



Contents lists available at ScienceDirect

Fisheries Research

journal homepage: www.elsevier.com/locate/fishres



Multijurisdictional fisheries performance reporting: How Australia's nationally standardised approach to assessing stock status compares

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ARTICLE INFO

Article history:

Received 30 September 2015

Received in revised form 13 January 2016

Accepted 1 February 2016

Available online xxx

Keywords:

Stock status reporting

Fisheries

Biomass

Fishing pressure

Multijurisdictional reporting

Australian fisheries

ABSTRACT

Australian marine wild-capture fisheries are managed by eight separate jurisdictions. Traditionally, fishery status reports have been produced separately by most of these jurisdictions, assessing the fish stocks they manage, and reporting on the effectiveness of their fisheries management. However, the format, the type of stock status assessments, the thresholds and terminology used to describe stock status and the classification frameworks have varied over time and among jurisdictions. These differences complicate efforts to understand stock status on a national scale. They also create potential misunderstanding among the wider community about how to interpret information on the status of fish stocks, and the fisheries management and science processes more generally. This is especially true when considering stocks that are shared across two or more jurisdictional boundaries. A standardised approach was developed in 2011 leading to production of the first national *Status of key Australian fish stocks reports* in 2012, followed by a second edition in 2014 (www.fish.gov.au). Production of these reports was the first step towards a broader national approach to reporting on the performance of Australian fisheries for target species and for wider ecosystem and socioeconomic consequences. This paper outlines the challenges associated with moving towards national performance reporting for target fish stocks and Australia's successes so far. It also outlines the challenges ahead, in particular those relating to reporting more broadly on the status of entire fisheries. Comparisons are drawn between Australia and New Zealand and more broadly between Australia and other countries.

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1. Introduction

Performance reporting for fisheries is a fundamental part of the adaptive management cycle, guiding management and policy responses. There is also increasing interest from broader fisheries stakeholders – consumers, retailers, and environmental non-government organisations (ENGOS) – who want information

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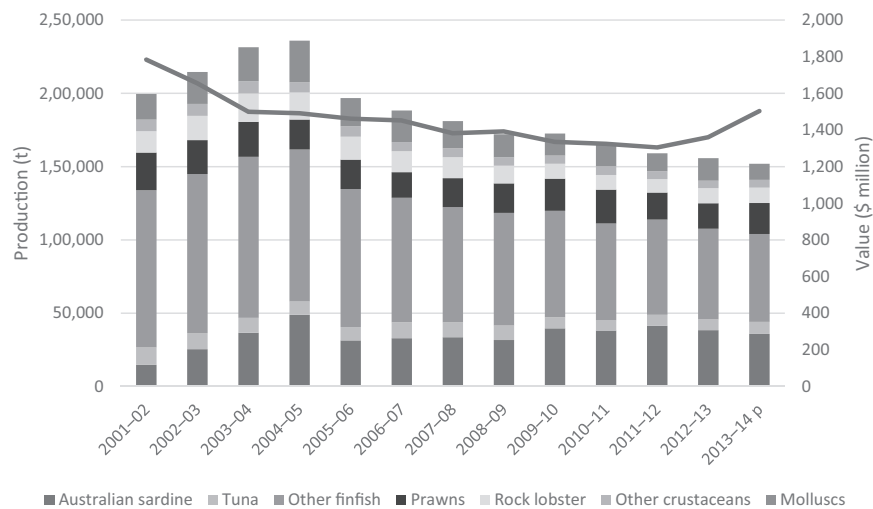


Fig. 1. Australian capture fisheries production for major groups and the total value of production, 2001–2002 to 2013–2014. p = preliminary estimate. Source: [Savage and Hobsbawn \(2015\)](#).

on the sustainability of fisheries and seafood products. The public's interest is exemplified by the media coverage that fisheries sustainability receives globally. Effective and accessible performance reporting can increase the public's understanding of the state of target fish stocks and provide increased confidence in fisheries management. From the perspective of the commercial industry, performance reporting can contribute to increased market and consumer confidence, as well as strengthening the social licence to operate ([Hamouda et al., 2005](#); [Mazur et al., 2014](#)). It is also part of demonstrating progress against international requirements and obligations, in particular the United Nations Convention on the Law of the Sea (UNCLOS) 1982.

In line with the principles of ecologically sustainable development and the ecosystem approach to fisheries management, holistic performance reporting for fisheries would consider biological, environmental, social, economic and governance indicators ([Fletcher et al., 2005](#)). The relative importance of performance against each component will vary among stakeholders, but common goals may include: (1) target fish stocks should be harvested at sustainable levels so that future catches can be maintained; (2) discarding of unwanted fish and interactions with bycatch species, especially protected and iconic species like turtles and dolphins, should be minimised to acceptably low levels; (3) impacts on the wider environment (such as the benthos and habitats) should be minimised to acceptably low levels; (4) management needs to be effective and considered; (5) fisheries should be economically sustainable or viable; and (6) fisheries should produce net social benefits ([Barclay, 2012](#); [Brooks et al., 2015](#)). Ideally, all aspects would be included in public reports to communicate a comprehensive understanding of the performance of fisheries.

In most fisheries, performance reporting with respect to the target fish stocks is the most developed and well informed aspect of status reporting. This reflects the fact that the most complete data sets and assessments are usually for single stocks of the target species. This also aligns with the expectations of fishery management provided by the United Nations Convention on the Law of the Sea (UNCLOS) and the Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries:

States should prevent overfishing and excess fishing capacity and should implement management measures to ensure that fishing effort is commensurate with the productive capacity of the fishery resources and their sustainable utilization (FAO, 1995).

In many cases fish stocks are multijurisdictional, with biological stocks crossing management boundaries within national waters, between countries' exclusive economic zones, or between national waters and the high seas. In these cases there is often a history of individual jurisdictions undertaking fishery performance reporting separately at the management unit scale, in line with their specific legislative and policy objectives. While there may be similarities in the overarching jurisdictional objectives, the separate development of reporting can result in different approaches being applied, duplication of assessments and inefficient use of limited resources. In the case of multijurisdictional stocks, individual jurisdictions may not explicitly take into account the shared nature of the stock in assessing performance. This can obscure the understanding of the status of the stocks underpinning wild-capture fisheries.

Australia provides an example of the complexity of managing and reporting on multijurisdictional fish stocks. In Australia, marine wild-capture fisheries produced over 152,000 t in 2013–14, 60% of Australia's total fisheries production and valued at AUS\$1.5 billion ([Savage and Hobsbawn 2015](#); [Fig. 1](#)). These fisheries are managed by eight state, territory and federal jurisdictions. Some fisheries also have an international component, where fish stocks and fisheries extend into high seas areas or other countries' exclusive economic zones.

Until recently, fishery status reporting in Australia has been undertaken separately in each jurisdiction, resulting in differences in stock status thresholds, classification frameworks and terminology ([Anon., 2007](#); [Fletcher and Santoro, 2014](#); [Fowler et al., 2014](#); [Georgeson et al., 2014](#); [Holmes et al., 2013](#); [Northern Territory Government, 2014](#); [Rowling et al., 2010](#); [Victorian Department of Primary Industries, 2008](#)). In addition, assessments have not always covered the full biological stock, being limited to the part of the stock within jurisdictional boundaries (i.e. to management units). As a result, it has been difficult to understand stock status on a national scale, especially for stocks that are shared across jurisdictional boundaries.

The production of the *Status of key Australian fish stocks reports* in 2012 and 2014 ([Flood et al., 2012, 2014](#)) represents Australia's first step towards a consistent national, fishery-wide reporting. These national reports currently focus on the key target species, but aim to contribute to building national fishery wide reporting, that will consider broader aspects of fisheries. The reports provide an example of how multijurisdictional reporting can be developed and progressed, with approaches that may be applicable in other countries or regions.

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