

# ABARE



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*Innovation in Economic Research*

## Final report: Australian Fisheries Statistics Project no. 98/166

### **Non technical summary**

To meet the needs of the fishing industry and fisheries managers, policy makers and researchers, ABARE has been publishing on an annual basis, detailed production and trade data in *Australian Fisheries Statistics* since 1991. The research undertaken in this project (98/166) produced data on the volume and value of production from state and Commonwealth fisheries, and the volume and value of Australian fisheries trade, by destination, source and product, covering the years 1995-96 to 1999-2000. These reports also contain industry structure profiles of Commonwealth and state fisheries.

An important part of this project was the requirement to implement a process of continuous improvement over the life of the project. These improvements were aimed at enhancing the coverage of fisheries, so all commercial fishing activities were included, maintaining the relevance of the data presented in both the production and trade tables, and implement processes so that the valuation of commercial fishing was undertaken in a consistent framework.

### **Background**

This project was undertaken to maintain the collection of commercial fishing industry production, value of production and trade data. These are the only collated, published sources of information on commercial industry catches and used for a wide range of purposes, including determination of Commonwealth allocations for fisheries research funding, industries levies and for addressing a wide range of information needs of both government and industry.

### **Need**

In the original application the principal users of fisheries economic data were identified as:

- the fishing industry;
- providers of services to the fishing industry;
- governments, particularly in the determination of research funding and in the promotion of the importance of the fisheries sector to regional and national economics; and

meeting Australia's international obligations to organizations, such as FAO and OECD.

Other major users of the data have become apparent over the life of the project, including the research and student communities, foreign delegations and other organisations, both government, non government and commercial, who require broad information the seafood industry.

### **Objectives**

To maintain a data base of production, value and trade statistics for the Australian fishing industry, including aquaculture.

### **Methods**

The key element of Australian Fisheries Statistics is the development of gross value of production estimates. National gross value of production is the total value of Australian wild caught and aquaculture product on the basis of price received by fishers and producers according to the 'beach' or 'farm gate' price after all marketing and transport costs have been deducted.

State and Commonwealth fisheries agencies provide production data used in gross value of production estimation. Responsibility of the accuracy of the data lies with the fisheries agency and for its consistency with the Fisheries Statistics Working Group, a subcommittee of the Standing Committee of Fisheries and Aquaculture. This group address problems in relation to methods of data collection (generally logbooks), consistency of data processing protocols, standardisation of the species names and issues such as the impact of overlapping fisheries management jurisdictions on catch data.

All production volumes recorded are in landed live weight of the fish production. No account is taken of the by catch and discarded species.

In general, commercial aquaculture production is provided by state fisheries agencies. Systems similar to those for wild capture fishery data have been introduced during the life of the project. Prior to this estimates were produced by state agencies, that relied

either on surveys or estimates provided by extension services to develop reliable estimates.

#### *Value of product*

The price used in gross value of production estimation is based on the estimated 'beach' or 'farm gate' price received by fisheries and aquaculture producers. Values are derived from a range of sources, including directly from fishers and producers, wholesale markets, seafood buyers and processors. For some states, the values are collected by the fisheries agency while for others they depend on information provided by a sample of buyers.

As most fish is actually sold on a market away from point of landing or aquaculture farm gate, marketing and transport costs need to be deducted from the price received at the point of sale.

#### *Intermediate product*

It often occurs that live product from one fishery or aquaculture operation is transferred for use in another fishery or aquaculture operation. For example, wild caught southern bluefin tuna are taken in the Commonwealth fishery and transferred to cages off Port Lincoln South Australia.

The issue is whether such intermediate product should be included in the gross value of production estimates. The criterion used in Australian Fisheries Statistics is whether live product is transferred to another management jurisdiction. If product is transferred to another jurisdiction, it is included in the GVP estimates for the jurisdiction in which the product was originally produced (in this case the southern bluefin tuna fishery).

Such product is then treated as any other input used by the second producer and no 'correction' is made to the value of product from the second jurisdiction (the tuna farming operation) because the estimates are of gross value of production. If, however, live product is transferred from one operator to another within the same fishery or aquaculture jurisdictions for on growing (for example, oyster spat), this product is not included in the estimates. However, in developing estimates, totaling

the values at the jurisdiction level would result in double counting so the value of the intermediate product is subtracted.

Fish fry, oyster spat and post larval prawns are grown in hatcheries for ongrowing. If this product is grown on or transferred to another aquaculture operation in the same state the value of the hatchery production is included at this stage. It is only if the product is sold interstate or is used for restocking that the value of hatchery product is relevant.

### **Trade data**

Details on fisheries trade are sourced from Australian Bureau of Statistics on the basis of the Harmonised System of tariff codes and ABARE collates the data into categories based on products, destinations etc.

### **Results/discussion**

See attached publication Australian Fisheries Statistics

### **Benefits**

The benefits of this project are widespread and have a substantial public good component. While in general the benefits are non market in nature there are significant components of realisable benefits, including as an input to decision making for fisheries management and investment decisions, research allocation decisions and similar issues.

### **Further development**

The objective of the Australian Fisheries Statistics project was to establish a framework for a low cost publication that covered fisheries production and trade. While ABARE collates and publishes the data, it is a collaborative effort, involving a number of different organisations at the Commonwealth, state and territory, and individual company level.

It is a low level resolution publication that includes only summary information on commercial production, value of production, industry structure and trade, but it does provide the basis to monitor longer term changes.

Although the published results are in mainly summary form, in the last year of the project substantial progress was achieved implementing a new database that allows more efficient retrieval of information on a species basis. At this stage only two years data (1998-99 and 1999-00) have been transferred to the database, it is intended that other historical data will be transferred.

While the general principal is that the value of production should be the ex vessel or ex farm gate value there may difficulties in obtaining such information. In those collections which are not based on obtaining such information directly from fishers or farmers the large number of marketing channels used in the fisheries sector may cause difficulties in providing representative valuations. Also the distribution of products can change significantly in a short period. Without monitoring, this can lead to errors in the basis for valuation.

There is also an implicit assumption that all fish of the same species has the same value. This is not generally the case. Source of fish, fishing method and size has an impact. In the absence of standard grades it is not feasible to assess the basis for price change, whether a change in returns is due to market demand and supply or due to changes in supply composition.

A requirement for statistical collections is that there have to be a minimum number of operators within a category before it can be published. This is an issue in relation to those fisheries or aquaculture sectors where there are a small number of operators. The right of confidentiality has to be balanced against the community's right to know how a public resource is being used.

In the aquaculture sector the number of operators may vary, particularly in the developing stage of the industry. It may be data are available for publication for one year but because the number of operators fell below the threshold the following year data cannot be published. In this situation it is difficult to assess the direction an industry/sector may be following since the remaining producers may have increased production. The Fisheries Statistics Working Group of the Standing Committee on Fisheries and Aquaculture is currently considering this issue of confidentiality.

Another issue for consideration is that year base chosen for reporting in *Australian Fisheries Statistics*. While the choice of year base does not affect the actual collection of data, since data collections are based on a much smaller timeframe (daily, monthly), there has been criticism that a financial year does not concur with a fishing seasons. While this may be the case for some fisheries, for others the use of a financial year does reflect a fishing season. Also information may be available for specific fisheries/species from other sources, for example stock assessment reports.

The Harmonised System and the statistical identification framework as currently implemented in Australia prevent identification of trade in most individual species. For example, southern bluefin tuna exports are not identified separately by the Australian Bureau of Statistics. In addition, the ABS periodically reviews the statistical codes used with view to amalgamating codes, or in some instances additional codes have become available. It is anticipated that ABS will be undertaking a major review of its statistical codes used for exports and imports in 2001, the implications of which are unknown at this stage with respect to the level of information available for publication in *Australian Fisheries Statistics*.

Presentation of information on the structure of the industry is made difficult due to the differences in the base for management varies widely throughout Australia. In some jurisdictions the individual fisher is the base, in others it is the boat. Also operators are often licensed for multiple fisheries so there are major problems in establishing the overlaps in assessing employment, boat numbers etc.

## **References**

Australian Bureau of Statistics  
Australian Fisheries Management Authority  
Fisheries Western Australia  
Marine and Freshwater Resources Institute  
Melbourne Wholesale Fish Market  
New South Fish Marketing Authority  
New South Wales Fisheries  
Northern Territory Department of Primary Industry and Fisheries

Queensland Fisheries Service

South Australian Research and Development Institute

Tasmanian Department of Primary Industries, Water and Environment

**Intellectual property**

Not applicable

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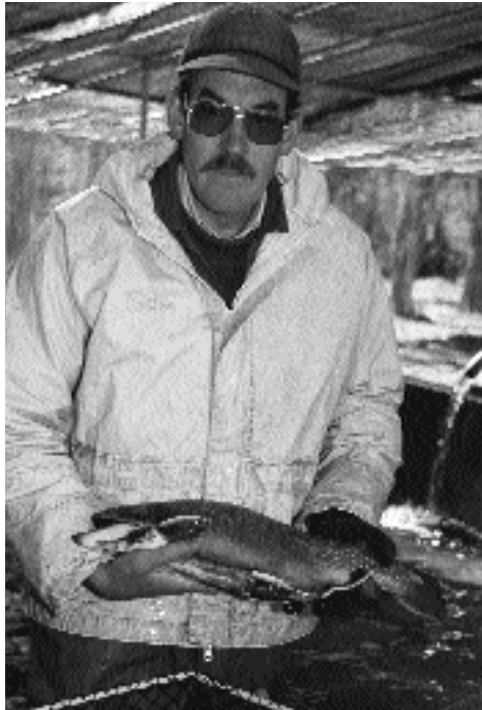
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[Available on the  
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