

# **Workshop to develop a national strategy for hopper R&D in Australian prawn trawl fisheries**

## **FINAL REPORT**

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**Project No. 2002/100**

# TITLE PAGE

**TITLE:** Workshop to develop a national strategy for hopper R&D in Australian prawn trawl fisheries.

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## **Appendix 1**

Workshop Agenda and invited attendees

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Workshop attendees, outputs and minutes

## **Appendix 3**

Copy of FRDC Funding Application – submitted December 2002

## **Appendix 4**

Copy of final FRDC Funding Application – submitted April 2003

# NON TECHNICAL SUMMARY

**2002/100      Workshop to develop a national strategy for hopper R&D in Australian prawn trawl fisheries**

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## **OBJECTIVES:**

1. Co-ordinate and run a facilitated workshop to identify and document a national approach for research on hoppers in Australian trawl fisheries
2. Develop a framework to deliver a co-ordinated and co-operative national hopper research project.
3. Identify and bring together key project stakeholders from research and industry to develop this framework.

## **NON TECHNICAL SUMMARY:**

### **Outcomes Achieved:**

- Cooperation and agreement by key industry and research stakeholders to support and contribute towards the development and implementation of a national strategy for hopper R&D in Australian prawn trawl fisheries.
- Agreement on a national approach and proposed strategy for hopper R&D across Australia's prawn trawl fisheries and development of a two year project funding application to FRDC to implement the strategy.
- Increased awareness and recognition of the role of SeaNet as an effective communication/extension tool to facilitate improved communication links between industry and researchers.

### **Outputs Achieved:**

- Facilitated stakeholder workshop to discuss the need and requirements for a national strategy for hopper R&D.
- Agreement on a 2-staged project framework to guide the development of funding application for a national strategy.
- Hopper R&D funding application submitted to FRDC in December 2002.

### **Summary:**

In September 2002, a one day workshop was held to bring together key industry and researcher stakeholders involved in Australia's prawn trawl fisheries to discuss industry's current use and research requirements on the use of hoppers.

A hopper is a mechanised, on board, submerged, rapid sorting device located on the back deck of the vessel which assists fishers sort their catch in water. Primarily, the uptake of hoppers has been driven by the economic benefits related to increased efficiencies in sorting and product quality, however, it has also been proposed that hoppers may assist to increase the survival of bycatch species caught during prawn trawl operations.

It was identified that currently a variety of hopper designs are in use, to varying levels, in the following Australian prawn trawl fisheries:

- Northern Prawn Fishery
- Torres Strait
- Queensland East Coast Trawl
- Spencer Gulf
- Gulf of St Vincent
- Exmouth Gulf
- NSW Estuary Prawn Trawl

The workshop was independently facilitated and brought together fisheries researchers and industry representatives from NSW, South Australia, Queensland (Commonwealth and State) and Western Australia. In total, 30 participants took part in the workshop, which in the first instance, focused on two key questions:

1. Do hoppers have a role in trawl systems to improve quality and bycatch survival?; and
2. Is there a benefit expending time and money to investigate hopper issues relative to other options?

Following an overview on the use of hoppers provided by both industry and researchers from each fishery, agreement was gained that the answer to both the above questions was yes. Having gained this level of agreement, the workshop then focused on devising a framework for a National Hopper Project Plan to facilitate the development of a funding application to develop a national strategy for hopper R&D in Australian prawn trawl fisheries.

The need for this workshop had been identified during the FRDC's funding pre-proposal process in which both CSIRO and SARDI researchers had submitted fishery specific funding proposals to research the effectiveness of hoppers in increasing survival rates of bycatch species caught during prawn trawl operations. Through it's involvement with the SeaNet program, Ocean Watch was identified as an appropriate independent organisation which had strong networks throughout the commercial fishing industry to coordinate the input and cooperation of all stakeholders and facilitate a national workshop.

The initiative of bringing together key industry and research stakeholders to discuss the opportunities and need for a coordinated, national approach on hopper R&D in

Australia has been both well received and supported by industry and researchers alike. Feedback following the workshop demonstrated that all participants found this approach both enlightening and facilitative with respect to improving the level of communication between fishers and researchers, as well as increasing the level of understanding about the current applications and uses of hoppers.

Resulting from the workshop, a funding application based upon the deliberations of the workshop was submitted to FRDC in December 2002. Following review of this application by the FRDC Board, a revised application was re-submitted to FRDC in April 2003. Subsequent to this, advice of this applications success was advised in May 2003.

**KEYWORDS:**        **Hopper, prawn trawl, national strategy, bycatch survival, sustainability, product quality.**

## **ACKNOWLEDGEMENTS**

We wish to thank several individuals and organisations that assisted in supporting and participating in the workshop. These include:

- The FRDC for providing funds and staff input to hold the workshop;
- The attendance and participation of key prawn trawl industry and research stakeholders who provided their time, knowledge and experience to develop a national hopper R&D strategy;
- Researchers at CSIRO, SARDI and the QFS for their support and assistance in pursuing the development of a national research approach;
- Robert van Barneveld for the excellent workshop facilitation;
- SeaNet officers for their assistance, communication networks and participation;

## **BACKGROUND**

A Queensland pilot study was funded to study the effects of hoppers on bycatch survival from prawn trawl fisheries. The pilot study ran for one year through the 2002 calendar year and a preliminary report was submitted to FRDC.

In 2001, CSIRO Marine Research submitted a pre-proposal to NORMAC and QFIRAC on the effects of hoppers. This received a 'high priority' from both but was

recommended for postponement until the results of the pilot study were clear. Ocean Watch Australia Ltd was included in this project as a co-investigator.

As part of the 2003/04 FRDC funding pre-proposal round, the CSIRO hopper research proposal was re-submitted to the WA Aquatic Resources R&D Advisory Committee, QFIRAC, SAFRAB and NPF Research Management Advisory Committee. Two similar project pre-proposals from SARDI were also submitted to SAFRAB.

Discussions between Ocean Watch and researchers at CSIRO and SARDI resulted in there being given in-principle agreement to combine the NPF and South Australian research proposals into one coordinated national research project involving researchers and industry from SA, Queensland, WA and NSW.

Researchers and industry from the above listed states were all consulted to gauge their support for the development of a national research project. Researchers and industry representatives confirmed their willingness to be involved in a national project and agreed to attend a one day workshop for stakeholders to develop an agreed national approach to progress this initiative.

Ocean Watch was successful in receiving a small project grant from FRDC to coordinate the workshop and assist industry representatives attend the meeting. This report overviews the results of the workshop and accounts for the expenditure of funds received to develop and undertake the workshop.

## **NEED**

It has been suggested that the use of hopper in prawn trawl fisheries can minimise the effects on bycatch species. Preliminary results, both from the Queensland pilot study and research in South Australia's Spencer Gulf Prawn trawl fishery, supported these suggestions. Although the uptake of hopper in some of Australia's prawn trawl fisheries is increasing, a coordinated and cooperative research approach to quantitatively determine the effects of hopper in reducing bycatch mortality and increasing product quality had not been undertaken.

NORMAC's Bycatch Action Plan has identified research into the effects of hopper on bycatch survival as a 'high priority'. The East Coast Trawl Plan also includes the need to reduce bycatch by 40% by 2005 and flags that hopper could assist achieve this target. SARDI have proposed that hopper, used as part of a suite of bycatch mitigation devices, could improve bycatch survival. Across Australia, there now exists a number of management initiatives and priorities that support further research into assessing the affects of hopper on increasing bycatch survival.

## **OBJECTIVES**

1. Coordinate and run a facilitated workshop to identify and document a national approach for research on hopper in Australian trawl fisheries.
2. Develop a framework to deliver a coordinated and cooperative national hopper research project.
3. Identify and bring together key project stakeholders from research and industry to



develop this framework.

## METHODS

Ocean Watch undertook the responsibility of co-ordinating and organising the workshop that was held in Brisbane on 10 September 2002. A copy of all the workshop materials, provided in preparation and as follow-up, are attached as Appendices.

Mr Robert van Barneveld was engaged to facilitate the workshop. Based upon Mr van Barneveld's experience with industry research needs and processes, his involvement ensured for the delivery of information to develop an agreed framework for hopper research on a national and cooperative basis.

Information obtained from the workshop included:

- A brief review and discussion of hopper research projects and results to date;
- Overview of industry's current use, need and perceived benefits of hoppers in Australian prawn trawl fisheries;
- Identification and agreement of industry's research priorities and needs relevant to hoppers and bycatch in trawl fisheries;
- Agreement on the project's participants and roles, design and methodology, timeframes and communication/extension requirements for inclusion in a funding application to FRDC
- Commitment from workshop participants to continue their involvement and support for the project.

All workshop discussions and agreements were recorded and documented. This information was used to develop the draft FRDC funding application circulated for comment to all researchers. Comments were incorporated into a final application submitted to FRDC in December 2002.

## RESULTS/DISCUSSION

The delivery of this project has resulted in the following outputs:

- A one day workshop that brought together project stakeholders and successfully engaged them to develop a national hopper R&D strategy.
- Development of a supported, national and cooperative framework to undertake research on the effects of hoppers on bycatch survival and prawn quality in Australian trawl fisheries;
- An agreed and documented project funding proposal with full industry support submitted to FRDC for funding consideration.

The facilitated workshop proved to be an extremely successful approach to bringing together key industry and research stakeholders to work collaboratively on the development and implementation of a national R&D strategy for fisheries research in

Australia. All participants at the workshop appreciated the opportunity to attend this type of forum to develop a collaborative industry/researcher approach to address this issue.

## **BENEFITS**

Flow on benefits from this project will extend across all industry participants and researchers in Australia's prawn trawl fisheries due to the collaborative and co-operative process taken to bring key stakeholders together. This approach should ensure for the improved communication between fisheries using or having some application for hoppers and reduce duplication in both industry approaches and researcher focus.

## **FURTHER DEVELOPMENT**

The results from the project were incorporated into the funding application submitted to FRDC in December 2002. Based upon a review of the project, undertaken by the FRDC Board, a successful revised application has now been funded by FRDC titled 'Hoppers In Action: A handbook for fishers on the use of hoppers in Australian prawn trawl fisheries'.

This project will commence in July 2003 and achieve the following objectives:

1. Undertake a national and international literature review of existing knowledge and technology relevant to the use/research of hoppers and document and identify existing gaps.
2. Document, via a technical handbook, the use, design, practices associated with the existing use of hoppers across Australian prawn trawl fisheries.
3. Hold a technical workshop to facilitate the development of a technical handbook which overviews hopper technology, provides advice on improving operational practices, case studies existing developments and includes the results of the literature review.
4. Extend the handbook to fishers via a series of key port visits
5. Provide information to fishery and environmental managers and the general community on existing mechanisms used by industry to improve operational practices;
6. Provide guidance and advice to industry and fishery managers about R&D priorities relevant to improving and extending hopper use and technology within Australian prawn trawl fisheries.

A project officer will be appointed to co-ordinate this project and will work in close partnership with SeaNet officers to gather information and communicate the results for the project.

## **PLANNED OUTCOMES**

The objectives of this project have been fully met through the holding of the workshop to bring together key stakeholders to develop a national approach for hopper R&D and the development of a national project funding submission that has

been submitted to FRDC.

## **CONCLUSION**

The main objective, being the hosting of a collaborative industry/researcher workshop to scope the need and use of hoppers in Australia's prawn trawl fisheries, was successfully completed and resulted in a strong commitment from all stakeholders to support and continue their involvement in this national initiative.

Feedback received following the workshop supported that key project stakeholders from research and industry had been identified and brought together to develop this framework. In preparation for the workshop, all efforts were made to identify these key contacts and information resulting from the workshop was disseminated to all participants to ensure all participants were kept in touch with the ongoing development of this project.

It is considered that the independent and professional facilitation of this workshop assisted in achieving the objectives of the project and ensured that all workshop participants contributed to the development of a national framework.

As supported by the ongoing involvement of industry and researchers in the successful revised hopper application, 'hoppers in action', it is considered that this project is a positive first step to identify the role and value of hoppers in Australia's prawn trawl fisheries. Additionally, this project will assist to better identify how this technology can be further refined and developed to deliver on industry's identified needs of determining the qualitative benefits related to product quality and bycatch survival.