Dr Mike Steer

Sub-program Leader, Finfish Fisheries

SOUTH AUSTRALIAN RESEARCH & DEVELOPMENT INSTITUTE
PIRSA

Qualifications

BSc (Hons)	James Cook University
PhD	University of Tasmania

Role

Dr Mike Steer is the leader of the Finfish Fisheries sub-program at SARDI Aquatic Sciences. This sub-program conducts biological, ecological and fisheries research, and provides scientific advice to State and Commonwealth Governments on issues related to the ecologically sustainable utilisation of temperate Australia's demersal and estuarine finfish resources.

Research focus

Dr Steer joined SARDI in 2004 and has worked on a variety of projects that have aimed to maximise the sustainable resource utilisation in South Australia's Marine Scalefish Fishery (MSF).

These projects have: assessed the stock status of a range of South Australian commercial Marine Scalefish species • Resolved the population structure of Southern Garfish to improve spatial management of the resource • Disentangled the fleet dynamics of a multi-gear, multi-species commercial fishery • Addressed key knowledge gaps for South Australia's iconic cuttlefish species and disseminated results within a politically sensitive environment • Standardised fishing gear to promote the recovery of an over-exploited resource • Developed a pre-recruit index for a sub-annual species through cross-sector investigation • Developed cutting edge molecular techniques to identify inconspicuous snapper eggs to estimate spawning biomass • Collaborated with international scientists to explore global trends in cephalopod fisheries.

Major projects

Dr Steer is currently involved in three major research projects that are co-funded by the Fisheries Research and Development Corporation (FRDC) and PIRSA. The objectives of these projects are:

To evaluate the suitability of commercial fishery data for assessing the status of Southern Garfish fisheries in South Australia. Information on the relative abundance, population size, age structure and reproductive potential of Garfish assessed in fished and unfished areas will evaluate the suitability of using fishery-dependent data to assess stocks.

To determine key King George Whiting spawning areas throughout the southern gulfs of South Australia and evaluate the potential benefits of strategic management options to ensure the sustainable harvest of the resource. This involves extensive exploratory egg and adult surveys and quantifying the link between larval source and sink populations.

To disentangle the complexities of South Australia's Marine Scalefish Fishery, describing the long-term spatio-temporal trends in composition, dynamics and socio-economic performance of the fishing fleet to inform the impending structural reform of the fishery. The results of this study will contribute to enhancing the productivity and profitability of SA's community owned MSF.

Key publications

Steer MA, AJ Fowler, R McGarvey, J Feenstra, EL Westlake, D Matthews, M Drew, PJ Rogers, J Earl (2018). Assessment of the South Australian Marine Scalefish Fishery in 2016. South Australian Research and Development Institute (Aquatic Sciences), Adelaide. SARDI Publication No. F2017/000427-1. SARDI Research Report Series No. 974. 250pp.

Oxley APA, Catalano S, Wos-Oxley ML, Westlake EL, Grammer G, Steer MA (2017) Using *in situ* hybridization (ISH) to extend the daily egg production method (DEPM) to new species. Molecular Ecology Resources 17(6): 1108-1121.

Steer MA, Besley M (2016) The licence amalgamation scheme: taming South Australia's complex multi-species, multi-gear marine scalefish fishery. Fisheries Research 183: 625-633.

Doubleday ZA, Prowse TAA, Arkhipkin A, Pierce GJ, Semmens J, Steer MA, Leporati SC, Lourenco S, Quetglas A, Sauer W, Gillanders BM (2016) Global proliferation of cephalopods. Current Biology 26: R1-R3.

Boards/Committees

Australian Society of Fish Biology (State representative)

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