		Reject		Jumlah	
	Ekor	Kg.	Ekor	Kg.	Ekor	Kg.
Blue Tuna (sirip biru)						
Yellofin Tuna (sirip kuning)						
Bigeye Tuna (mata besar)						
Albacore						
Billfish (setuhuk)						
Shark (Hiu / Cucut)						
Other Fish (Ikan Lain)						
J u m l a h						

Diperiksa oleh,
Pengawas Kapal Ikan.

Tanggal Laporan :

Nama Pengisi / Nakhoda :

Tanda tangan :

.....
NIP.

Figure 2. Fishing-log form (Form A) used by WASKI

Figure 3. The current “Laporan Statistik LL-3” form submitted to DGCF by provincial fisheries offices. The form header reads “Marine fisheries production statistics according to fishing gear type and fish type, with value according to fish type”.

“Jenis alat penangkap” = type of fishing gear, “Rawai tuna” = long-line.