

DEPARTMENT OF FISHERIES — DATA COLLECTION

1619. Mr D.J. Kelly to the minister representing the Minister for Fisheries:

I refer to the collection of data by the Department of Fisheries, and I ask:

- (a) what methods does the Department of Fisheries employ to collect data on fish stocks in Western Australia;
- (b) what methods does the Department of Fisheries employ to collect data used for the formulation of fisheries management plans made under the *Fish Resources Management Act 1994*;
- (c) what methods does the Department of Fisheries employ to collect data used to monitor commercial fisheries catches in Western Australia; and
- (d) what methods does the Department of Fisheries employ to collect data used to monitor recreational fisheries catches in Western Australia?

Mr T.R. Buswell replied:

- (a) A wide range of data collection methods are employed by the Department of Fisheries (Department) to generate the information used to assess the status of the main fish stocks of Western Australia. These methods include the collection and analysis of data or samples supplied directly by commercial fishers, recreational fishers plus that material directly obtained by Department staff or through research collaborations.

The data supplied by commercial fishers may include one or more of the following — compulsory monthly catch and effort returns, completion of shot, daily or trip level logbooks, catch disposal records, gear and equipment surveys, processor/unload returns, VMS records, video recordings of on deck, below water and in-gear activities and direct interviews. Fishers and processors may also provide direct assistance though the retention of representative fish samples (e.g. frames, skeletons) for biological analysis and their recording of the results from use of experimental gear and voluntary logbooks.

Data supplied directly by recreational fishers includes voluntary participation in a variety of phone based surveys including the state-wide boat-based survey, marron and freshwater fish surveys, mail survey of rock lobster recreational fishers, field survey of metropolitan abalone recreational fishers, completion of logbooks, participating in boat ramp interviews involving the measurement of lengths and weights of fish retained by recreational fishers, plus the provision of fish frames through the Send us your Skeleton Program.

Data collection activities directly carried out or managed by Departmental staff includes on-board observer programs undertaken on commercial vessels (via the placement of staff on-board commercial vessels and/or the capturing of secure video), interviews with recreational fishers, completion of fishery independent-standardised surveys for recruitment and/or spawning stock abundance involving a wide ranges of sampling techniques, obtaining representative samples of targeted fish stocks for biological (e.g. length/age/reproduction condition etc.) analyses, tagging of fish to determine growth, mortality and/or movement patterns, monitoring (directly or remotely — e.g. satellite data) relevant environmental variables that may affect stock levels plus targeted research projects to fill identified specific gaps in knowledge or to develop improved monitoring processes.

The specific combination of data collection activities and methods undertaken for each fish stock varies greatly with the level determined using the Department's world leading, risk based, Ecosystem Based Fisheries Management (EBFM) approach. The EBFM approach determines the appropriate level of ongoing monitoring for each fish stock (asset) primarily based on its current stock sustainability/ecological risk level combined with the relative level of social and economic value that the resource generates for the Western Australia community and political profile. This method optimises the use of Departmental resources while ensuring risks to these aquatic assets managed under the FRMA and the Offshore Constitutional Settlement are maintained at acceptable levels across the 13,000 km of coastline out to the 200 nm EEZ.

The current detailed five year scheduled program of data collection, including monitoring, assessment and tactical research plan for each fishery is documented within the most recent "*Research, Monitoring, Assessment and Development Plan*" published in March 2012. This report is available at: http://www.fish.wa.gov.au/Documents/occasional_publications/fop106.pdf

In addition, a summary of each of these plans, including any subsequent changes and initiatives are reported for each fishery/asset within the “*Status Reports of the Fisheries and Aquatic Resources of Western Australia*”. This report is available at:

http://www.fish.wa.gov.au/Documents/sofar/status_reports_of_the_fisheries_and_aquatic_resources_2012-13.pdf

These results form the basis of the Department’s Key Performance Indicator 1.1, which is presented in the Departments’ Annual Report to Parliament.

- (b) In addition to the information collected by the Department on the main fish stocks as outlined in part (a), additional data on other potentially affected components of the ecosystem and/or economic and social outcomes are used to formulate management plans for Western Australia’s aquatic resources. This holistic, EBFM based approach is required to both meet the objects of the FRMA, and the commitments to the Council of Australian Governments (COAG) agreed principles of ecologically sustainable development.

The additional types of data that may be collected to either inform the development or operation of a fisheries management plan could, depending upon the fishery, include information on the levels of capture and discarding of by-product species, the total spatial extent of fishing operations, level and type of interactions with protected species, habitat maps associated with key fisheries, monitoring changes in the extent of key habitats, extent of fishery interactions with key habitats, assessments of overall ecosystem health, catch and catch rates associated with optimal economic returns, satisfaction of commercial and recreational fishers with their fishing experiences and general community attitudes.

Similar to the decisions for what level of stock monitoring is undertaken, the same risk based approach is used to determine what, if any, additional information is required to develop a fisheries management plan and what is required to be monitored to ensure that the operation of each fishery/activity is not having an unacceptable level of impact on the other components of the ecosystem and to ensure that optimal community benefits are being generated.

Risk assessments are completed both at the individual fishery level and at the Bioregional level to ensure that cumulative impacts of separate fisheries management plans are appropriately considered. The current level of risk at the fishery level and the regional level for each of the ecological assets of Western Australia are reported annually in the *Status Reports of the Fisheries and Aquatic Resources of Western Australia*” and have been for the past 5 years.

- (c) See part (a).
- (d) In addition to the components of this answer outlined in part (a), the Department has just released the results of a comprehensive research study on this issue “Determination and development of cost effective techniques to monitor recreational catch and effort in Western Australian demersal finfish fisheries” (Fisheries Research Report 245) which has been used to refine our current recreational fisheries survey methodologies. This report is available at —
http://www.fish.wa.gov.au/Documents/research_reports/frr245.pdf