FRDC
FISHERIES RESEARCH & DEVELOPMENT CORPORATION

Australian Government
Department of Agriculture, Fisheries and Forestry
ABARES

Status of key Australian fish stocks reports and companion national fishery status reports

review of the 2012 reporting process and planning for future reports

M. Flood, I. Stobutzki, J. Andrews, C. Ashby, G. Begg, P. Butcher, W. Fletcher, C. Gardner, B. Gibson, K. Hartmann, P. Hone, P. Horvat, A. Moore, A. Roelofs, K. Sainsbury, T. Saunders, S. Sloan, T. Smith, B. Wise

December 2013

FRDC Project No **2012/513**

ISBN 978-1-74323-177-7

Status of key Australian fish stocks reports and companion national fishery status reports – review of the 2012 reporting process and planning for future reports

2012/513

2013

Researcher Contact Details

Name:
Address:

Phone:
Fax:
Email:

FRDC Contact Details

Address: 25 Geils Court
Deakin ACT 2600
Phone: 02 6285 0400
Fax: 02 6285 0499
Email: frdc@frdc.com.au
Web: www.frdc.com.au

Contents

Acknowledgments

This project was co-funded by the FRDC; the Australian Bureau of Agricultural and Resource Economics and Sciences; the Institute for Marine and Antarctic Studies, Tasmania; the Department of Primary Industries, New South Wales; the Department of Fisheries, Western Australia; the Department of Primary Industry and Fisheries, Northern Territory; the Department of Primary Industry, Victoria; the Department of Primary Industries and Regions, South Australia; the Department of Agriculture, Fisheries and Forestry, Queensland; and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Abbreviations

ABARES – Australian Bureau of Agricultural and Resource Economics and Sciences, of the Department of Agriculture

AFMF – Australian Fisheries Management Forum

CSIRO – Commonwealth Scientific and Industrial Research Organisation

ENGO – Environmental Non-Government Organisation

ESD – Ecologically Sustainable Development

FRDC – Fisheries Research and Development Corporation

SAFS – Status of key Australian fish stocks

Executive Summary

What the report is about

Stakeholder responses to the inaugural *Status of key Australian fish stocks (SAFS) reports 2012* demonstrated the positive value and impact of these reports. In order to build on the achievement of the SAFS reports 2012 and establish a sustainable long term approach it was critical that the reports and production process be evaluated and the next edition planned.

The current project built on the investment in the inaugural SAFS reports, facilitating feedback from end-users and those directly involved in the production process. Two SAFS Advisory Group workshops were held at FRDC in Canberra (31 July, and 21-22 October 2013)—the SAFS Advisory Group comprises heads of fisheries research agencies from all Australian jurisdictions with marine fisheries, FRDC and the CSIRO.

The workshops considered fisheries stakeholder feedback from industry representatives, environmental non-government organisations (ENGOs) and retailers; external peer reviewers of the 2012 reports; authors of the initial reports and the SAFS Advisory Group. In addition ABARES produced an options paper which directed discussion and agreement on updates to the SAFS national stock status classification framework for 2014. The workshops resulted in agreement on content and a process for producing a second edition of the SAFS reports in 2014. Production of the SAFS reports beyond 2014 and development of companion national fishery-level status reporting were also discussed.

Consultation during the project also resulted in the establishment of links between the SAFS Advisory Group, FRDC project 2013/204 '*Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries*' (PI: Emily Ogier) and FRDC project 2014/008 '*Fishery Status reports: health check for Australian fisheries*' (PI: Alistair Hobday).

Background

The inaugural SAFS reports were launched on 11 December 2012. The project was undertaken by ABARES in collaboration with the FRDC, government fisheries agencies across all Australian jurisdictions with marine fisheries and the CSIRO. The AFMF, involving the heads of fisheries management agencies from each Australian jurisdiction, endorsed the reports.

Most jurisdictions produce separate periodic status reports for their fisheries. However, differences in terminology and approach can make comparisons of stocks across jurisdictions difficult. The SAFS reports 2012 used a consistent national reporting framework to improve transparency and consistency across jurisdictions.

The 2012 reports—which incorporated data up to 2010—provided the first national assessments of the status of key wild capture Australian fish stocks, covering 49 key species (150 stocks in total). This represented more than 80 per cent of the value and 70 per cent of the catch volume of Australian wild capture fisheries.

It was envisaged that over time the scope of the SAFS reports would increase to incorporate more species, and that in the longer term, national fishery-wide reporting would be developed to consider other aspects of ecologically sustainable development (ESD), such as the effects of fishing on the marine environment, economic performance, governance and social issues.

Aims/objectives

1. To document the lessons learned from the production process used for the SAFS reports 2012
2. To develop a preliminary agreed process for production of the next edition of the SAFS reports
3. To develop a preliminary agreed process for production of companion reports building towards national fishery status reporting

Methodology

Collection of feedback

Advisory Group members gathered feedback from authors on perceived strengths and weaknesses of both the production process for the SAFS reports 2012, and the resulting product (i.e. the inaugural edition). The same feedback was sought from the Advisory Group members themselves.

ABARES sought the views of fisheries stakeholders (fishing industry, ENGOs and retailers), gauging their awareness of the reports, what they believed to be the strengths and weaknesses of the reports, and what they believed to be priority issues to be included in future editions.

ABARES also collated high level comments from the FRDC external reviewers of the SAFS reports 2012. In most cases these related to recommend changes to the species chapter reporting template.

Options paper – Status of key Australian fish stock reports national framework update

Following the first workshop ABARES produced this options paper to guide the Advisory Group in updating the classification framework for 2014 and beyond. This paper was presented at the second workshop in 2013.

Workshops

The two SAFS workshops held in 2013 focused on reviewing the lessons learned during the production of the inaugural edition of the SAFS reports, in part by evaluating the feedback outlined above. The workshops also focused on developing an agreed process of production for the SAFS reports 2014 and a strategic long- term plan for producing these reports into the future. In addition the Advisory Group discussed the potential for development of companion national fishery status reports.

Results/key findings

The SAFS Advisory Group agreed on how to progress with the production of the SAFS reports 2014 subject to resourcing. The Advisory Group agreed to seek support from FRDC to produce 2014 reports in a similar fashion to the 2012 reports, with the minor alterations to the national stock status classification framework and species template, and the addition of 18 new iconic and/or historically overfished species.

Advisory Group feedback compiled before the workshops highlighted the importance of more accurately estimating the budgetary requirements for producing future editions of the SAFS reports. As a result the budgetary figures in the full FRDC application for the 2014 reports will more accurately reflect in-kind contributions from all jurisdictions.

Feedback from Advisory Group members and fisheries stakeholders recommended that a number of aspects of the SAFS stock status classification framework and species chapter template be revisited. Based on this feedback and the ABARES options paper mentioned above, the SAFS Advisory Group has agreed that the classification framework for 2014 will be updated to include the category ‘environmentally limited’. This classification will be utilised for stocks that have been depleted by environmental factors that are not related to fishing. The Advisory Group has also agreed on a number of amendments to the 2014 species template that will help streamline the drafting process. These changes include presenting the main features section in table form, removal of the key performance indicator graph, and removal of the catch explanation text.

Feedback from the SAFS Advisory Group and external stakeholders highlighted the need to ensure the reports are more up to date at the time of release. As a result the Advisory Group has agreed to use 2013 data in the 2014 reports, reducing the data lag from two years (as in the SAFS reports 2012) to one year. This will be facilitated by moving the due date for first drafts back to July in 2014 to allow for 2013 data to be acquired and processed. The review processes have also been simplified to help improve efficiencies in the production process and ensure the reports can still be released within 2014 despite the

delay in first drafts.

The Advisory Group feedback highlighted the need for improved communication processes during production of future reports. They have agreed that ABARES will visit the authors in each jurisdiction at the commencement of the drafting process to run information/introductory workshops to provide and explain drafting materials, explain the drafting process and answer any questions the authors have regarding the project. It is envisaged that this initial contact will help improve the lines of communication throughout the drafting process.

It was agreed by the Advisory Group that the proposed 2014 project will also consider issues relating to the future of the reports (beyond 2014), including development of a system of equivalence across jurisdictions, the potential for periodic electronic updates (possibly using a Wikipedia type approach) and the identification of solutions to various technical challenges relating to data acquisition and the reporting platform. In addition, planning is also proposed for developmental work relating to companion national fishery status reports.

During the current project AFMF provided support for the development of the SAFS reports 2014 and clarified that future SAFS reports should continue reporting at the biological stock level where possible, noting there may be issues depending on the species involved.

Implications for relevant stakeholders

The end users of the SAFS reports are interested members of the public, policy makers, managers, fishers and seafood consumers. The potential impacts of producing these reports include: improved awareness of the sustainability of Australian fish stocks; better informing the buying patterns of Australian seafood consumers; better informing seafood chooser guides; and potentially increasing the demand in existing markets where stocks are found to have a healthy biomass and adequately controlled fishing pressure.

Recommendations

Feedback from stakeholders would suggest that the national reporting on the status of key Australian fish stocks should continue into the future and that effort should be made to incorporate reporting on fishery level environmental, economic, governance and social issues.

Keywords: Fishery status, fish stock, national, stock status

Introduction

The inaugural SAFS reports were launched on 11 December 2012. The project was undertaken by ABARES in collaboration with FRDC, government fisheries agencies across all Australian jurisdictions with marine fisheries and the CSIRO. The AFMF, involving the heads of fisheries management agencies from each Australian jurisdiction, endorsed the reports.

The 2012 reports provided the first national assessments of the status of key wild capture Australian fish stocks. They focused on 'biological stocks', where possible assessing the entire stock, independent of management boundaries. They covered 49 key species (150 stocks in total), representing more than 80 per cent of the value and 70 per cent of the catch of Australian wild capture fisheries. The reports contained data and information up to and including 2010. The SAFS reports 2012 used a consistent national reporting framework, developed collaboratively by fisheries scientists around Australia. The framework provided for scientifically robust assessments that improved transparency and consistency across jurisdictions.

Traditionally 'fishery status reports' have been produced by most jurisdictions, covering the key fish stocks they manage, and reporting on the effectiveness of their fisheries management. However, the format and type of stock status assessments vary, as does the terminology used to describe the status of stocks. This can make understanding stock status at a national level challenging. Also, some biological stocks of fish span more than one jurisdiction—in these cases, it can be difficult to understand the overall status of the shared biological stocks. Before the SAFS reports 2012 there was a need for a scientifically robust, simple tool to allow stakeholders (i.e. fishers, seafood consumers, managers, policy makers and the broader community) to make comparisons between the status of the key wild-caught fish stocks around Australia. This was one of the main drivers for production of these reports.

Drivers also included the Australian Government's State of the Environment Report 2011, which identified a need for this type of national reporting noting that a lack of a nationally integrated approach inhibits effective marine management.

> *Foremost among the many issues is the lack of an integrated national system for assessment and reporting of marine condition. Without an integrated and genuinely national system of multilevel governance for conservation and management, it will be difficult to properly maintain the natural wealth of our oceans in the face of the challenges ahead.*

The House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry report, Netting the benefits: Inquiry into the role of science for the future of fisheries and aquaculture (released November 2012) recommended that the Australian Government continue to publish a consolidated national stock status report in consultation with State and Territory governments.

Positive stakeholder responses to the release of the inaugural SAFS reports in 2012 demonstrated the value and impact of national fisheries reporting. In order to build on this and establish a strategic and sustainable long term approach to national reporting it was critical to review the production process and plan the next edition. The current project has been a critical step in the development of mechanisms needed to establish the reports as on-going and build towards the broader elements of national fisheries status reporting.

This project builds on the investment in the inaugural reports, facilitating feedback from end-users and those directly involved in production. It also provided a forum to facilitate agreement on a production processes for the second edition of the SAFS reports (planned for 2014). While the initial reports focused on target species, there is a longer term need to build reporting frameworks on fishery level issues relating to other aspects of ESD, such as the effects of fishing on the marine environment, economic performance, governance and social good. The current project also provided a forum to facilitate initial discussions relating to the development of companion national fishery status reports.

Complimentary projects with a national focus on fisheries include:
2013-204 ‘Meeting sustainability expectations: policy translation, objective setting and reporting for Australian fisheries’ (IMAS)
2014/008 ‘Fishery Status reports: health check for Australian fisheries’ (CSIRO)
2010/061 ‘Development of a national harvest strategy framework’ (PIRSA)
2013/023 ‘Develop a draft Australian Standard for responsible fishing on vessels to improve public perception of the commercial fishing industry’ (SSA)
2012/746 ‘Seafood CRC: preliminary investigation of internationally recognised responsible fisheries management certification’ (Sydney-Fish-Market)
2013/024 ‘Professionalising industry - NSW pilot’ (Oceanwatch)
2011/513 ‘Status of key Australian fish stocks reports’ (ABARES)
Review of the Commonwealth policy on fisheries bycatch (DAFF)
Review of the Commonwealth Harvest Strategy Policy (DAFF)
2010/046 ‘Improving the management of bycatch: development and testing of standards for the effective mitigation of bycatch in Commonwealth fisheries’ (ABARES)
2010/040 'National social objectives and indicators guide' (FRDC)

Objectives

4. To document the lessons learned from the production process used for the SAFS reports 2012

5. To develop a preliminary agreed process for production of the next edition of the SAFS reports

6. To develop a preliminary agreed process for production of companion reports building towards national fishery status reporting

Method

ABARES compiled feedback from: 1. those involved in production of the SAFS reports 2012, 2. fisheries stakeholders, and 3. reviewers of the first reports. This was presented for consideration at the SAFS 2013 workshops.

1. Feedback from the Advisory Group and authors of 2012 reports

SAFS Advisory Group members in each jurisdiction gathered feedback from authors of the initial SAFS reports, specifically:

- opinions on the production process for SAFS reports 2012 and on ways they felt the production process for future editions could be improved
- recommendations on how to update the species template for future editions
- recommendations on how to best include their feedback into planning for the next SAFS reports
- recommendations on how best to communicate with them during production of future editions of the SAFS reports.

Advisory Group members were requested to provide feedback from themselves and their authors to ABARES.

2. Feedback from fishing industry, ENGOs and retailers

ABARES undertook a targeted stakeholder review, circulating the following four questions to thirty fisheries stakeholders including fishing industry representatives, ENGOs and retailers.

- Were you aware of the release of the SAFS reports? If so, how?
- What are the positive aspects of the reports?
- Are there any areas for improvement that you can identify?
- What sustainability aspects should be a priority for future reports?

Seven responses were received, four from ENGOs, three from fishing industry and none from retailers.

Following the first workshop, on request of the SAFS Advisory Group, ABARES again requested this feedback from stakeholders. Five additional responses were received, two from retailers and a further three from fishing industry representatives. These additional responses were in agreement with feedback received prior to the first workshop.

3. Feedback from external reviewers of the SAFS reports 2012

ABARES compiled the recommendations received from external reviewers, including suggestions of potential changes to the species chapter template used in the SAFS reports 2012.

4. SAFS Advisory Group workshop 1 – 31 July 2013

The Agenda for this workshop is included as appendix 3.

On the 31 July 2013 the SAFS Advisory Group met at FRDC in Canberra to commence the process of reviewing the SAFS reports 2012 and planning for a second edition.

Attendance included:

- The SAFS Advisory Group
    a. Comprising heads of fisheries research agencies from all Australian jurisdictions and representatives from FRDC, CSIRO and AFMA
    b. Sean Sloan (PIRSA – fisheries manager)
    c. Keith Sainsbury (fisheries consultant)
- Emily Ogier (2013/204 'Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries')
- Steve Kenelly (2013/233 'Benchmarking Australia's national status reporting system')
- Lisa Pope and Jennifer Ovenden (to provide advice on how to improve knowledge of biological stock delineation)

#NB: It is anticipated that project 2013/204 will play an important role in the development of classification frameworks for additional aspects of ESD to be included in future companion national fishery status reports.

Prior to the workshop ABARES circulated:

- The initial FRDC EOI for production of the SAFS reports 2012
- The list of species included in the SAFS reports 2012
- The FRDC draft final report for SAFS reports 2012 (FRDC project No. 2011/513), including:
    - the methodology used to produce the first edition of the SAFS reports
    - some of the lessons learned through the inaugural process
    - the aims of the SAFS Advisory Group workshop's in 2013
    - the stock status terminology used in the SAFS reports 2012
    - the species template used in the SAFS reports 2012
    - recommended stock status language used for the SAFS reports 2012

With respect to the SAFS reports this workshop aimed:

- to review the production process used to generate the first edition of the SAFS reports, what worked and what could be done better
- to review the longevity of the project and the potential for future funding, including reviewing the costing structure used to produce the first SAFS reports
- to review recommendations received from external reviewers and other stakeholders; including suggestions of potential changes to the species chapter template used in the 2012 SAFS reports.
- to review the classification framework used in the 2012 reports. Specifically considering:
    - the potential development of a nationally agreed target reference point for assessment of stock status
    - the criteria for classifying stocks as overfished
    - the provision of clearer rationale for classifying stocks as undefined
- to decide whether to update the SAFS reports species template for the next edition—based on

reviewer and stakeholder feedback, and on the potential incorporation of a target reference point—or whether to make no changes for the next edition and develop a new template for edition three.

- to commence work to update the original SAFS reports species template based on reviewer and stakeholder feedback; and on incorporation of a target reference point (if required for edition 2).
- to decide on timing of the second edition of the SAFS reports and commence the development of an agreed production process and draft timeline for production.
- to commence discussions to identify research requirements (and identify the potential for future research) to properly classify stocks listed as undefined in the 2012 SAFS reports.
- to commence discussions to identify research requirements (and identify the potential for future research) to determine the delineation of biological stocks where management unit or jurisdiction level reporting was used in the 2012 SAFS reports.
- to decide on species to be included in next edition of the SAFS reports, and revisit the criteria used to include species/stocks.
- to discuss mechanisms that may be put in place to help ensure more current data can be used in the second edition.
- to examine the feasibility of adding new species chapters to the SAFS reports and updating current species chapters with new data between editions using the current framework and reporting layout.

With respect to the development of companion national fishery status reports the workshop aimed:

- to consider the potential timing for the first edition of the companion national fishery status reports and potentially commence work on the develop an agreed 'production process' and draft timeline for production.
- to potentially commence work on the development of a reporting template for future companion national fishery status reports.
- to commence discussions to identify which additional aspects of ESD of fisheries to add to companion national fishery status reports, i.e. broader ecosystem impacts of fishing, economic performance, governance and/or social good.
- to commence discussions to decide on an appropriate way to establish advisory groups for development of classification frameworks for broader ecosystem impacts of fishing, economic performance, governance and/or social good.

Following workshop 1 ABARES produced an agreed outcomes, actions and decisions required document which was provided to all workshop participants (Appendix 4).

5. SAFS Advisory Group workshop 2 – 21 and 22 October 2013

The Agenda for this workshop is included as appendix 5.

The first workshop raised several issues that required further consultation. The second workshop was required to resolve many of these outstanding issues and allow the SAFS Advisory Group to move forward with planning for production of the second edition of the SAFS reports.

To facilitate resolution of issues relating to the SAFS national stock status classification framework ABARES produced an options paper outlining potential framework updates. This was circulated to the Advisory Group before the second workshop.

Attendance included:

- The SAFS Advisory Group
    a. Comprising heads of fisheries research agencies from all Australian jurisdictions and representatives from FRDC, CSIRO and AFMA
    b. Sean Sloan (PIRSA – fisheries manager)
- Emily Ogier (2013/204 'Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries')
- Alistair Hobday (2014/008 'Fishery Status reports: health check for Australian fisheries')
- Jennifer Ovenden (to provide advice on how to improve knowledge of biological stock delineation)

#NB: If funding is secured for the proposed project 2013/204, it is anticipated the project will play an important role in developing reporting templates for additional aspects of ESD required for producing companion national fishery status reports.

Prior to the workshop ABARES circulated:

- The updated EOI for the SAFS reports 2014 and beyond
- An updated species template for review by Advisory Group
- The FRDC EOI for the Fishery status reports: health-check for Australian fisheries

Following workshop 2 ABARES produced an agreed outcomes and actions document which was provided to all workshop participants (Appendix 6). Attachments to this document include:

- The options paper for the potential changes to the SAFS national classification framework, with the inclusion of agreements from the SAFS Advisory Group in workshop 2
- An example of the Advisory Group's preferred tabular layout for the main features section of the species template
- A letter from Dr Lisa Pope and Dr Jennifer Ovenden to FRDC regarding stock structure explanations in the SAFS reports 2012
- The EOI for the proposed project to define biological stocks for SAFS reports (Dr Jennifer Ovenden)
- The SAFS Advisory Group's Species selection list for SAFS 2014
- Alistair Hobday's presentation for the proposed Fishery status reports: health-check for Australian fisheries.

6. Follow up from workshops

In addition to *agreed outcomes, actions and decisions required* documents, ABARES:

- Provided a draft timeline for the proposed *SAFS reports 2014 and beyond* project to the SAFS Advisory Group
- Have commenced updating the species chapter template and the SAFS national stock status classification framework. These will be finalised early in the new year (2014) pending funding approval for production of the SAFS reports 2014. The template will be circulated to both the SAFS Advisory Group and key fisheries stakeholders for comment before chapter drafting commences.

Results, Discussion and Conclusion

To a large extent the results, discussion and conclusions for this project are documented in the *agreed outcomes, actions and decisions required* documents (Appendices 4 and 6, plus accompanying attachments) from the 2013 SAFS planning and review workshops. These documents include the results of discussions relating to the feedback listed below from Advisory Group members and authors, stakeholders and external reviewers.

This section provides brief summaries where required and directs readers to more in depth appendix documentation. Information is also provided for work / decisions made since the workshops.

In brief, the SAFS Advisory Group agreed on how to progress with the production of the SAFS reports 2014, subject to resourcing. The Advisory Group agreed to seek support from FRDC to produce 2014 reports in a similar fashion to the 2012 reports.

The key outcomes/decisions from the 2013 SAFS project include:

- Budgetary figures for the full FRDC application for the 2014 reports will now more accurately reflect in-kind contributions from all jurisdictions.
- The SAFS national classification framework for 2014 will be updated to include the category 'environmentally limited', defined for the purposes of classification as being stocks that have been depleted by environmental factors that are not related to fishing.
- The 2014 species chapter template will be updated to help streamline the drafting process. Agreed changes include presenting the main features section in table form, removal of the key performance indicator graph, and removal of the catch explanation text.
- The 2014 reports will include 18 new iconic and/or historically overfished species.
- The 2014 reports will include data up to 2013, reducing the data lag from two years (as in the SAFS reports 2012) to one year. This will be facilitated by moving the due date for first drafts back to July in 2014 to allow for 2013 data to be acquired and processed.
- The review processes have also been simplified to help improve efficiencies in the production process and ensure the reports can still be released within 2014 despite the delay in first drafts.
- ABARES will visit the authors in each jurisdiction at the commencement of the drafting process to run information/introductory workshops to provide and explain drafting materials, explain the drafting process and answer any questions the authors have regarding the project.
- The proposed 2014 project will also consider issues relating to the future of the reports (beyond 2014), including development of a system of equivalence across jurisdictions, the potential for periodic electronic updates (possibly using a Wikipedia type approach) and the identification of solutions to various technical challenges relating to data acquisition and the reporting platform. In addition, planning is also proposed for developmental work relating to companion national fishery status reports.

1. Feedback from the Advisory Group and authors of 2012 reports

The following feedback was provided before the workshops in 2013:

1	Funding was inadequate for work required to produce the inaugural reports. In-kind was around 75-80% from all jurisdictions.
2	Some jurisdictions could have potential resourcing issues when producing the second edition of the SAFS reports.
3	Queries were raised by Advisory Group members regarding the substantial number of undefined stocks in the inaugural reports: – Should classification of stocks with negligible catch be removed? – Do we need sub-classifications to further clarify undefined stocks?
4	Concerns were raised regarding appropriateness of language for the intended audience.
5	Concerns were raised regarding the criteria for stock classification, specifically the need for evidence of biomass improvement before a stock can be moved from the overfished to transitional-recovering category.
6	Concerns were raised that the setting of a national target reference point across all jurisdictions would not be achievable.
7	It would be worthwhile re-visiting some of the terminology used in the inaugural reports.
8	It is important to try and use more recent data in future reports.
9	Mechanisms for communication with all staff during the production process need to be revisited.

2. Feedback from fishing industry, ENGOs and retailers

The following table lists the questions ABARES circulated to key stakeholders and the range of responses received:

Q1	Were you aware of the release of the SAFS reports? If so, how?
	Respondents were made aware of the reports' release through media statements and fishing industry bodies
Q2	What are the positive aspects of the reports?
	Respondents were supportive of: – the national approach taken to reporting – attempts to develop national terminology and benchmarks – cross-jurisdictional nature of the reports – the collaboration of fisheries scientists and managers across all jurisdictions
Q3	Are there any areas for improvement that you can identify?

	Areas of improvement for future reports include: – the timing of the release of the reports and age of data – the inclusion of more species that consumers are likely to connect with – further discussion and potential amendment of the use of the term 'sustainable' was raised by one stakeholder – concerns were raised regarding the use of the two transitional classification categories instead of explicitly categorising these as either 'subject to overfishing' or 'overfished'
Q4	What sustainability aspects should be a priority for future reports?
	Respondents indicated that ecosystem aspects such as bycatch and environmental effects of fishing should be a priority for inclusion in companion nation fishery status reports

3. Feedback from external reviewers of the SAFS reports 2012

During the FRDC review process most concerns raised by the peer reviewers were addressed. However, there were a number of high level issues, relating to the "species chapter template" that were left for discussion at the SAFS review/future planning workshops. These issues are listed below:

1	Is it possible to build into the species template an indication of confidence in the stock status determinations?
2	Some reviewers would like maps improved to show fishing intensity/ areas of peak catches.
3	Some reviewers thought that within the 'main features and statistics section' management measures should be outlined separately for each jurisdiction/management unit and stock.
4	The reviewers believe there is a need to consider consistency in terminology when referring to boats, vessels, fishers, operators and licences.
5	The reviewers believe it may be useful to mention main markets of commercial catch.
6	Some reviewers felt the use of stacked bar graphs to present commercial catch information was a poor way of presenting data unless presented at the stock level. Presenting at the management unit or jurisdiction level hides any stock-specific patterns.
7	For 'effects of fishing on the marine environment' and 'environmental effects on the target species' sections reviewers thought it might be worth breaking these sections up by stock/management unit/jurisdiction.
8	Reviewers also felt that information from relevant fisheries observer programs may be worthwhile including.
9	The reviewers indicated that the template (and instructions to authors) didn't appear to contemplate the assessment of groups of species e.g. Balmain Bugs.

4. SAFS Advisory Group workshop 1 – 31 July 2013

The agreed outcomes, actions and decisions required from workshop 1 are documented in full in appendix 4. Appendix 4 also contains the following additional attachments:

- Attachment 1: FRDC's (Crispian Ashby's) presentation on related national reporting initiatives, outlining FRDC's current national priorities for fisheries and aquaculture.
- Attachment 2: Emily Ogier's introductory presentation to the SAFS Advisory Group on the FRDC project 'Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries'. Emily outlined how this project and the SAFS project are linked.
- Attachment 3: Presentation by Dr Jennifer Ovenden on ways that her team could use genetic techniques to assist with better defining biological stock boundaries for species included in the SAFS reports.

5. SAFS Advisory Group workshop 2 – 21 and 22 October 2013

The agreed outcomes and actions from workshop 2 are documented in full in appendix 6. Appendix 6 also contains the following additional attachments:

- Attachment 1: The options paper for the potential changes to the SAFS national classification framework, with agreements reached by the Advisory Group in workshop 2
- Attachment 2: An example of the Advisory Group's preferred tabular layout for the main features section of the Species template
- Attachment 3: A letter from Dr Lisa Pope and Dr Jennifer Ovenden to FRDC regarding stock structure explanations in the SAFS reports 2012
- Attachment 4: The EOI for the proposed project defining biological stocks for the SAFS reports (Dr Jennifer Ovenden)
- Attachment 5: The SAFS Advisory Group's species selection list for SAFS 2014
- Attachment 6: Alistair Hobday's presentation for the proposed Fishery status reports: health-check for Australian fisheries.

6. Follow up from workshops

Following the SAFS workshops ABARES produced a draft timeline for production of the SAFS reports 2014 and circulated this for comment to the Advisory Group.

In addition to the species chapter template amendments agreed upon at the 2013 SAFS Advisory Group workshops ABARES recommend to the Advisory Group removing the 'catch explanation' text that was provided in 2012 to explain the catch graphs in each species chapter. Many authors struggled with this text in 2012, especially given the frequent need for cross jurisdictional interpretation. ABARES believed that removal would help simplify the species chapter template and make it easier for jurisdictions to populate. In most cases if anomalies in the catch data were important to status determination these were already mentioned in the 'stock status' text. The Advisory Group agreed to the removal of this text but requested that the template be altered to reflect the need to reference the catch graph (where appropriate) in the stock status text section.

The workshops in 2013 resulted in a number of agreed changes to the species template and national stock status classification framework. ABARES was asked to incorporate these amendments and provide the template and classification framework to the Advisory Group for one round of comments. ABARES is currently working on these.

During the current project ABARES also provided two SAFS briefings to AFMF (at AFMF meetings 29 and 30 – May and November 2013). AFMF provided support for the development of the SAFS reports 2014 at both meetings and indicated that they would continue to engage with the SAFS Advisory Group representatives from their jurisdictions. In November AFMF clarified that future SAFS reports should continue reporting at the biological stock level where possible, noting there may be issues depending on the species involved. This advice was provided in response to a SAFS Advisory Group request to AFMF for guidance on whether future SAFS reports (beyond 2014) should continue reporting at the biological stock level where possible, or at the management unit level.

In addition, at the May 2013 meeting AFMF provided support for the future development and production of companion national fishery status reports dealing with additional aspects of ESD, to be reported on at the fishery level.

Implications

The agreements reached during the current project directly impact the content and presentation of information in the proposed SAFS reports 2014. The agreements also impact the production process for these reports. If funding is secured for the second edition these reports will be released in December 2014.

The end users of the SAFS reports 2014 will be interested members of the public, policy makers, managers, fishers and seafood consumers.

The potential impacts of releasing the SAFS reports 2014 will be to: 1) improve awareness of the sustainability of Australian fish stocks; 2) better inform the buying patterns of Australian seafood consumers; 3) better inform seafood chooser guides; and 4) potentially increase the demand in existing markets where stocks are found to have a healthy biomass and adequately controlled fishing pressure. Presumably this could improve the popularity of these species with consumers.

Recommendations

The SAFS Advisory Group recommends production of the second edition of the SAFS reports in 2014. The Advisory Group proposes production of reports that are similar to the 2012 product, with minor alterations to the national stock status classification framework and species template, and addition of 18 new species chapters. The project will consider issues relating to the future of the reports, development of a system of equivalence across jurisdictions, the potential for periodic electronic updates and the identification of solutions to various technical challenges relating to data acquisition and the reporting platform.

Further development

Where they have not already been completed ABARES and the SAFS Advisory Group will work through the action items agreed upon at the SAFS workshops, see appendices 4 and 6.

Extension and Adoption

The outputs and outcomes of this project directly relate to planning for future editions of the SAFS reports. The decisions made during the workshops, outlined above, directly impact on production of the next edition of the SAFS reports. As a result, end users are likely to be confined to those directly involved in production of the reports and external stakeholders with an interest in the classification framework / terminology, species template and species chosen for the second edition.

SAFS Advisory Group and authors for 2014

ABARES and the SAFS Advisory Group will work together to finalise changes to the national stock status classification framework and species chapter template. If funding is secured for producing the next edition of the SAFS reports in 2014, ABARES will travel to each jurisdiction to provide authors with all materials required to undertake drafting, to explain the production process and provide answers to any questions authors may have on these issues.

Key fisheries stakeholders

The national stock status classification framework and species chapter template will be provided to fisheries stakeholders for comment early in 2014.

Project coverage

This section is not applicable at present. Project coverage will be more important in relation to the SAFS reports 2014.

Project materials developed

Materials developed include:

- Agreed outcomes, actions and decisions required from workshop 1 (appendix 4).
- Agreed outcomes and actions from workshop 2 (appendix 6).
- Options paper – Status of key Australian fish stocks reports national classification framework update (attachment 1 of appendix 6).
- Draft timeline for production of the SAFS reports 2014 (circulated to Advisory Group)

Appendix 1: SAFS Advisory Group

Status of key Australian fish stocks reports Advisory Group (alphabetical):

- Dr James Andrews, Department of Primary Industries, Victoria
- Mr Crispian Ashby, Fisheries Research and Development Corporation
- Professor Gavin Begg, South Australian Research and Development Institute
- Dr Paul Butcher, Department of Primary Industries, New South Wales
- Dr Rick Fletcher, Department of Fisheries, Western Australia
- Dr Matthew Flood, Australian Bureau of Agricultural and Resource Economics and Sciences
- Dr Caleb Gardner, Institute for Marine and Antarctic Studies, Tasmania
- Ms Beth Gibson, Australian Fisheries Management Authority
- Dr Klaas Hartmann, Institute for Marine and Antarctic Studies, Tasmania
- Dr Patrick Hone, Fisheries Research and Development Corporation
- Mr Peter Horvat, Fisheries Research and Development Corporation
- Mr Andy Moore, Australian Bureau of Agricultural and Resource Economics and Sciences
- Mr Anthony Roelofs, Department of Agriculture, Fisheries and Forestry, Queensland
- Professor Keith Sainsbury, Fisheries Research and Development Corporation
- Dr Thor Saunders, Department of Primary Industry and Fisheries, Northern Territory
- Mr Sean Sloan, Department of Primary Industries and Regions, South Australia
- Dr Tony Smith, Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Dr John Stewart, Department of Primary Industries, New South Wales
- Dr Ilona Stobutzki, Australian Bureau of Agricultural and Resource Economics and Sciences
- Mr Brent Wise, Department of Fisheries, Western Australia

Appendix 2: Intellectual property

The research contained in this report is for the public domain.

Appendix 3: Agenda – workshop 1

Status of key Australian fish stocks reports – review/planning workshop	**Location:** FRDC, 25 Geils Court, Deakin
Facilitating Agency: ABARES Fisheries and Quantitative Sciences	**Date:** 31 July 2013

Time: 9:00 am – 5:00 pm
Chair: Dr Ilona Stobutzki, First Assistant Secretary Fisheries and Quantitative Sciences

AGENDA

Workshop Objective

- review lessons-learned from the production process used for the SAFS 2012
- develop an agreed process for production of SAFS 2014 reports and a strategic long- term legacy
- develop a process for production of companion reports building towards national fishery status reporting process

1. **Introduction and welcome**
   - *Workshop objectives* – Dr Ilona Stobutzki, ABARES
2. **Jurisdictional updates** *(5 minutes/jurisdiction)*
   - Roundtable State and Territory Status Reports updates
     - uptake of the SAFS framework and key jurisdictional drivers
     - human resourcing potential
3. **Associated national fishery reporting initiatives**
   - Crispian Ashby – related national reporting initiatives
   - Emily Ogier – 'Meeting sustainability expectations'

11:00 – 11:30 MORNING TEA

4. **Feedback regarding SAFS 2012 (production process and final product)**
   - ABARES to present and discuss summaries of feedback received from 1. the Advisory Group and SAFS authors, 2. other fisheries stakeholders (fishing industry, ENGOs and retailers) and 3. high level feedback from FRDC peer reviewers
     - positive aspects of the production process
     - areas for improvement
     - longevity and future funding
     - Dr Jennifer Ovenden to provide input on biological stock delineation
5. **SAFS 2012 reporting frameworks and updates for future reports**
   - Discussion on potentially updating reporting frameworks and the species template relating to:
     - initial selection of species / stocks included in reports
     - inclusion of more species
     - incorporating more up-to-date data into the reports
     - developing a nationally agreed target reference point
     - assessing criteria for classifying stocks as overfished and uncertain

1:00 – 2:00 LUNCH

6. **Discussion on process for producing SAFS 2014**
   - Timing of next edition
   - Agreed production process, responsibilities etc
   - Timeline for production

- Refinement of EOI and development of full FRDC application

7. Developing companion national fishery status reports frameworks

- jurisdictional approaches to fisheries Ecologically Sustainable Development (ESD) reporting (roundtable)
- priority aspects of fisheries ESD for companion reports (e.g. bycatch, ecosystem impacts)
- development of classification frameworks for additional aspects of ESD
- establishment of Advisory Group/s for ESD classification frameworks
- Emily Ogier – 'Meeting sustainability expectations' project – development of classification frameworks

4:00 – 4:30 AFTERNOON TEA

8. Review of agreed outcomes

Appendix 4: Agreed outcomes, actions and decisions required, workshop 1

Status of Key Australian Fish Stocks Reports – Review/Planning Workshop 1

31 July 2013

Canberra, FRDC Conference Centre

Agreed Outcomes, Actions and Decisions Required

Attendee list: Ilona Stobutzki (ABARES), Crispian Ashby (FRDC), Gavin Begg (SARDI), Peter Horvat (FRDC), Matt Flood (ABARES), Justin Roach (ABARES), Andy Moore (ABARES), Thor Saunders (NT DoR), Carolyn Stewardson (FRDC), Emily Ogier (Tas IMAS), Anthony Roelofs (QLD DAFF), Peter Kind (QLD DAFF), Lisa Pope (UQ), Jennifer Ovenden (UQ), Tony Smith (CSIRO), Sean Sloan (PIRSA), Keith Sainsbury (consultant), Caleb Gardner (Tas IMAS), Brent Wise (WA Fisheries), Rick Fletcher (WA Fisheries), Steve Kennelly (consultant), James Andrews (DPI VIC), James Woodhams (ABARES), Beth Gibson (AFMA)

Apologies: Patrick Hone (FRDC), Alistair Hobday (CSIRO), Bryan McDonald (NT DoR), Tim Ward (SARDI), John Stewart (NSW)

Agreed outcomes

Agreed: A proper clearance process, like that used for the first edition, is still required for SAFS reporting
Agreed: Specific national target reference points will not be pursued for the SAFS reports 2014
Agreed: Species from SAFS reports 2012 will be retained; extra iconic species, species that can be included without much extra work, and historically overfished stocks will be added
Agreed: To continue reporting on all Australian stocks for each species included in the SAFS reports
Agreed: Advisory Group to better instruct SAFS authors on how to determine stock status and to provide authors with adequate drafting time
Agreed: To clarify that a future classification framework could include a risk based (weight-of-evidence) approach for assessing low catch stocks
Agreed: That no additional confidence indicators will be included in SAFS reports 2014
Agreed: That maps in their current form are adequate
Agreed: To provide management measures for each jurisdiction, management unit and stock in the 'main features and statistics section'
Agreed: Information on both domestic and export markets will be provided in the main features section where possible
Agreed: That graphs in their current form are adequate
Agreed: The template will not be changed to specifically accommodate chapters assessing groups of species (e.g. Balmain Bugs); these chapters should be dealt with on a case by case basis
Agreed: To develop companion National Fishery Status Reports as a strand of work to be maintained during the SAFS project, noting interactions (and the need for alignment) with other projects.

Actions arising

Action: Seek more in depth stakeholder responses to the SAFS reports 2012 and circulate these responses to state / territory governments
Action: Ask fishery stakeholders how they use information from SAFS reports

Action: Consider developing processes for periodic status updates of individual stocks (e.g. half yearly)
Action: ABARES to seek input from AFMF on whether the SAFS reports should continue reporting (by preference) at the biological stock level or move instead to management unit level reporting wherever possible.
Action: ABARES to draft options paper with possible changes to the SAFS classification framework
Action: Advisory Group to provide examples of how to deal with environmentally limited stocks
Action: ABARES to recirculate past workshops' notes dealing with environmentally limited stocks
Action: Test changes to classification framework with stakeholders (industry, ENGOs, retailers, consumers) before adopting an updated classification framework
Action: ABARES to collate a list of potential additional SAFS species recommended by the jurisdictions
Action: ABARES to provide the agreed additional species list to ENGOs for comment / further recommendations
Action: ABARES to address the inclusion of risk based assessments in the options paper for restructuring the national SAFS classification framework
Action: ABARES to compile a list outlining when all jurisdictional data will be available and when the next jurisdictional reports are scheduled for release
Action: ABARES to meet with FRDC to clarify their desire for periodic updates to individual stock status classifications
Action: Update the species template to incorporate information on management measures at the jurisdiction / management unit or stock level
Action: ABARES to produce relevant issues papers to assist the Advisory Group in finalising the decisions from this first workshop
Action: ABARES to organise a second SAFS workshop
Action: Advisory Group to include a small amount of developmental work for the National Fishery Status Reports (National fishery ESD reporting) in future project proposals for SAFS reporting
Action: Invite SEWPaC representative to attend Advisory Group meetings dealing with ESD reporting
Action: ABARES to circulate an 'agreed outcomes, actions and decisions required' document from this workshop and issues papers already outlined above

Decisions required – issues 'parked' at this workshop

Decision required: To retain a national reporting framework, or consider using a less nationally aligned but simpler compilation process of jurisdictional fisheries reporting information.
Decision required: Change to web based periodic updates or retain the current system of updating the entire edition (all stocks) at one time
Decision required: Advisory Group to consider ABARES options paper on classification framework changes and come to a consensus on the classification framework
Decision required: Advisory Group to agree on full list of species to include in SAFS reports 2014
Decision required: Whether to retain the 'effects of fishing on the marine environment' heading and to clarify what information to include in the 'effects of fishing on the marine environment' and 'environmental effects on target species' sections

Jurisdictional updates

Each State/Territory provided a brief update on their jurisdictional fishery/stock status reports, outlining their level uptake of the SAFS national reporting framework and human resourcing potential for future editions.

Victoria

- There has been some uptake of the SAFS reporting framework for smaller finfish fisheries species but not as much for larger non-fin fish fisheries species. The smaller fisheries have been easier to align with SAFS than the larger ones where pre-existing management plans already specify performance indicators.
- Research staff numbers have halved since production of the SAFS reports 2012.
- Victoria cannot commit to production of the SAFS reports every year. They are also likely to struggle to produce SAFS reports in 2014 if major changes or updates are introduced.

Western Australia

- Western Australia has not incorporated the SAFS reporting terminology in their reports as they believe the terminology is inaccurate.
- Western Australia are currently going through Marine Stewardship Council (MSC) pre-assessment of all fisheries. They indicated that the SAFS framework doesn't adequately align with the MSC framework, Western Australian fisheries management or Western Australian fisheries legislation. Hence, closer alignment would be required between the SAFS framework and the Western Australian framework for them to be involved in the future.
- Western Australia has committed most resources to completing MSC pre-assessments and therefore has limited capacity to undertake another SAFS process. This is especially the case if the misalignment between the national and Western Australian reporting frameworks is not dealt with.

Tasmania

- Tasmania restructured their assessments to align with the SAFS framework where possible.
- Issues exist where there are pre-existing management plans for a fishery as they often have existing performance measures that don't align easily with SAFS.
- Tasmania is focused on moving towards biomass and fishing mortality (or proxy) based assessments. However, the new focus on limit reference points requires large amount of change to existing reporting.
- Tasmania has had some human resource reductions however the production of the next edition of the SAFS reports should not be a problem.

Queensland

- There have been substantial reductions in the fisheries staff in Queensland. Capacity is currently about half what it was during drafting of the SAFS reports 2012.
- Queensland could only resource a biennial approach to producing the SAFS reports.
- Queensland have begun to align their reports with the SAFS reporting framework and envisage aligning them completely over time.
- Queensland highlighted the importance of more in depth stakeholder responses to the SAFS reports 2012. They require verification that the reports are useful to stakeholders in order to convince their state government that resourcing future editions should be a priority.

Northern Territory

- The Northern Territory have similar staffing levels to those during the SAFS project, though there may be resourcing issues in the future.
- The Northern Territory are working towards adopting the SAFS reporting framework for their jurisdictional reports. However, they indicated that better dovetailing of the two reporting frameworks is required. They are currently assessing how the SAFS stock-based approach can fit with their current fisheries approach to reporting.
- The Northern Territory support the inclusion of more species in the next edition of the reports.

South Australia

- South Australia's staffing capacity has not changed significantly since the production of the SAFS reports 2012. However, their financial commitment during the first edition was significantly underestimated.
- South Australia is adopting the SAFS reporting terminology but are aligning the reports more closely with fishery management units than with biological stocks.
- South Australia would consider a biennial approach to the SAFS reports.
- South Australia wants to ensure there is alignment between their reports and the SAFS reports.

- 2006 was last stock status reports for South Australia.
- Stakeholder feedback in South Australia indicated that the transitional stock categories were easy to communicate to government and fisheries management.
- South Australia aims to communicate details of management and all aspects of ESD to the public.

Commonwealth

- ABARES is now finalising production of the 2012 Commonwealth Fishery Status Reports.
- The Commonwealth reports at the fishery level. The reports remain different in structure and content from the SAFS reports. However, results from the Commonwealth Fishery Status Reports can easily be translated across to the SAFS framework. Details are provided in the Commonwealth reports to facilitate this translation.
- 27 of the 95 stocks in the Fishery Status Reports are also covered in the SAFS reports.
- ABARES resourcing is being cut, there is expected to be an 18% loss of capacity.
- AFMA have indicated that their main reference will remain the Commonwealth Fishery Status Reports given the SAFS reports currently cover too few of the Commonwealth species.

New South Wales

- New South Wales were not represented at the workshop
- Ilona Stobutzki indicated that ABARES have sought feedback from New South Wales. John Stewart has indicated that there is limited scope for resourcing production of the next edition.

Action: Seek more in depth stakeholder responses to the SAFS reports 2012 and circulate these responses to state / territory governments

Presentations on associated national fishery reporting initiatives

- FRDC (Crispian Ashby) presented on related national reporting initiatives, outlining FRDC's current national priorities for fisheries and aquaculture (Attachment 1).
- Emily Ogier introduced the FRDC project 'Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries' and outlined how this project and the SAFS project are linked (Attachment 2).
- Jennifer Ovenden outlined ways that her team could use genetic techniques to assist with better defining biological stock boundaries for species included in the SAFS reports (Attachment 3).

Feedback regarding SAFS 2012 (production process and final product)

- ABARES presented summaries of feedback:
    1. Advisory Group and SAFS reports 2012 authors,
    2. Fisheries stakeholders (fishing industry, ENGOs and retailers)
    3. High level feedback from FRDC peer reviewers
- Below are summary tables outlining the feedback. Feedback is discussed under heading four.

SUMMARY OF FEEDBACK FROM ADVISORY GROUP MEMBERS AND SAFS AUTHORS

1	Some Advisory Group members indicated that funding was inadequate for work required to produce the inaugural reports. In-kind was around 75-80% from all jurisdictions.
2	A number of Advisory Group members have indicated that their jurisdictions could have potential resourcing issues when producing the second edition of the SAFS reports.
3	Queries were raised by Advisory Group members regarding the substantial number of undefined stocks in the inaugural reports:

	– Should classification of stocks with negligible catch be removed? – Do we need sub-classifications to further clarify undefined stocks?
4	Advisory Group members raised concerns regarding appropriateness of language for the intended audience.
5	Some Advisory Group members raised concerns regarding the criteria for stock classification, specifically the need for evidence of biomass improvement before a stock can be moved from the overfished to transitional-recovering category.
6	Advisory Group members have concerns that the setting of a national target reference point across all jurisdictions would not be achievable.
7	A number of Advisory Group members believe it would be worthwhile re-visiting some of the terminology used in the inaugural reports.
8	Advisory Group members believe it is important to try and use more recent data in future reports.
9	Mechanisms for communication with all staff during the production process need to be revisited.

SUMMARY OF FEEDBACK FROM FISHERIES STAKEHOLDERS

ABARES circulated the four questions shown in the table below to thirty fisheries stakeholders including fishing industry representatives, Environmental Non Government Organisations (ENGOs) and retailers. Seven responses were received, four from ENGOs, three from fishing industry and none from retailers. The Advisory Group has requested that retailers be asked again for feedback.

1	**Question 1:** Were you aware of the release of the SAFS reports? If so, how?
	Respondents were made aware of the reports' release through media statements and fishing industry bodies
2	**Question 2:** What are the positive aspects of the reports?
	Respondents were supportive of: – the national approach taken to reporting – attempts to develop national terminology and benchmarks – cross-jurisdictional nature of the reports – the collaboration of fisheries scientists and managers across all jurisdictions
3	**Question 3:** Are there any areas for improvement that you can identify?
	Areas of improvement for future reports include: – the timing of the release of the reports and age of data – the inclusion of more species that consumers are likely to connect with – further discussion and potential amendment of the use of the term 'sustainable' was raised by one stakeholder – concerns were raised regarding the use of the two transitionary classification categories instead of explicitly categorising these as either 'subject to overfishing' or 'overfished'
4	**Question 4:** What sustainability aspects should be a priority for future reports?
	Respondents indicated that ecosystem aspects such as bycatch and environmental effects of fishing should be a priority for inclusion in companion nation fishery status reports

SUMMARY OF HIGH LEVEL FEEDBACK FROM FRDC PEER REVIEWERS

During the FRDC review process most concerns raised by the peer reviewers were addressed. However, there were a number of high level issues, relating to the species template that were left for discussion at this workshop. For responses of the Advisory Group to these issues see text under heading four.

1	Is it possible to build into the species template an indication of confidence in the stock status determinations?
2	Some reviewers would like maps improved to show fishing intensity/ areas of peak catches.
3	Some reviewers thought that within the 'main features and statistics section' management measures should be outlined separately for each jurisdiction/management unit and stock.
4	The reviewers believe there is a need to consider consistency in terminology when referring to boats, vessels, fishers, operators and licences.
5	The reviewers believe it may be useful to mention main markets of commercial catch.
6	Some reviewers felt the use of stacked bar graphs to present commercial catch information was a

	poor way of presenting data unless presented at the stock level. Presenting at the management unit or jurisdiction level hides any stock-specific patterns.
7	For 'effects of fishing on the marine environment' and 'environmental effects on the target species' sections reviewers thought it might be worth breaking these sections up by stock/management unit/jurisdiction.
8	Reviewers also felt that information from relevant fisheries observer programs may be worthwhile including.
9	The reviewers indicated that the template (and instructions to authors) didn't appear to contemplate the assessment of groups of species e.g. Balmain Bugs.

Advisory Group discussions on: feedback, the intent of the reports, the production process and updates to the national framework and species template

REVISITING THE PURPOSE OF THE SAFS REPORTS

Keith Sainsbury – consultant

- Keith indicated that the original purposes were to:
    1. make sure information was more easily available from around the country
    2. identify places where fisheries management wasn't crash hot
- Keith acknowledged that reporting around Australia was good in some places and poor in others and that we need to avoid the mismatch of information that is currently out there. The fact that Coles and Woolworths both use different ways to assess fisheries is an issue for fishers. Their processes are quite different, which can cause confusion. The Status of key Australian fish stocks and potential National Fishery Status reports should displace some of this confusion. These government reports should help provide information to clear up issues in cases where Coles / Woolworths / AMCS and others have provide assessments based on inaccurate information.

Additional comments from Advisory Group members:

- It was also acknowledged that groups such as Coles and Woolworths use jurisdictional reports and the SAFS reports as key information sources for their assessments.
- The importance of getting feedback from a more comprehensive list of stakeholders was highlighted. Advisory Group members requested that a survey be conducted to determine how information in the SAFS reports is used by key stakeholders. Stakeholders should include retailers (Coles, Woolworth), AMCS, WWF, traffic, sustainable fisheries partnership etc.

Action: Ask fishery stakeholders how they use information from SAFS reports

CONFORMING TO A NATIONAL FRAMEWORK OR COMPILATION EXERCISE

- The question was posed of whether the SAFS reports should be a compilation exercise or a nationally consistent set of reports based on a national reporting framework.
- It was acknowledged that assessments based on a single national reporting framework require restructuring of jurisdictional assessments, resulting in more work than a compilation exercise.
- In contrast, a simple compilation exercise should require no rewriting, instead the relevant parts of the jurisdictional reports should slot directly into the SAFS reports. It was acknowledged however that this approach would be likely to result in misalignment of information from different jurisdictions and potential confusion for the audience.
- It was suggested by some Advisory Group members that staying with the national framework (i.e. not a compilation exercise) would require updating the national framework to better reflect the requirements under all jurisdictional legislation.
- The Advisory Group made no formal decision about whether to continue reporting against a national framework or whether to discard the national framework in favour of a more basic compilation exercise. However, conversations following on from this focused on ways of improving the national framework. Whilst this would suggest that the Advisory group are in favour of continuing to use a national framework

(pending agreement on revisions/updates) clarification needs to be sought from the Advisory Group at the next workshop.

Decision required: To retain a national reporting framework, or consider using a less nationally aligned but simpler compilation process of jurisdictional fisheries reporting information.

DELIVERY FORMAT REVISITED

- FRDC would like to move away from a paper version of the SAFS reports and move to a purely web based approach. They would like the **www.fish.gov** website to be restructured to allow querying by species, individual stock, jurisdiction and year that data represent. Using this structure, each stock status assessment in each chapter could be updated in isolation from all others.
- It was acknowledged that a simple periodic update system was required for longevity of the reports, and that a system similar to that used by the USA (NOAA) would be useful. The USA update their assessments whenever new data become available (http://www.nmfs.noaa.gov/sfa/statusoffisheries/).
- Some concerns were raised regarding the process that would be required for periodic updating. Concerns related to the development effective processes for drafting and reviewing the documents.
- There was debate around the need for a peer review process and whether the FRDC process could truly be considered a peer review. Regardless of the validity of the FRDC peer review there was general agreement that the reports would need to be cleared by a designated clearing house before they could be uploaded to the website.

Agreed: A proper clearance process, like that used for the first edition, is still required for SAFS reporting

Action: Consider developing processes for periodic status updates of individual stocks (e.g. half yearly)

Decision required: Change to web based periodic updates or retain the current system of updating the entire edition (all stocks) at one time

REPORTING ON BIOLOGICAL STOCKS VS FISHERIES MANAGEMENT UNITS

- Some jurisdictions indicated that whilst they are supportive of better defining the delineation of biological stocks, the requirement to complete assessments at the biological stock level (where possible) may not always be appropriate. For some species they believe it will be easier to carry out the assessments at the management unit level. In addition they indicated that it will be easier to align assessments at the management unit level with assessments of other aspects of Ecologically Sustainable Development (ESD) at the fishery level.
- Clarification was provided by ABARES that the SAFS reports are envisaged to be a separate document from potential companion National Fishery Status Reports. This specifically deals with the lack of alignment between fisheries and biological stocks. There was general consensus among Advisory Group members (with some exceptions) that stock status reporting is most appropriate at the biological stock level, while reporting on most other aspects of ESD is most appropriate at the management unit and jurisdiction level.
- The majority of Advisory Group members believed that the biological stock was the most appropriate unit of assessment, expressing a desire to continue reporting at that level wherever possible in the SAFS reports.
- As a compromise some Advisory Group members recommended a removal of the requirement to move from management unit reporting to biological stock level reporting as biological stock boundaries become better described. They requested that if it is easier and financially more efficient to continue assessing a species at the level of management unit this should occur.
- It was also recommended that the Advisory Group ensure that the introduction clearly articulates the fact that there is a hierarchical structure of assessments (i.e. that one stock may be fished by multiple management units, or that one management unit could contain multiple stocks).
- Concerns were raised that providing assessments in this hierarchical structure could be even more confusing for the general public.
- It was then suggested that the Advisory Group request AFMF to provide input into the decision about whether to retain the goal of completing assessments at the biological stock level or move to management units.

- A separate concern was that assessments at the biological stock level are not straight forward in cases where a 'stock' is actually a compilation of a number of similar species which are not / cannot be differentiated in catch and effort records (i.e. a basket stock). However, it was highlighted that this can be dealt with on a case by case basis by, for example, assessing only the most vulnerable species from the list of species caught in a given basket stock.

Action: ABARES to seek input from AFMF on whether the SAFS reports should continue reporting (by preference) at the biological stock level or move instead to management unit level reporting wherever possible.

REVISITING THE NATIONAL FRAMEWORK AND TERMINOLOGY

Advisory Group members were each asked to comment on whether they felt the current national SAFS framework and terminology should be changed, and if so what changes were needed.

Victoria

- Victoria is not supportive of making changes to the SAFS framework and terminology.
- Victoria believes that a consistent benchmarking system is required, and that this is delivered by the current framework and terminology.
- They stressed that so much effort was put into the first framework and that we should avoid changing it if possible.
- Victoria stressed that if stakeholders are asked for feedback on the appropriateness of the framework, specific stakeholder biases should be taken into account in interpreting feedback.

Queensland

- Queensland feels that there was a lot of work put into the initial framework and recommend not changing it at this point in time.
- Queensland is already transitioning their jurisdictional report language to align with the SAFS reports, building language around the issue of biomass.
- Queensland indicated the importance of convergence on terminology across jurisdictions.

Northern Territory

- The Northern Territory feels that definitions are currently easy to understand.
- They would prefer not to make changes at this point in time but acknowledge that there may be a need to improve the definition of 'undefined' stocks.

South Australia

- South Australia is reasonably comfortable with the definitions arrived at for the first edition.
- However, they believe that the recruitment overfished benchmark for 'sustainable stocks' is probably too low (based on feedback received from South Australian fisheries stakeholders).

South Australia

- South Australia is working towards adopting the SAFS framework and terminology and hence would like to avoid changing the structure too much.
- However, they have identified that the 'sustainable stock' category is not compatible with development of harvest strategies. The word 'sustainable' indicates that managers do not need to be more conservative in cases where conservatism is required. For example when a stock is only slightly above the limit reference point of recruitment overfished.
- South Australia are also grappling with how to define stocks that are depleted by causes other than fishing (e.g. climate change). The South Australian classification system previously had a separate category for these stocks, they were termed 'environmentally limited'. While South Australia now believes this term may not be appropriate (based on stakeholder feedback), they indicated the

importance of having a way of differentiating between stocks that are depleted by fishing compared with stocks depleted by other factors.

CSIRO

- Agrees that setting the bar for 'sustainable stocks' so low is an issue.
- Recommended the use of the colour orange for 'transitional–recovering' classification and yellow for 'transitional–depleting' to reflect that it is worse to have a depleted stock that is recovering than a stock that is being depleted but is not yet overfished.

Western Australia

- While Western Australia originally agreed with the SAFS reports 2012 terminology they have since identified a lack of alignment between the SAFS classifications 'overfished' and 'transitional–recovering' and the fisheries objectives of Western Australia and the MSC.
- Western Australia indicated that this lack of alignment could be rectified by altering the SAFS definitions so that adequate management measures would be enough to move a stock from the 'overfished' to 'transitional–recovering' classification. This would remove the need for evidence of measurable improvements in stock biomass (i.e. it would require the removal of the words 'and recovery is occurring' from the transitional–recovering category definition).
- Western Australia also noted that the current classification system did not include the option for stocks to be depleted for environmental reasons, not because of overfishing.

Consultant

- Indicated that the framework was a reasonable start but he recommended adding categories of evidence for each classification. This is discussed in more detail below, under the heading 'high level feedback from FRDC peer reviewers'.
- Believes there is an issue with the terminology 'sustainable stock'. For stocks that are only just over the limit reference point the term 'sustainable' is inappropriate.
- Recommends subdividing the 'sustainable stock' green classification into two categories, one for stocks just above the limit reference point and one for stocks that are likely to be somewhere closer to a target reference point.
- Indicated along with others that there is no need for a specific national target reference point at this point in time even if the 'sustainable stock' category is split in two. It is important to know that a stock is significantly above the limit reference point, not that you are at or above a specific national target.
- Indicated that in a number of jurisdictions harvest strategies and management plans are now being drafted under the incorrect assumption that being above the limit reference point is okay when managers should be aiming to ensure that biomass is closer to the target level.
- Disagreed that there was a misalignment between the SAFS definitions and the Marine Stewardship Council.
- In contrast with Western Australia's request to remove the requirement for evidence that a stock is recovering before it is moved to from 'overfished' to 'transitional–recovering', it was suggested that a threshold level of recovery should be achieved before a stock could be moved out of the 'overfished' classification.
- Indicated that if moving a stock from the 'overfished' category to the 'transitional–recovering' category could not pass the 'laugh test' then the change in classification should not be made.

General notes from subsequent round table discussion

- Of particular concern for a number of Advisory Group members was the proposed removal of the requirement for proof of biomass improvement before moving a stock from the 'overfished' to 'transitional–recovering' category. Some members feel that stakeholders may view this as an attempt by government to make it possible to move stocks that should be classified as 'overfished' out of the 'overfished' category.

- Credibility issues and potential audience confusion resulting from changes to the national SAFS classification framework were raised by a number of Advisory Group members. There was no agreement within the group about how these changes were likely to be accepted by stakeholders.
- Hence, it was recommended that following sign off by the Advisory Group on a revised national classification framework a survey of stakeholder acceptance should be undertaken. This survey would assess:
    - Stakeholder acceptance of the revised classification framework (terminology, definitions etc)
    - More general stakeholder acceptance of changes having been made (regardless of what the changes were)
- Advisory Group members agreed that stocks depleted for reasons other than overfishing are not adequately dealt with in current framework. A number of solutions were posed including:
    - splitting 'overfished stocks' into two separate categories, 'overfished' and something like 'environmentally limited' stocks.
    - Changing the term 'overfished' to 'depleted' to reflect depletion not caused by fishing.
    - Altering the terminology used to describe the limit reference point from 'recruitment overfished' to something like 'recruitment impaired'
    - Making no change to the framework and instead removing from the reports any stocks that are depleted from non-fisheries causes.
- The Advisory Group did not come to any agreement on how to change the national classification framework to address all of the concerns and recommendations listed above. Instead ABARES were asked to produce an options paper for discussion at the next workshop.

Action: ABARES to draft options paper with possible changes to the SAFS classification framework

Action: Advisory Group to provide examples of how to deal with environmentally limited stocks

Action: ABARES to recirculate past workshops' notes dealing with environmentally limited stocks

Action: Test changes to classification framework with stakeholders (industry, ENGOs, retailers, consumers) before adopting an updated classification framework

Agreed: Specific national target reference points will not be pursued for the SAFS reports 2014

Decision required: Advisory Group to consider ABARES options paper on classification framework changes and come to a consensus on the classification framework

INITIAL SPECIES AND STOCK SELECTION

Addition of new species

- FRDC have a preference for increasing the number of species addressed in the SAFS reports rather than developing the National Fishery Status Reports at the current time. They recommended selecting easy species to add to the reports as a starting point and concentrating on identifying species that Australian consumers are likely to see. Additions should include species / stocks that already possess good assessments of biomass and fishing mortality and single jurisdictional stocks where stock status is known.
- The Advisory Group discussed various ways to choose additional species to add to the SAFS reports. The final decision was to retain the species included in the first set of reports (based on value and catch volume) and to add extra iconic species nominated by the jurisdictions; specifically species that people are likely to see on their plate or in the fish shop.
- The Advisory Group also agreed to consider the addition of species that have been historically overfished.
- It was highlighted that the Advisory Group should seek input from stakeholders on the species list before commencing production.

Agreed: Species from SAFS reports 2012 will be retained; extra iconic species, species that can be included without much extra work, and historically overfished stocks will be added

Action: ABARES to collate a list of potential additional SAFS species recommended by the jurisdictions

Action: ABARES to provide the agreed additional species list to ENGOs for comment / further recommendations

Decision required: Advisory Group to agree on full list of species to include in SAFS reports 2014

Removal of Stocks

- For the SAFS reports 2012 it was decided that for species included all Australian stocks of that species should be reported on.
- In light of the number of undefined stocks in the first edition the Advisory Group considered whether there was a need to adjust this criteria, allowing for the removal of low volume stocks. However, the group decided against this. Since the workshop Western Australia have indicated that they still do not agree with retaining all stocks for each species.
- It was highlighted that the general public would feel mislead if they could catch a fish in an area but that area was not addressed in the reports. It was also pointed out that low catch volume or being considered bycatch does not necessarily equate with being unimportant.
- The Advisory Group decided to retain the objective of reporting on all stocks for each species included in the reports. There was concern over the number of 'undefined stocks' resulting from the decision to report on all stocks for each species in the 2012 reports. To deal with this the Advisory Group decided to focus on using a risk assessment / weight of evidence approach to moving stocks out of the undefined classification.
- It was agreed that a risk based approach could be applied to currently undefined stocks, requiring a change in the current classification criteria to allow this type of assessment to be undertaken.
- One reason for stocks being classified as 'undefined' was that some authors were not adequately informed of how to complete stock status assessments. It appears that some authors were uncertain of how to do this and therefore defaulted to classifying stocks as undefined.
- The Advisory Group agreed that authors should be given more time to complete stock status assessments and more assistance in understanding what is required.

Agreed: To continue reporting on all Australian stocks for each species included in the SAFS reports

Agreed: Advisory Group to better instruct SAFS authors on how to determine stock status and to provide authors with adequate drafting time

Agreed: To clarify that a future classification framework could include a risk based (weight-of-evidence) approach for assessing low catch stocks

Action: ABARES to address the inclusion of risk based assessments in the options paper for restructuring the national SAFS classification framework

USE OF MORE UP TO DATE DATA

- Advisory Group members were asked whether more recent data could be provided in future editions of the SAFS reports.
- Victoria and Tasmania could not provide more up to date data for many of their stocks as they do not enter data into their data bases until it is needed for jurisdictional reporting.
- Queensland and Western Australia enter data at least once a year so can provide more up-to-date data.
- The major issue with providing more up-to-date information in the SAFS reports relates to the misalignment of jurisdictional reporting.
- The Advisory Group indicated that they would need a better idea of when data and jurisdictional reports would be available before deciding on when to start drafting the next reports.
- FRDC expressed their desire for this work to be presented online with periodic updating when data becomes available.
- There was some concern that real time updates to parts of the reports will cause difficulties in adequately resourcing the project and may jeopardise the review process.

- It was suggested that the reports were likely to drop off the radar if there were no clear timelines.

Action: ABARES to compile a list outlining when all jurisdictional data will be available and when the next jurisdictional reports are scheduled for release

Action: ABARES to meet with FRDC to clarify their desire for periodic updates to individual stock status classifications

HIGH LEVEL FEEDBACK FROM FRDC PEER REVIEWERS

Is it possible to build into the species template an indication of confidence in the stock status determinations?

- Keith Sainsbury suggesting that the reports would be enhanced by this categorisation. This already occurs in some jurisdictions (e.g. the NSW 5 tier framework) with categories differentiating between quantitative, semi-quantitative and qualitative stock status assessments.
- One main problem with the current stock status classification system is that it attempts to cram lots of scenarios into a limited number of classification categories. Providing an indication of confidence in status determinations would help circumvent this issue. Keith suggested keeping the classification system simple, with only 4 or 5 categories.
- The majority of jurisdictions were not interested in adding this aspect to the next edition of the SAFS reports. It was felt that that the 'undefined' category adequately deals with this issue; where too much uncertainty exists a stock should be classified as 'undefined'.
- There was general agreement that splitting the 'sustainable stock' into two categories would adequately provide an indication of assessment confidence. It was highlighted that readers could go back to full stock assessments for full details of the stock status assessment's confidence.

Agreed: That no additional confidence indicators will be included in SAFS reports 2014

Some reviewers would like maps improved to show fishing intensity/ areas of peak catches

Agreed: That maps in their current form are adequate

Some reviewers thought that within the 'main features and statistics section' management measures should be outlined separately for each jurisdiction/management unit and stock

Agreed: To provide management measures for each jurisdiction, management unit and stock in the 'main features and statistics section'

Action: Update the species template to incorporate information on management measures at the jurisdiction / management unit or stock level

There is a need to consider consistency in terminology when referring to boats, vessels, fishers, operators and licences

The aim within the SAFS reports 2012 was to report 'vessel number'. This aim was not changed as a result of discussions at this workshop.

It may be useful to mention main markets of commercial catch

Agreed: Information on both domestic and export markets will be provided in the main features section where possible

Some reviewers felt the use of stacked bar graphs to present commercial catch information was a poor way of presenting data unless presented at the stock level. Presenting at the management unit or jurisdiction level hides any stock-specific patterns

Agreed: That graphs in their current form are adequate

For 'effects of fishing on the marine environment' and 'environmental effects on the target species' sections it might be worth breaking these sections up by stock/management unit/jurisdiction

It was acknowledged that these issues would be dealt with in more detail in National Fishery Status Reports. The Advisory Group was asked by some members to consider removing the 'effects of fishing on the marine environment' section as this aligns better with National Fishery Status Reports. Others recommended not removing this until the National Fishery Status Reports are produced.

This issue was not resolved at the workshop.

Decision required: Whether to retain the 'effects of fishing on the marine environment' heading and to clarify what information to include in the 'effects of fishing on the marine environment' and 'environmental effects on target species' sections

Information from relevant fisheries observer programs may be worthwhile including

This was considered by the Advisory Group to be part of the previous point.

The template (and instructions to authors) didn't appear to contemplate the assessment of groups of species e.g. Balmain Bugs

Agreed: The template will not be changed to specifically accommodate chapters assessing groups of species (e.g. Balmain Bugs); these chapters should be dealt with on a case by case basis

TIMING OF NEXT REPORTS

- The Advisory Group indicated that given the large number of unfinalised decisions stemming from the current workshop it would not be possible to clarify the timing of the next SAFS reports.

Action: ABARES to produce relevant issues papers to assist the Advisory Group in finalising the decisions from this first workshop

Action: ABARES to organise a second SAFS workshop

DEVELOPING COMPANION NATIONAL FISHERY STATUS REPORTS / FRAMEWORKS

- ABARES informed the Advisory Group that an EOI has submitted to FRDC for the SAFS reports 2014 project. The EOI included proposed work to commence the development of companion National Fishery Status Reports reporting frameworks.
- ABARES relayed AFMF's decision that bycatch and other environmental impacts of fishing would be the first two issues developed for inclusion in the companion National Fishery Status Reports. Reporting on economics and social issues will be addressed at a later stage.
- Tony Smith briefly introduced Alistair Hobday's EOI to FRDC for a fisheries 'health check'. The proposed work would be similar to work that has been done by Alistair on climate change. The 'health check' is envisaged to include multiple aspects of fisheries ESD reporting including economic and social indicators. Tony indicated that if both the health check and National Fishery Status Reports go forward it will be important to ensure the projects are properly linked.

The Advisory Group members were asked whether performance measures for bycatch and environmental effects had been developed for their jurisdictions.

Western Australia

In Western Australia this reporting is completed using a risk assessment approach. Where risk is identified annual monitoring and reporting is completed at the fishery or bioregion level. Where risk is low no annual monitoring is undertaken.

- Western Australia agreed that the environmental aspects of ESD should be the first aspects reported on.
- Western Australia indicated that they do not believe there is a need for another framework. It is more important to simply ensure that reporting is occurring.
- Western Australia recommended that the Advisory Group make some initial choices about what to report on, starting with main issues such as dolphins, turtles and whales.

Victoria

- Victoria complete this type of reporting for rock lobster but not for the fin fish species.

Tasmania

- This type of reporting is completed for some fisheries and not others.

Queensland

- Queensland previously produced some performance reporting at the fishery level but have now lost their observer program.
- Queensland plan to re-examine previous observer data to identify issues for future assessment.
- In Queensland there are very few risk assessments conducted from a WTO perspective (unlike the Commonwealth and Western Australia).
- Queensland agreed that priorities must be identified for what to report on.
- Current resourcing restrictions would not allow Queensland's effective participation in National ESD reporting at this time.

Northern Territory

- Northern Territory uses an ecological risk assessment (ERA) process.
- Northern Territory is currently considering redoing a number of ERAs.
- The Northern Territory feels that having a risk assessment framework for companion National Fishery Status Reports would be a good idea.

South Australia

- South Australia don't foresee companion National Fishery Status Reports being produced in the near future.
- South Australia indicated that a framework for bycatch sustainability would be the most appropriate aspect of ESD reporting to commence with.
- In South Australia assessments vary from fishery to fishery based on requirements (e.g. WTO), finance etc.
- South Australia believes that reporting on bycatch is going to be a big job.
- South Australia is waiting to see the outcomes of the Commonwealth bycatch policy before they move forward with bycatch reporting in their jurisdictional fishery status reports.

General notes from subsequent round table discussion

- The Advisory Group indicated that the current focus should remain on production the SAFS reports. However, it was agreed that in the longer term a focus on ESD reporting will be important.
- A number of jurisdictions are waiting on the release of the Commonwealth Bycatch Policy. They are interested in examining the advice contained within this policy before further developing jurisdictional reporting and commencing work on national reporting.
- Given that groups such as AMCS provided information on bycatch it was acknowledged that government has a responsibility to provide information on this too. It was stressed that government can't fully demonstrate sustainability without including fishery level ESD issues.
- It was acknowledged that government reporting may be unable to change the views of bloggers, news papers, ENGOs etc. However, it was stressed that it is government's role to inform these groups.
- The Advisory Group acknowledged that bycatch reporting will be more difficult to standardise than the target species reporting in the SAFS reports. It was also acknowledged that there are currently a lack of data in many fisheries for making assessments of bycatch.

- It was suggested that the aim at present should simply be to start moving in the direction of bycatch reporting.
- A staged approach was recommended for achieving this level of reporting, which could be achieved by maintaining a strand of work on National ESD reporting throughout the SAFS project.
- ABARES confirmed that what was proposed in the EOI is a staged approach beginning with the development of the required reporting frameworks.
- Keith Sainsbury indicated that this process is revisiting the National ESD reporting framework (http://www.fisheries-esd.com/c/implement/implement0200.cfm). He indicated that the National ESD reporting framework was designed to allow information to be pulled together easily across jurisdictions.
- A number of Advisory Group members indicated that SEWPaC should be in the room for discussions about these environmental frameworks.
- It was recommended that the Advisory Group start by reporting on threatened, endangered and protected (TEP) species.
- The Hawke Review of the EPBC Act may help outline issues that should be included in reporting.
- In summary the Advisory Group believed that there is value in having a structure for work to develop companion National Fishery Status Reports. The National ESD framework is a good starting point for this. The Advisory Group should be led by the Commonwealth Bycatch Policy and current practices of the jurisdictions in the development of ESD reporting frameworks.

Agreed: To develop companion National Fishery Status Reports as a strand of work to be maintained during the SAFS project, noting interactions (and the need for alignment) with other projects.

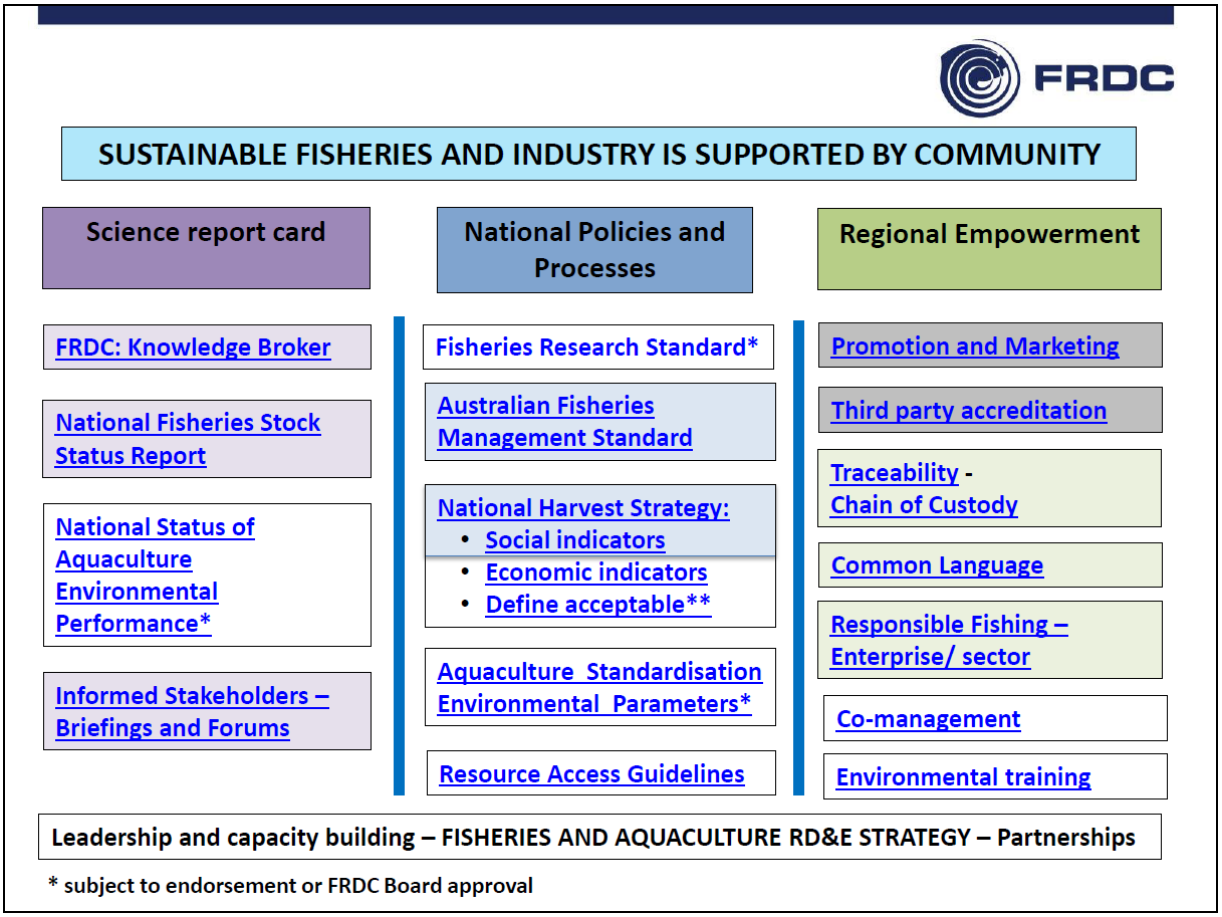
Action: Advisory Group to include a small amount of developmental work for the National Fishery Status Reports (National fishery ESD reporting) in future project proposals for SAFS reporting

Action: Invite SEWPaC representative to attend Advisory Group meetings dealing with ESD reporting

SUMMING UP THE MEETING

Action: ABARES to circulate an 'agreed outcomes, actions and decisions required' document from this workshop and issues papers already outlined above

Attachment 1: FRDC's (Crispian Ashby's) presentation on related national reporting initiatives, outlining FRDC's current national priorities for fisheries and aquaculture.


FRDC
SUSTAINABLE FISHERIES AND INDUSTRY IS SUPPORTED BY COMMUNITY
Science report card
National Policies and Processes
Regional Empowerment
FRDC: Knowledge Broker
National Fisheries Stock Status Report
National Status of Aquaculture Environmental Performance*
Informed Stakeholders – Briefings and Forums
Fisheries Research Standard*
Australian Fisheries Management Standard
National Harvest Strategy:
• Social indicators
• Economic indicators
• Define acceptable**
Aquaculture Standardisation Environmental Parameters*
Resource Access Guidelines
Promotion and Marketing
Third party accreditation
Traceability - Chain of Custody
Common Language
Responsible Fishing – Enterprise/ sector
Co-management
Environmental training
Leadership and capacity building – FISHERIES AND AQUACULTURE RD&E STRATEGY – Partnerships
* subject to endorsement or FRDC Board approval

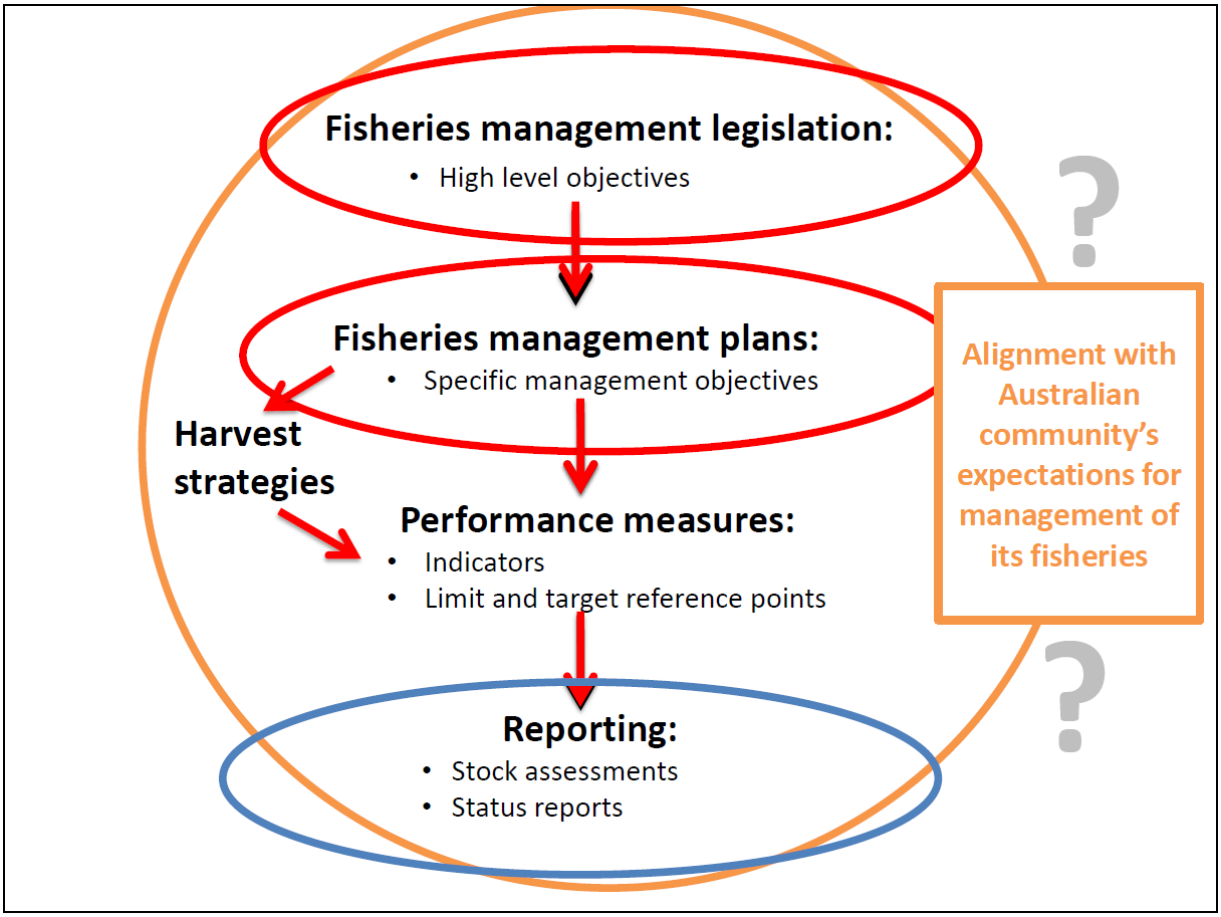
Website – current website

Concept developed over three months

Loaded in seven days

Not ideal approach, as it had some issues...

Attachment 2: Emily Ogier's introductory presentation to the SAFS Advisory Group on the FRDC project 'Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries'. Emily outlined how this project and the SAFS project are linked.


Fisheries management legislation:
• High level objectives
Fisheries management plans:
• Specific management objectives
Harvest strategies
Performance measures:
• Indicators
• Limit and target reference points
Reporting:
• Stock assessments
• Status reports
?
Alignment with Australian community's expectations for management of its fisheries
?

We already know…

High level of variation in:

- Inclusion and types of social (& economic) objectives and indicators across jurisdictions (FRDC 2010/040)
- Weightings different jurisdictions attribute to various social, economic and ecological objectives (FRDC 2010/040 & 2009/073)
- Extent to which high level social, economic and ecological management objectives are translated into specific operational objectives and associated performance measures (FRDC 2013/204)

We've been told…

Effective process for developing a common reporting framework for the ESD performance of fisheries needs to:

- Build on existing reporting of fisheries ESD performance
- Maximise the alignment and articulation of any new reporting metrics with existing fisheries legislative and management objectives and with broad social expectations for management of Australian fisheries

FRDC 2013/204 Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries

Need: To ensure that the Australian community's expectations for the management of its fisheries are adequately and consistently reflected and accounted for throughout governance processes.

Aim: To optimise the opportunity presented by Australian fisheries governance to demonstrate sustainability of Australian fisheries.

Who: Emily Ogier (IMAS), Caleb Gardner (IMAS), Julia Jabour (IMAS), Matthew Flood (ABARES), Sean Sloan (PIRSA)

translatingnatureintoknowledge

Relevance to SAFS?

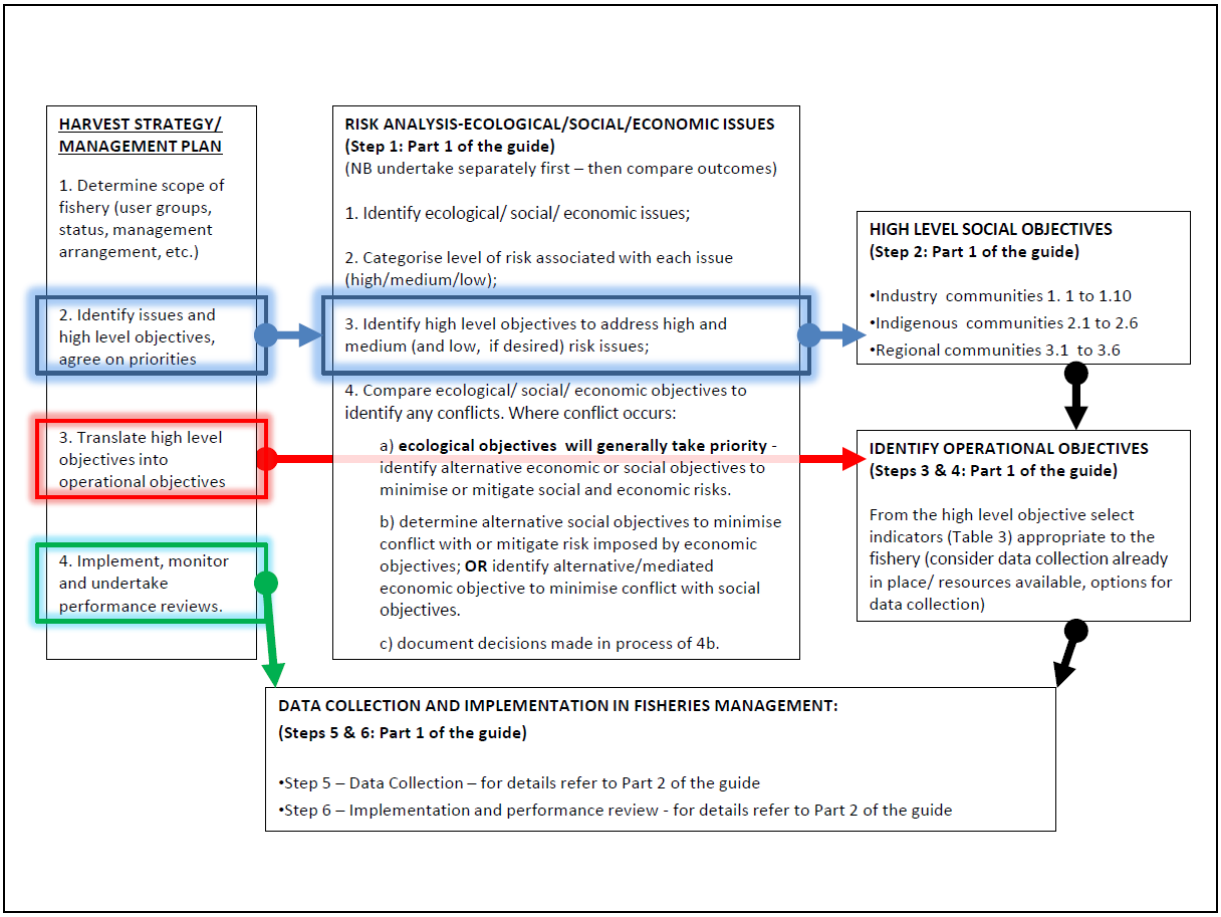
Review and analysis of legislative and management objective hierarchies and performance measures for all fisheries included in the 2014 report.

Review to:

1. "Map" fisheries governance arrangements for key fisheries and by jurisdiction
2. Identify commonalities, divergences and gaps in objectives (all types), performance measures, and benchmarks
3. Identify level of alignment with wider community goals for fisheries (as identified by FRDC 2012/301 Let's Talk Fish)
4. Make recommendations for further development of common reporting frameworks for ESD components, based on above

Social & economic objectives

- Many social & economic benefits arise from fisheries
- Social benefits are directly affected by fisheries management
- Social & economic objectives are a core part of the ESD management framework (i.e. Industry/Indigenous/Regional Community Wellbeing)
- Reporting performance of fisheries against social & economic objectives needs to highlight dependency on and primacy of ecological/biological objectives
- FRDC 2010/040 *Developing & testing social objectives & indicators* – useful findings


HARVEST STRATEGY/ MANAGEMENT PLAN
1. Determine scope of fishery (user groups, status, management arrangement, etc.)
2. Identify issues and high level objectives, agree on priorities
3. Translate high level objectives into operational objectives
4. Implement, monitor and undertake performance reviews.
RISK ANALYSIS-ECOLOGICAL/SOCIAL/ECONOMIC ISSUES (Step 1: Part 1 of the guide)
(NB undertake separately first – then compare outcomes)
1. Identify ecological/ social/ economic issues;
2. Categorise level of risk associated with each issue (high/medium/low);
3. Identify high level objectives to address high and medium (and low, if desired) risk issues;
4. Compare ecological/ social/ economic objectives to identify any conflicts. Where conflict occurs:
a) ecological objectives will generally take priority - identify alternative economic or social objectives to minimise or mitigate social and economic risks.
b) determine alternative social objectives to minimise conflict with or mitigate risk imposed by economic objectives; OR identify alternative/mediated economic objective to minimise conflict with social objectives.
c) document decisions made in process of 4b.
HIGH LEVEL SOCIAL OBJECTIVES (Step 2: Part 1 of the guide)
•Industry communities 1. 1 to 1.10
•Indigenous communities 2.1 to 2.6
•Regional communities 3.1 to 3.6
IDENTIFY OPERATIONAL OBJECTIVES (Steps 3 & 4: Part 1 of the guide)
From the high level objective select indicators (Table 3) appropriate to the fishery (consider data collection already in place/ resources available, options for data collection)
DATA COLLECTION AND IMPLEMENTATION IN FISHERIES MANAGEMENT: (Steps 5 & 6: Part 1 of the guide)
•Step 5 – Data Collection – for details refer to Part 2 of the guide
•Step 6 – Implementation and performance review - for details refer to Part 2 of the guide

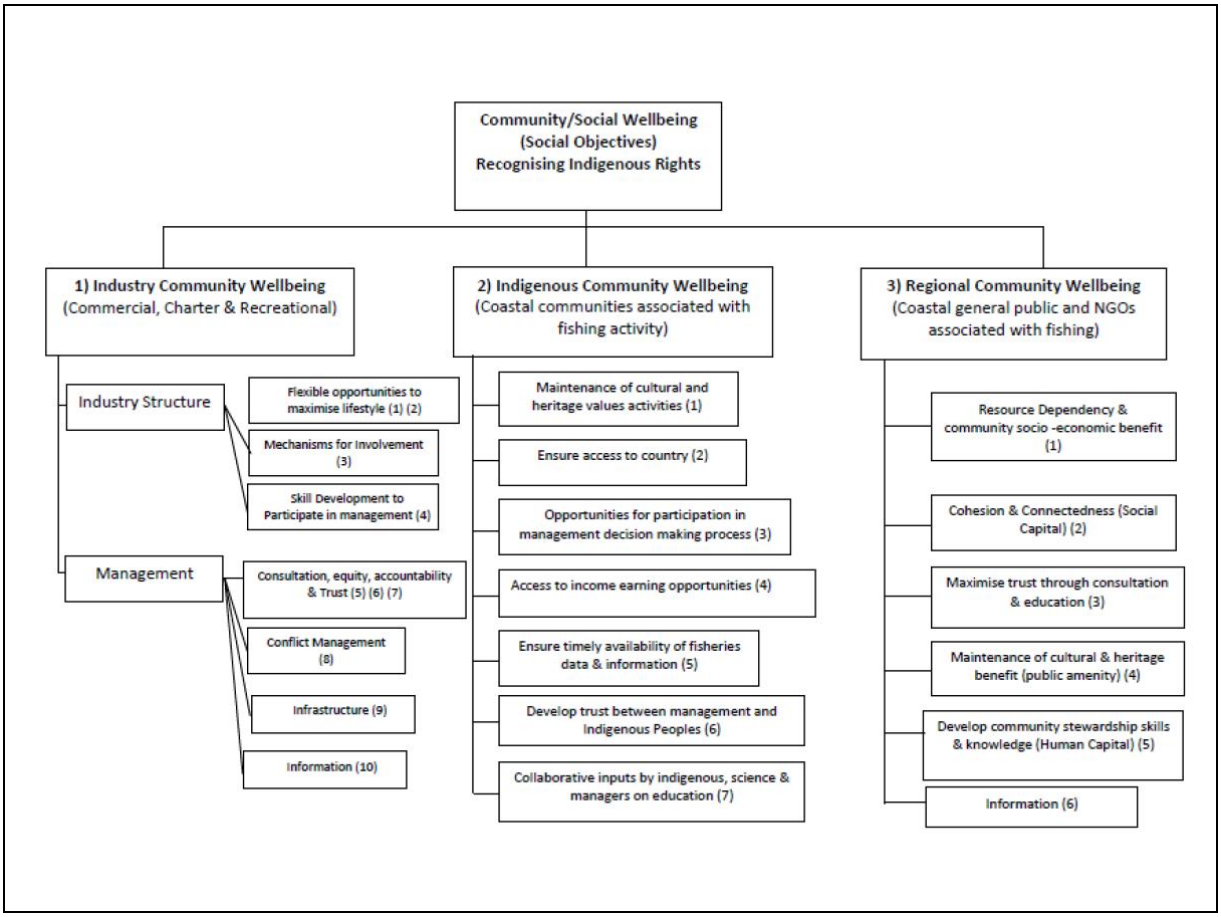
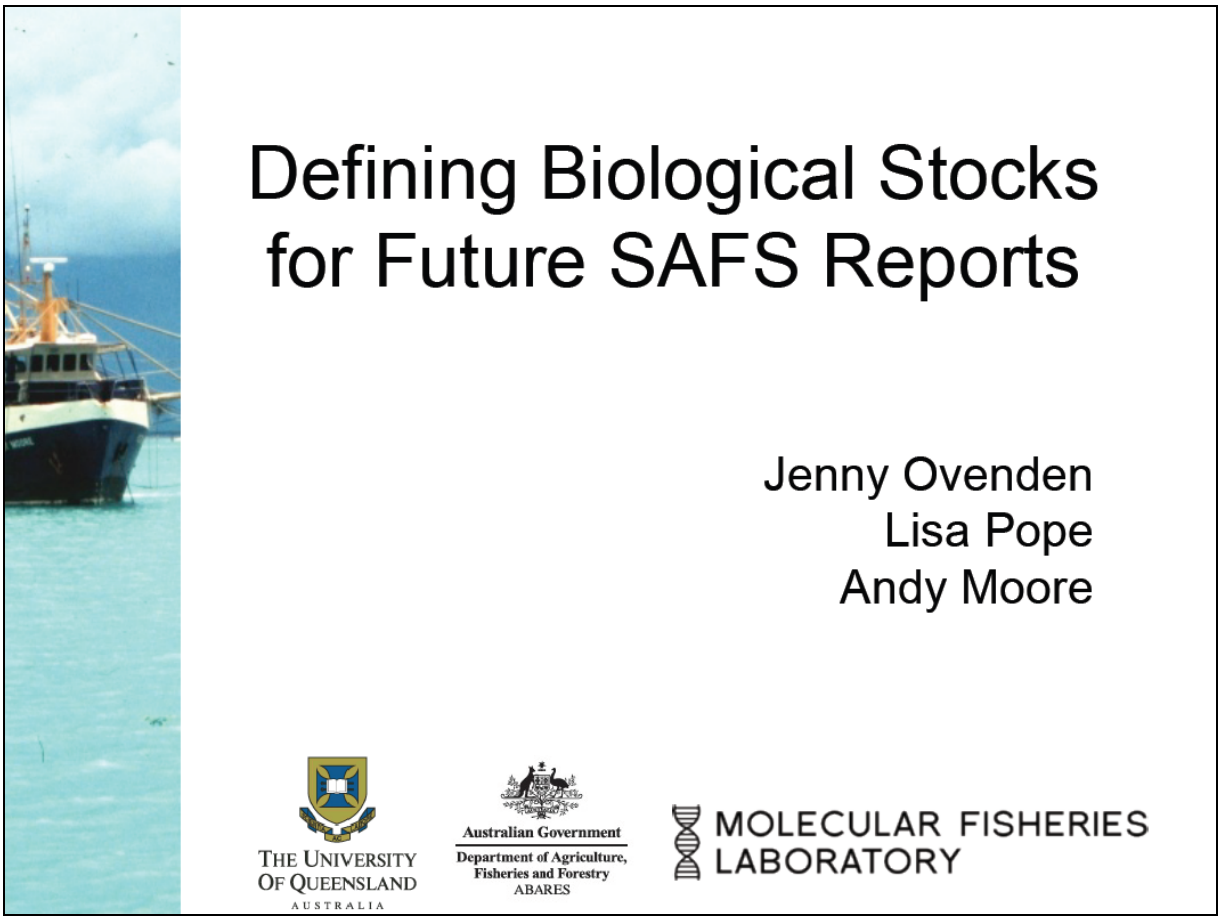

Community/Social Wellbeing
(Social Objectives)
Recognising Indigenous Rights
1) Industry Community Wellbeing
(Commercial, Charter & Recreational)
2) Indigenous Community Wellbeing
(Coastal communities associated with fishing activity)
3) Regional Community Wellbeing
(Coastal general public and NGOs associated with fishing)
Industry Structure
Flexible opportunities to maximise lifestyle (1) (2)
Mechanisms for Involvement (3)
Skill Development to Participate in management (4)
Management
Consultation, equity, accountability & Trust (5) (6) (7)
Conflict Management (8)
Infrastructure (9)
Information (10)
Maintenance of cultural and heritage values activities (1)
Ensure access to country (2)
Opportunities for participation in management decision making process (3)
Access to income earning opportunities (4)
Ensure timely availability of fisheries data & information (5)
Develop trust between management and Indigenous Peoples (6)
Collaborative inputs by indigenous, science & managers on education (7)
Resource Dependency & community socio -economic benefit (1)
Cohesion & Connectedness (Social Capital) (2)
Maximise trust through consultation & education (3)
Maintenance of cultural & heritage benefit (public amenity) (4)
Develop community stewardship skills & knowledge (Human Capital) (5)
Information (6)

Table 3 Industry social Indicators (commercial, charter and recreational fisheries)

NB: "CC only" refer to Commercial and Charter only. Some indicators for the following objectives refer to 'perceptions', rather than focusing on 'reality' (e.g. 1.2.2; 1.5.2; 1.7.1 & 1.8.1), this is because perceptions in this case represent the reality of the social cost/benefit of the fishery's management to individuals, and are consequently the most important aspect to monitor in relation to achieving the objective.

Objective number and name	Indicator number and name	Measurement method/s	Measurement costs	Measurement complexity	Independence of indicator	Additional information
1.1-Provide flexible opportunities to ensure fishers can maintain or enhance their livelihood, within the constraints of ecological sustainability	**1.1.1**-Provision of a livelihood opportunity: the change in the cost of access for fishers to procure a livelihood from fishing (CC only).	Management agency	Low	Low	High	Page 49-
	1.1.2-Perception of flexibility: fisher belief that management processes are flexible enough to allow them to adapt to changing conditions.	Fisher survey	Low	Low	High	Page 51
	1.1.3-Existence of transferable property or use rights that allow access to marine and aquatic resources (CC only).	Management agency	Low	Low	Medium	Page 54
	1.1.4-Proportion of fishers accessing a livelihood from fishing (CC only).	Management agency	Low	Medium	Medium	Page 56
	1.1.5-Proportion of fisheries management decisions that constrain access to livelihood opportunities (CC only).	Management agency	Low	Low	Low	Page 59
1.2-Maximise cultural, recreational and lifestyle benefits (including health benefits) of fishing for those who participate in fishing activities, within the constraints of ecological sustainability	**1.2.1**-Level of satisfaction fishers have with their fishing activities over the last 12 months.	Fisher survey	Medium	Low	High	Page 61
	1.2.2-Level of satisfaction fishers that they are achieving the cultural, recreational and lifestyle benefits important to them from fishing.	Fisher survey	Medium	High	High	Page 64
	1.2.3-Level of satisfaction fishers have with their fishing derived income (CC only).	Fisher survey	Medium	Low	High	Page 67
	1.2.4-Level of perceived importance of fishing activities to fisher lifestyle.	Fisher survey	Medium	Medium	High	Page 69
	1.2.5-Fishers' plans to leave fishing (CC only).	Fisher survey	Medium	Low	High	Page 71

Attachment 3: Presentation by Dr Jennifer Ovenden on ways that her team could use genetic techniques to assist with better defining biological stock boundaries for species included in the SAFS reports.

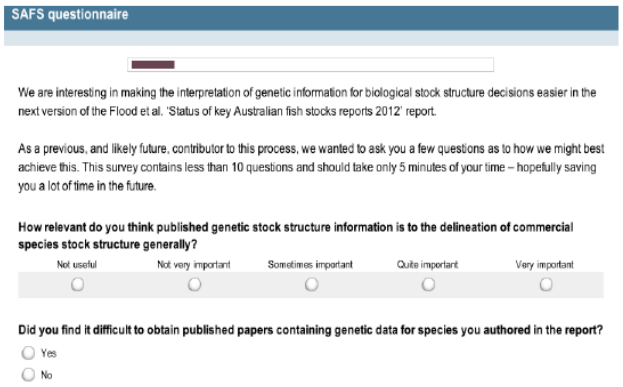


What is the problem?

- The focus on biological stocks (as the biologically appropriate management unit) was a key feature of the report
- But, one of the challenges of the SAFS process was ability to identify the biological stocks
- Of the 150 stocks covered, 81 were 'biological stocks', the others were jurisdictional or management unit assessments
- This reflected
  - a lack of information to identify biological stocks
  - lack of clarity from the available information
  - In some cases (such as abalone, barramundi) the number of biological stocks was too high to be able to report at that level
- There is opportunity for improvement in the future

Pre-workshop questionnaire

- We designed questions to further define the problem, and to get feedback on possible solutions
- We sent the web-survey to steering group members, chapter authors and others



SAFS questionnaire

We are interesting in making the interpretation of genetic information for biological stock structure decisions easier in the next version of the Flood et al. 'Status of key Australian fish stocks reports 2012' report.

As a previous, and likely future, contributor to this process, we wanted to ask you a few questions as to how we might best achieve this. This survey contains less than 10 questions and should take only 5 minutes of your time – hopefully saving you a lot of time in the future.

How relevant do you think published genetic stock structure information is to the delineation of commercial species stock structure generally?

Not useful	Not very important	Sometimes important	Quite important	Very important
○	○	○	○	○

Did you find it difficult to obtain published papers containing genetic data for species you authored in the report?

○ Yes
○ No

Pre-workshop questionnaire

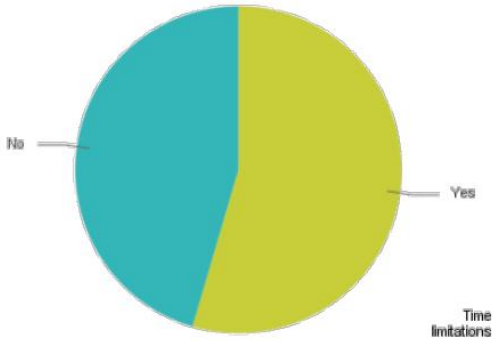
Q1 How relevant do you think published genetic stock structure information is to the delineation of commercial species stock structure generally?

not useful	not very	sometimes	quite	very important	N
1	0	2	4	3	10

Pre-workshop questionnaire

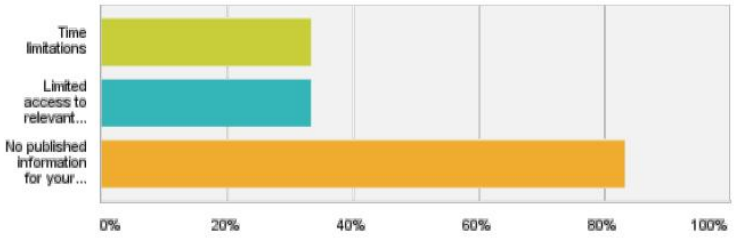
Q2 Did you find it difficult to obtain published papers containing genetic data for species you authored in the report?

Answered: 11 Skipped: 0



Q3 What were the main reasons that made obtaining published genetic papers difficult?

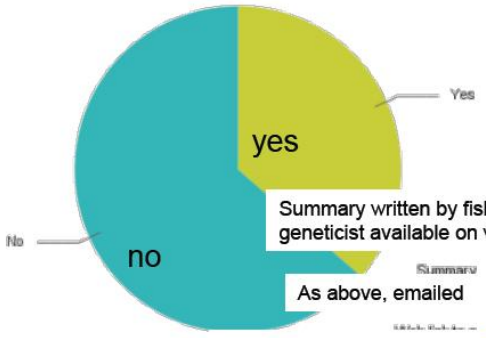
Answered: 6 Skipped: 5



Pre-workshop questionnaire

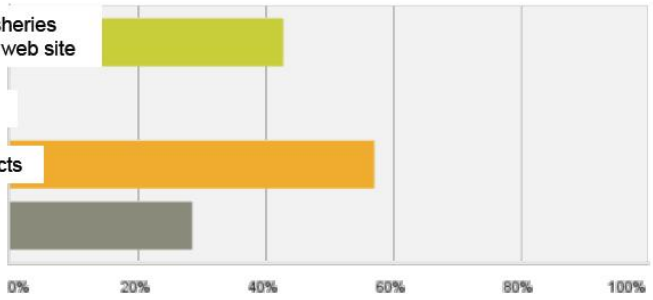
Q4 For the particular species that you worked on, if there was genetic information available, did you find this easy to translate and apply to deciding stock structure boundaries for the report?

Answered: 11 Skipped: 0



Q5 How do you think interpretation of the genetic information could be improved?

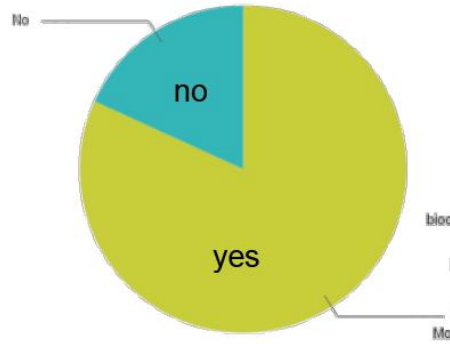
Answered: 7 Skipped: 4



Pre-workshop questionnaire

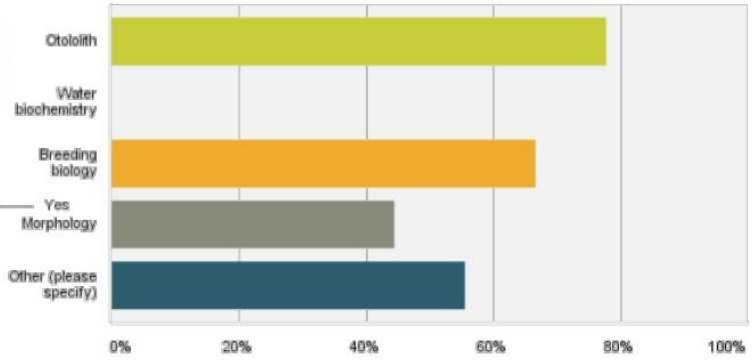
Q6 Other types of data, besides genetics, are also useful for determining stock structure. Was more than one type of stock structure information available for your species?

Answered: 11 Skipped: 0



Q7 Which type of additional information was available and useful for your particular species?

Answered: 9 Skipped: 2



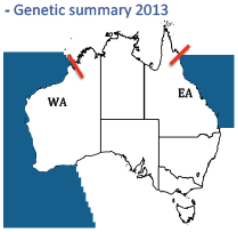
Pre-workshop questionnaire

Q8 Attached is a template of a genetic summary for one of the commercial species from the report. Do you think access to summaries like this for your species, would be helpful when writing the next version of the report?

Answered: 11 Skipped: 0

Sandbar Shark *Carcharhinus plumbeus* - Genetic summary 2013

LC Pope, J Ovenden



http://spatial.ala.org.au/#

CAAB code 37 018007;coastal demersal pelagic, IUCN near threatened

Genetic stocks	Description
1 WA	South of western range extent
2 EA	South of eastern range extent

Genetic stocks

A genetic study of the global phylogeography of the sandbar shark found strong evidence for genetic structure between the ocean basins [1]. There was evidence for differentiation between Western and Eastern Australian populations based on mtDNA but not nuclear DNA. This difference may have resulted from greater male movement. Overall, genetic evidence supports the existence of two biological stocks.

References:

1. Portnoy, D.S., et al., *World phylogeography and male-mediated gene flow in the sandbar shark, Carcharhinus plumbeus.* Molecular Ecology, 2010. **19**(10): p. 1994-2010.

Example stock summary card

Fields

- Map
- Species distribution
- Stock name and extent
- Descriptive text
- Reference/s
- Summary of study/s

Ref	No. of Aust pops	Ave sample size	Sampling range	Marker	Main result
1. Portnoy et al. 2010	2	36.5	Qld, WA	Microsatellites (8 loci) MtDNA sequence (CR)	Strong differentiation between ocean basins. There may be more male than female gene flow.

Specific comments on summary cards

- Looks very good as is, map is a must.
- Need to factor in stock ID information in addition to genetics
- Should contain a cut and paste summary that could be inserted into SAFS report
- You probably need two headings: 1. Overview, 2. Full explanation.
- Summary needs to be written by a geneticist in combination with a biologist or assessment scientist
- Explanation of markers may be required for those without a technical background in genetics

In-kind contribution from UQ

- Synergy with existing project funded by UQ to Lisa Pope and Jenny Ovenden
  - Construction of a meta-database containing “Marine population genetic studies”
  - Strict criteria: ≥ 3 populations with ≥ 5 individuals.
  - Verts and inverts

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Proposal for TRF/s

- Feedback
  - Confirms problem
  - Supports drawing together available information as 'e-cards'
- Solution
  - Delineating stocks is best done with an integrated multi-disciplinary approach informed by tools such as genetics, population dynamics, parasite, otolith microchemistry
- Proposal
  - Two sequential TRF's
  - TRF #1 to develop an Integrated Stock Definition (ISD) method and trial its application to various SAFS species, run alongside SAFS 2
  - TRF #2 (if #1 successful) to apply to SAFS species, aim to inform SAFS 3

Proposal for TRF/s

- Feedback
  - Confirms problem
  - Supports drawing together available information as ‘cards’
- Solution
  - Delineating stocks is best done with an integrated multi-disciplinary approach informed by tools such as genetics, population dynamics, parasite, otolith microchemistry
- Proposal
  - Two sequential TRF’s
  - TRF #1 to develop an Integrated Stock Definition (ISD) method and trial its application to various SAFS species, run alongside SAFS 2
  - TRF #2 (if #1 successful) to apply to SAFS species, aim to inform SAFS 3
- Agree?

Appendix 5: Agenda – workshop 2

Status of key Australian fish stocks reports – review / planning workshop 2	**Location:** FRDC, 25 Geils Court, Deakin
Facilitating Agency: ABARES Fisheries and Quantitative Sciences	**Date:** 21-22 Oct 2013

Time: 10:00 am – 5:00 pm (Mon) AND 8:30 am – 1:30 pm (Tue)
Chair: Dr Ilona Stobutzki, First Assistant Secretary Fisheries and Quantitative Sciences

AGENDA

Workshop Objectives

- To prepare for production of the SAFS reports 2014
- To continue discussions relating to production of national fishery status reports
- To continue discussions on development of SAFS reports beyond 2014

Day 1
10:00 am START

9. Introduction and welcome
- *Workshop objectives* – Dr Ilona Stobutzki, ABARES

10. SAFS reports 2014 EOI to FRDC
- SAFS reports 2014 and beyond – Matt Flood
    - Outline of proposed workshop by CSIRO – Klaas Hartmann

11. Additional species (round table discussion)
- Crispian Ashby to outline Colin Simpfendorfer's shark work and potential contribution to SAFS reports
- Review and finalisation of additional species list for SAFS reports 2014
- Allocation of lead and support jurisdiction responsibilities

12:30 – 1:30 LUNCH

12. Species template update review
- Review of agreed minor changes made to species template for 2014 reports

13. Review of proposed budget for SAFS reports 2014
- Round table discussion

14. Development of full FRDC application
- Round table discussion

3:00 – 3:15 AFTERNOON TEA

15. Discussion on process for producing SAFS reports 2014
- Proposed timeline for production
- Agreed production process
- Agreement on fishing year to be reported on
- Clearance and review process

5 pm FINISH (DAY 1)

Day 2
8:30 am START

16. **EOI for Health-check for Australian fisheries – Alistair Hobday**
    - Project linkages – Alistair Hobday, Emily Ogier and Matt Flood

17. **Review of remaining 'Action items' and 'Decisions required' from last meeting**
    - Review of Agreed outcomes document
    - Brief round table discussion of Action items and parked issues

18. **SAFS reports beyond 2014**
    - National reporting framework / compilation process / equivalence
    - Review of national status classification options paper – agreement sought for SAFS reports 2016
    - Consideration of a periodic update process for individual stocks - FRDC

19. **Review of AFMF's role in SAFS reporting**
    - Round table discussion

20. **Further feedback from Stakeholders**
    - Extra feedback from retailers and industry
    - Identification of any items requiring stakeholder review before commencement of 2014 production

10:30 – 11:00 am MORNING TEA

21. **Review of agreed outcomes**

Appendix 6: Agreed outcomes and actions, workshop 2

Status of Key Australian Fish Stocks Reports – Review/Planning Workshop 2

21 and 22 Oct 2013

Canberra, FRDC Conference Centre

Agreed Outcomes and Actions

Attendee list: Ilona Stobutzki (ABARES), Patrick Hone (FRDC), Crispian Ashby (FRDC), Peter Horvat (FRDC), Carolyn Stewardson (FRDC), Yvonne Zunic (AFMA), Matt Flood (ABARES), Andy Moore (ABARES), Rocio Noriega (ABARES), Paul Butcher (NSW DPI), Anthony Roelofs (QLD DAFF), Michelle Winning (QLD DAFF), Jennifer Ovenden (UQ), Sean Sloan (PIRSA), Gavin Begg (SARDI), Brent Wise (WA Fisheries), James Andrews (DPI VIC), Thor Saunders (NT DoR), Emily Ogier (Tas IMAS), Klaas Hartmann (via telephone - Tas IMAS), Alistair Hobday (via telephone - CSIRO)

Apologies: Rick Fletcher (WA Fisheries), Tony Smith (CSIRO), Keith Sainsbury (consultant), John Stewart (NSW DPI), Bob Creese (NSW DPI), Caleb Gardner (Tas IMAS), Beth Gibson (AFMA), Malcolm Haddon (CSIRO)

BRIEFING FROM FRDC

- Patrick Hone reaffirmed that the SAFS project is the highest priority project for FRDC in 2014.
- The critical nature of this work was highlighted in both:
    a. The House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry report, Netting the benefits: Inquiry into the role of science for the future of fisheries and aquaculture (released November 2012)
    b. The Australian Government's State of the Environment Report 2011
- Patrick outlined how the SAFS project aligns with the current goals of FRDC and stressed the importance of developing a system of equivalence to reduce complexity and duplication in Australian fisheries reporting.
- The importance of broadening the scope of future national fisheries reporting to incorporate more aspects of Ecologically Sustainable Development was highlighted. This should include building strong frameworks for understanding byctch; Threatened Endangered and Protected Species; and the environmental impact of fisheries that interact with the sea floor.
- FRDC see it as the Australian Government's responsible to provide the public with confidence that Australian fisheries are sustainable.
- In future, FRDC would like the SAFS reports produced in a similar manner to Wikipedia, with information lodged online. The information would then be assessed and either accepted or rejected. If the information / data for a stock was not updated after a specified number of years it would be downgraded or removed.
- FRDC requested volunteer jurisdictions to beta test an IT system for electronically uploading status reports. The Northern Territory and South Australia have indicated their interest.
- FRDC requested that the SAFS Advisory Group continue to make decisions on stock status based on science alone and not to be influenced by industry or management.

- FRDC have highlighted the need for the SAFS Advisory Group and FRDC to commence the briefing / communication process much earlier in the year for the SAFS reports 2014 than the 2012 reports.
- FRDC indicated that the original EOI budget figure of $600,000 was more likely to be available than the updated EOI budget of $710,000.
- Funding could potentially be made available to commence production of the SAFS reports 2014 by the beginning of December 2013; definitely by early in the new year (2014).

NATIONAL FRAMEWORK AND TERMINOLOGY

Below is a summary of issues discussed and decisions made in relation to possible alterations to the SAFS national classification framework and terminology. Discussion was facilitated by an options paper developed by ABARES (attachment 1). Decisions were made specifically in relation to the SAFS reports 2014. It is envisaged that the same options paper will be discussed further at future SAFS meetings to clarify whether decisions hold only for SAFS reports 2014 or need to be further amended in the future.

Action: ABARES to send a copy of the amendments outlined below to AFMF and the Common Language Group. ABARES to also provide presentations of these changes in both forums.

Agreed: The Advisory Group agreed to provide AFMF with a brief on changes made to the classification system and outcomes from the current meeting.

Sustainable stock

The Advisory Group discussed the option of splitting the sustainable stock classification in two.

Agreed: The Advisory Group agreed that for the SAFS reports 2014 the current single category for sustainable stocks will be retained.

Transitional–recovering stocks and Overfished stocks

The Advisory Group discussed either:

- Removing the need for evidence of measurable improvements in stock biomass before a stock could be moved from the overfished to transitional–recovering category.
- At the other extreme, introducing a threshold level of recovery that must be reached before moving a stock from the overfished to transitional–recovering category.
- Retaining the definitions developed for the SAFS reports 2012.

Agreed: The Advisory Group agreed to retain the status quo for the SAFS reports 2014, noting that Western Australia are yet to agree to this.

Action: Western Australia to inform the Advisory Group within the next week of whether they can adopt the current *transitional–recovering* definition for the 2014 SAFS reports.

WA response: The current definition used by SAFS differs from the WA Auditor General's definition. Where this difference does not affect the status assessment it is appropriate these stocks be included in the 2014 SAFS reports. At this stage it is unlikely any stocks represented in 2014 SAFS reports will be affected by this difference.

Transitional–recovering stocks and Transitional–depleting stocks

The Advisory Group discussed the use of the colour orange for the 'transitional–recovering' classification and yellow for 'transitional–depleting'. This would indicate that it is better to be overfishing a stock that is currently above the limit reference point than to be successfully managing the recovering a stock that is currently below the limit reference point. The Advisory Group did not feel that this distinction was required, instead deciding to retain the colour yellow for both transitional classifications.

Agreed: The Advisory Group agreed to retain the status quo for the SAFS reports 2014.

Environmentally limited stocks

The Advisory Group discussed a number of options for explicitly dealing with stocks depleted by causes other than fishing (e.g. climate change) in the classification framework. The preferred option was to split the 'overfished stocks' category into two separate categories, 'overfished stocks' and 'environmentally limited stocks'. This was listed as option 1 in the options paper (attachment 1). The group indicated that the use of this new classification category would be scrutinized heavily by the Advisory Group for each stock it was applied to.

Agreed: The Advisory Group agreed that there should be a classification category called 'environmentally limited' for the 2014 reports (option 1 under the environmentally limited stocks heading of attachment 1).

Agreed: The Advisory Group agreed that definition should include:

- The stock has been reduced to a level at which there is a significant risk of recruitment failure.
- This reduction has not been due to overfishing or lack of appropriate fisheries management.
- There is good evidence that the reduction is related to substantial environmental changes or shocks, or disease outbreaks.
- Fisheries management has responded appropriately to the environmental change in productivity.
- The Advisory Group indicated that this is an 'exceptional' category that they do not expect to see used often.

Undefined stocks

The Advisory Group was asked to consider whether the explanation of the weight of evidence approach in the introduction of the SAFS reports 2012 adequately allows for the use of risk assessments in assessing stock status.

Agreed: The Advisory Group agreed that the text provided in 2012 adequately allows for the use of risk assessments in assessing stock status.

The Advisory Group also considered the removal of stocks with negligible levels of catch from the SAFS reports.

Agreed: The Advisory Group agreed that on a case by case basis, some stocks identified within a species may not require a stock status assessment. These stocks must have an historically low to negligible catch, must be generally not targeted and must not be part of a cross jurisdictional stock. The reports would note the estimated level of catch but would not undertake a status assessment. The agreed process is that if a jurisdiction wants to do this with a particular stock they would nominate it to the Advisory Group with the reasons why and the Advisory Group would approve this on a case by case basis. The catch graphs will not include catch from those stocks that are not assessed, nor will this catch be shown in the maps. The stock will not be captured in the summary statistics at the front of the SAFS reports.

Agreed: The Advisory Group agreed that in cases where there is an unassessed stock, the stock status table would look like this (the WA stock in the table is an example of a stock not assessed):

Jurisdiction	South Australia	Victoria	Tasmania		Western Australia
Stock	Stock A	Stock B	Stock C	Stock D	Stock E
Stock status		↑	↑		Neg
Indicators	Biomass and Fishing mortality	CPUE	Catch		

*neg = historically low catch, no stock status

Within the species chapter the catch quantity for each unassessed, 'negligible' stock will be included for the reporting year and as an average for the previous 10 years.

Equivalence in reporting

The Advisory Group discussed moving to an equivalence approach for reporting in the SAFS reports.

Agreed: The Advisory Group agreed that introducing standards and a framework for equivalence reporting would not be done for the SAFS reports 2014. However, they would consider this as part of the larger SAFS project dealing with scoping future directions, especially for currently certified species (e.g. MSC).

SPECIES TEMPLATE

The Advisory Group discussed various options for updating the main features section of the species template. The overall decision by the group was to tabulate this information. An example of the Advisory Group's preferred tabular layout for the main features section of the species template is included as attachment 2. The removal of the key indicators graph was also discussed.

FRDC requested that the Advisory Group ensure that indigenous catch information is included in the main features section of the species template wherever this is available.

Agreed: The Advisory Group agreed to present the main features section in the form of a table.

Agreed: The Advisory Group agreed to remove the 'key performance indicator' graph from the species template. The exception would be if there is perceived to be a strong reason for retaining this. If there is a strong reason for retaining the graph but the graph and data are submitted to ABARES after the deadline the graph will not be included.

Action: ABARES to circulate an amended species template for one round of comments by the Advisory Group.

Action: ABARES to develop an approach (in main features table) for capturing indigenous information. This is to be provided to FRDC indigenous reference group for comment.

STOCK STRUCTURE

In early 2013 Dr Jennifer Ovenden and Dr Lisa Pope wrote to FRDC regarding potential improvements they could facilitate to the stock structure explanations provided in the *Status of key Australian fish stocks reports 2012*. This letter is included as attachment 3.

At the current workshop Jennifer briefly reminded the Advisory Group of her EOI submitted to FRDC (attachment 4). The EOI proposes work to improve the resolution of stock structure information for species included in the SAFS reports. If the EOI and full application are successful, funding would be received too late for the project to influence the SAFS reports 2014. FRDC have indicated that funding may be available on a case by case basis to resolve stock structure for some of these stocks for the 2014 reports. The Advisory Group has asked Jennifer to indicate which species she has already identified as being poorly described in the SAFS reports 2014.

Agreed: The Advisory Group agreed to stay with stock structure text currently used in the SAFS reports and to identify stocks that could be done better and inform Jenny Ovenden's potential FRDC project.

Action: Jennifer Ovenden to recirculate the species structure letter she and Lisa Pope sent to FRDC earlier in 2013. Jennifer will provide a list of species that their group believe need better stock structure determination in the 2014 status reports. Advisory Group members to review this and provide feedback on these species along with any additional species they believe may need to be reviewed.

REVIEW PROCESS

The Advisory Group discussed the simplification/truncation of the review processes required for the SAFS reports. For the 2012 reports there were four review processes undertaken: a consistency review by ABARES staff (1-2 months), a technical review by senior ABARES staff (2 months), an opportunity for AFMF to provide comment (2 months), and an FRDC peer review (1.5 months).

Also, it was highlighted that in some jurisdictions stock status assessments and/or stock assessments are put through independent external peer reviews by those jurisdictions. The Advisory Group indicated that information about when these reviews were done and who completed them should be formally captured within the SAFS process.

Agreed: The Advisory Group agreed to change the AFMF review of the SAFS reports to an AFMF briefing, to occur after all drafting and review processes are complete.

Agreed: The Advisory Group agreed that jurisdictions are responsible for ensuring engagement with management agencies has occurred at some stage during the drafting process, as appropriate. Most jurisdictions have a current process for this, that will continue during production of the SAFS reports 2014. So therefore, the assumption is that when chapters come to ABARES for review they will have already been through a review process with fisheries managers in each jurisdiction.

Agreed: The Advisory Group agreed to retain an ABARES consistency review that will include highlighting technical gaps or technical questions on the status determination.

Agreed: The Advisory Group agreed to raise species chapters of particular concern with the Advisory Group as part of a review at an Advisory Group meeting.

Agreed: The Advisory Group agreed to remove the ABARES technical review as a standalone review and combine this with the ABARES consistency review.

Agreed: The Advisory Group agreed that the review process will be as follows: ABARES to do consistency/technical review (as one), any changes that cause problems will come back to an Advisory Group meeting for a solution, then half of the chapters are to go out for FRDC external review. FRDC review to be purely a review that the text is consistent with the status, not a review of the report template. Within 5 years all chapters should be reviewed.

Action: ABARES to write a short description of the review process, and circulate this to the Advisory Group for comment/information.

Action: Jurisdictions will provide information to ABARES on which stocks status assessments/stock assessments have had an independent external peer review, when and by whom.

SPECIES SELECTION AND BUDGET

Crispian Ashby outlined Colin Simpfendorfer's shark project and potential contribution to SAFS reports. Crispian indicated that if the work was ready and in the correct format it would be included in the SAFS reports 2014. This project will not affect (or draw on) the budget of the SAFS reports 2014 project.

The Advisory Group revised the lead and support responsibilities for the 49 original species (/species complexes) included in SAFS reports 2012 (attachment 5). In addition they considered all species recommended for inclusion in the SAFS reports 2014 by each jurisdiction. A priority rating was applied to each potential new species (attachment 5):

- Priority 1 – indicated a species should be included in the SAFS reports 2014
- Priority 2 – indicated that the species will be excluded for now.

The prioritisation process resulted in 32 additional (priority 1) species for the SAFS reports 2014 (32 lead jurisdictions and 42 supports). Due to budgetary restraints the Advisory Group agreed to reduce the number of priority 1 species for which funding would be requested. To do this the Advisory Group agreed to prepare a number of their proposed new species with 100% in-kind.

- Potential in-kind species are listed as priority '1a' species within the species list (attachment 5).

The majority of the 1a species are fished in only a single jurisdiction. Advisory Group members are yet to confirm which 1a species they will report on in-kind.

The resulting number of priority 1 new stocks requiring FRDC funding for the SAFS reports 2014 was 18 (equating to 18 lead jurisdictions and 37 supports). This is 2 leads less and 17 supports more than what was budgeted for in the FRDC EOI. Given that jurisdictions have requested $5000 from FRDC for each lead and $1000 from FRDC for each support the final count would result in a $7,000 increase to the funding request to FRDC for lead and support roles.

Action: ABARES to circulate species list outlining priority 1, 1a and 2 species (attachment 5).

Action: Jurisdictions to decide which additional 1a species they will draft as in-kind.

Action: ABARES to update the entire budget and circulate to jurisdictions.

Action: ABARES to provide the updated budget to AFMF. The budget should clearly outline the newly agreed ratio for FRDC contribution : in-kind contribution (see agreement below).

Agreed: The Advisory Group agreed that in-kind for lead species should be remain at $5000 for old species and $10,000 for new species and in-kind for support species would be $3000 for both old and new species.

Agreed: The Advisory Group agreed to continue to produce a hard copy of the SAFS reports for the 2014 edition.

Agreed: The Advisory Group agreed to remove the CSIRO workshop from the project proposal.

Agreed: The Advisory Group agreed to continue to include Keith Sainsbury as a SAFS Advisory Group member, and fully fund his costs to attend the meetings.

Agreed: The Advisory Group agreed to retain CSIRO's involvement in the SAFS project, Tony Smith will be requested to continue to fill this role.

Agreed: The Advisory Group agreed that Jenny Ovenden would be engaged as an expert in spatial definition of biological stocks, on a case by case basis depending on the agenda of specific Advisory Group workshops.

PROJECT TIMELINE

The Advisory Group discussed the year to be reported on in the SAFS reports 2014, when data would become available in each jurisdiction and when drafting could be completed for chapters.

Agreed: The Advisory Group agreed that ABARES would run information/introductory workshops for jurisdictional authors in early February 2014.

Agreed: The Advisory Group agreed to report on data up to the end of the 2013 calendar year and status for 2013 (or the most recent appropriate fishing season). The reports are to be released within 2014 (November).

Agreed: The Advisory Group agreed that the first drafts will be at ABARES for consistency review by the second week of July (11 July 2014).

Agreed: The Advisory Group agreed to provide data to lead jurisdictions by the end of May 2014, the complete data sets for maps and graphs (along with example excel graphs) are to be provided to ABARES 11 July 2014 (hard cut off), along with the cleared drafts for ABARES consistency/technical review.

Action: ABARES to consider meeting with authors at AFSB to discuss the SAFS production process, post drafting.

Action: ABARES to draft the timeline for the project and circulate to the Advisory Group for comment.

AUTHORSHIP FOR SAFS REPORTS 2014

ABARES highlighted the need to determine authorship responsibilities for each chapter soon to ensure that a complete contact list can be developed and circulated to all authors before the commencement of the SAFS reports 2014 project. This will facilitate communication between authors across jurisdictions and between authors and ABARES.

Action: ABARES to circulate the contact list / authors list to the Advisory Group for updating in 2013.

Action: ABARES to circulate the species list for Advisory Group members to populate with responsible individuals.

Action: ABARES to circulate the complete species list. Jurisdictions to coordinate and align their reporting time frame for shared stocks. Lead jurisdictions to coordinate alignment process.

FISHERIES HEALTH CHECK EOI

Alistair Hobday (CSIRO) introduced his EOI for a '*Fishery status reports: health-check for Australian fisheries*' (attachment 6). Linkages between this project and the SAFS project were outlined by – Alistair Hobday, Emily Ogier, Crispian Ashby and Matt Flood.

Agreed: The Advisory Group agreed to be the oversight group for the '*Fishery status reports: health-check for Australian fisheries*' project (PI – Alistair Hobday) and the '*Meeting sustainability expectations: translating and aligning objectives, reporting and evaluation of the performance of Australian fisheries*' project (PI – Emily Ogier).

Action: ABARES to circulate Alistair's talk to the Advisory Group.

AFMF'S ROLE IN THE SAFS PROCESS

ABARES indicated a need to clarify the role of AFMF in the SAFS project.

Agreed: The Advisory Group agreed that AFMF will continue to be informed of the SAFS process and their comments will be sought on the overarching framework. AFMF have a clear role in terms of ensuring the long term legacy of the project. However, status determinations are based on scientific process.

ROLE OF MANAGEMENT REPRESENTATIVE IN SAFS PROJECT

FRDC reminded the SAFS Advisory Group to ensure decisions on stock status are based on science alone and not the influence of industry or management. Following this Sean Sloan requested that the Advisory Group confirm whether his ongoing involvement in the Advisory Group was appropriate.

Agreed: The Advisory Group agreed to retain an AFMF/management representative (Sean Sloan) on the Advisory Group, to provide a management perspective on frameworks and templates.

Attachment 1: The options paper for the potential changes to the SAFS national classification framework, with agreements reached by the Advisory Group in workshop 2

Options paper – Status of key Australian fish stocks reports national classification framework update

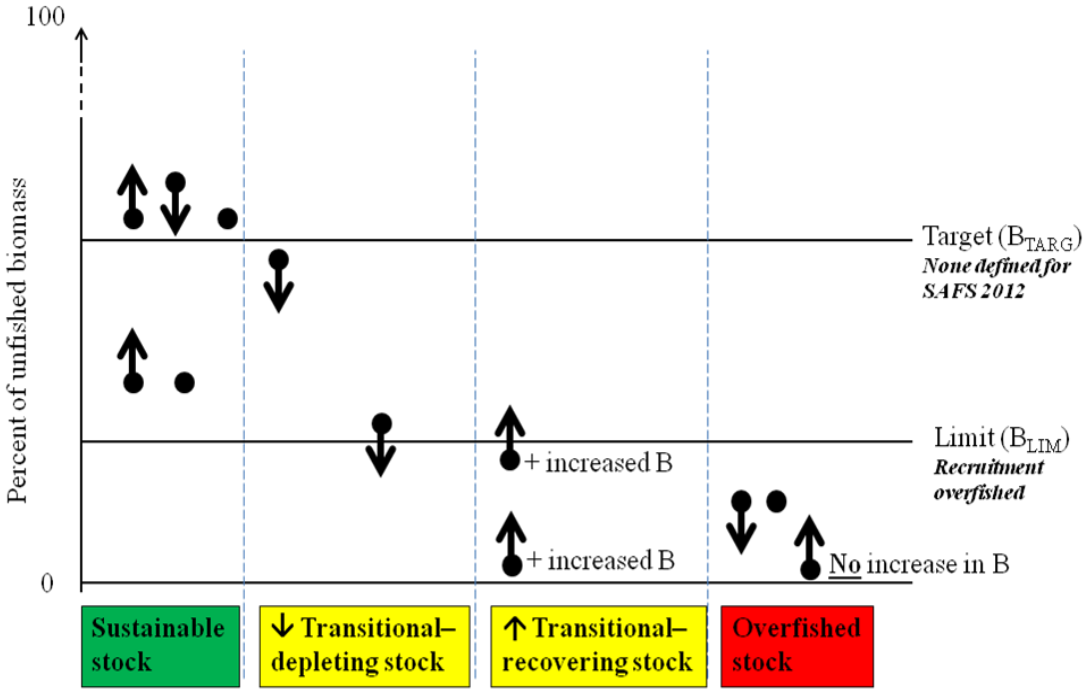
Following the production of the *Status of key Australian fish stocks (SAFS) reports 2012* the project's Advisory Group met on 31 July 2013 to review the inaugural reports / reporting process and commence planning for future reports. One key discussion related to the nationally agreed stock status classification framework developed for the first edition.

Revisiting and potentially revising the initial classification was identified as a need for future editions. This paper provides a brief overview of SAFS reports 2012 classification framework and outlines the options discussed by the Advisory Group for updating this in the future.

Figure 1: Initial classification framework

	Stock Status	Description	Potential implications for management of the stock
	Sustainable	Stock for which biomass (or biomass proxy) is at a level sufficient to ensure that, on average, future levels of recruitment are adequate (i.e. not recruitment overfished) and for which fishing pressure is adequately controlled to avoid the stock becoming recruitment overfished	Appropriate management is in place
↑	Transitional–recovering	Recovering stock—biomass is recruitment overfished, but management measures are in place to promote stock recovery, and recovery is occurring	Appropriate management is in place, and the stock biomass is recovering
↓	Transitional–depleting	Deteriorating stock—biomass is not yet recruitment overfished, but fishing pressure is too high and moving the stock in the direction of becoming recruitment overfished	Management is needed to reduce fishing pressure and ensure that the biomass does not deplete to an overfished state
	Overfished	Stock is recruitment overfished, and current management is not adequate to recover the stock; or adequate management measures have been put in place but have not yet resulted in measurable improvements	Management is needed to recover this stock; if adequate management measures are already in place, more time may be required for them to take effect
	Undefined	Not enough information exists to determine stock status	Data required to assess stock status are needed

Figure 2: Diagrammatic representation of the national classification system for the SAFS reports 2012. This figure indicates where stocks with varying levels of biomass and fishing pressure would fall on the classification system.



Arrows – indicate whether current management (fishing mortality) is likely to result in biomass increasing (up arrow), decreasing (down arrow) or remaining unchanged (no arrow).

Sustainable stocks

A number of Advisory Group members indicated concern with using the term 'sustainable' to describe stocks with biomass just above the limit reference point (recruitment overfished). This concern was also raised by stakeholders in FRDC's Common Language Group meeting (12 November 2012). The SAFS Advisory Group changed the terminology for this category from '*sustainably fished*' to '*sustainable stock*' following this Common Language Group meeting, immediately prior to release of the SAFS reports in 2012. Despite this change a number of stakeholders and Advisory Group members still feel there is an issue with the word 'sustainable'.

It was highlighted by some Advisory Group members that the 'sustainable stock' category may not be compatible with development of harvest strategies and management plans. There is concern that these could be drafted under the incorrect assumption that it is okay for a stock to be just above the limit reference point rather than aiming for biomass closer to a target level.

During the Advisory Group meeting in July 2013 a number of members requested that the group consider subdividing the '*sustainable stock*' classification in two, one classification for stocks just above the limit reference point and one for stocks somewhere closer to a target reference point.

The potential development of a national target reference point to facilitate this split was briefly discussed. However, the Advisory Group agreed that there is no need for a specific national target reference point at this time. Instead they recommended ensuring that a stock is significantly above the limit reference point.

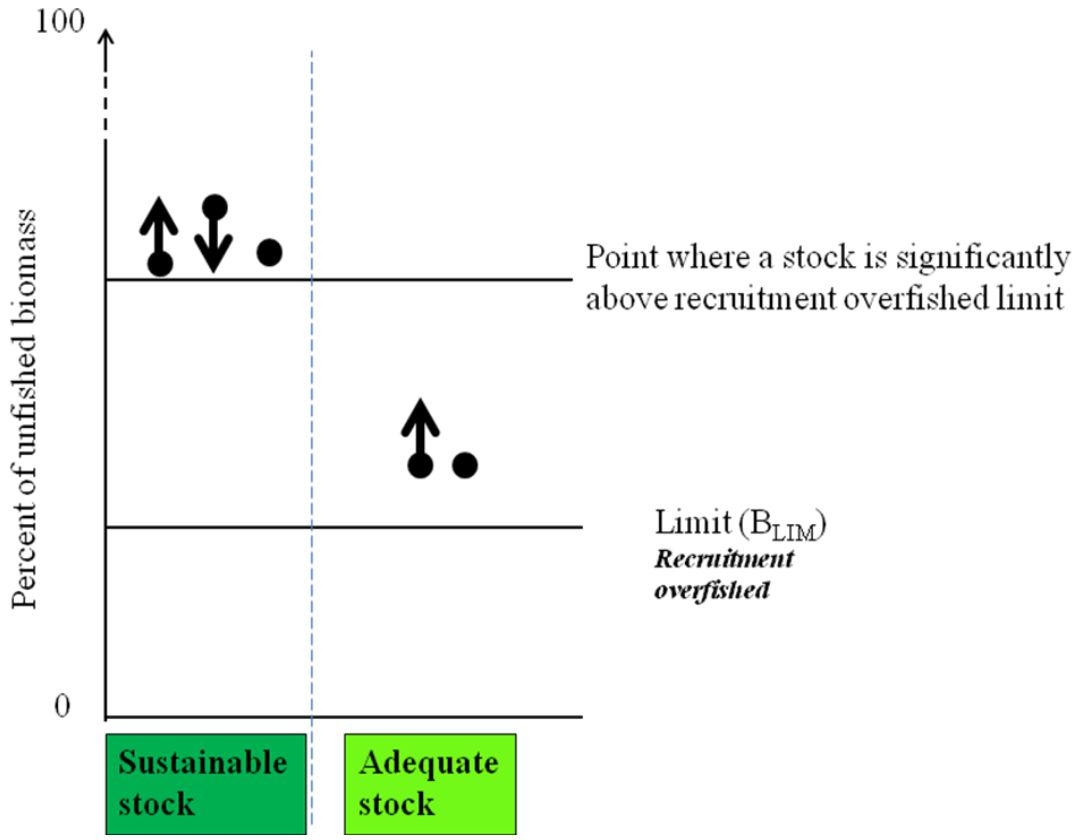
Decision required: To keep the single sustainable stock category, or split this into two?

Agreed: The Advisory Group agreed that for the SAFS reports 2014 the current single category for sustainable stocks will be retained.

Decision required: If category is split in two, what is the most appropriate terminology and colour for stocks close but above the limit reference point?

Decision required: Define clearly what is meant by 'significantly above limit reference point'. Authors will need clear guidance on this in order to accurately allocate stocks to one category or the other.

Figure 3: Diagrammatic representation of potential split to the current 'sustainable stock' classification.



Transitional–recovering stocks and Overfished stocks

The national reporting framework used in the *Status of key Australian fish stocks reports* was developed collaboratively by the SAFS Advisory Group. This framework uses standardised terminology and reference points for stock status classifications. While Western Australia originally agreed with this classification framework they have since identified that there may be a lack of alignment between the SAFS classifications '*overfished*' and '*transitional–recovering*' and the fisheries objectives of Western Australia and the MSC.

Western Australia have indicated that this potential lack of alignment may be rectified by altering the SAFS definitions so that having 'adequate management measures in place' would suffice for moving a stock from the '*overfished*' to '*transitional–recovering*' classification. This would remove the need for evidence of measurable improvements in stock biomass (see figure 1, '*transitional–recovering*' description).

In contrast, some Advisory Group members noted a concern with the proposed removal of the requirement for proof of biomass improvement before moving a stock from '*overfished*' to '*transitional–recovering*'. They feel that stakeholders may view this as an attempt by government to make it possible to move stocks that should be classified as '*overfished*' out of this category. These members suggested that it should be made more difficult (not easier) to move a stock out of the '*overfished*' category and that a threshold level of biomass recovery should be achieved first.

Decision required: Advisory Group to decide whether to:

a) remove the requirement for biomass recovery before moving a stock from '*overfished'* to '*transitional–recovering'*, or

b) keep the requirement for biomass improvement and include the additional requirement that the biomass of a stock must have recovered to a certain threshold level before the stock can be moved from the '*overfished'* to '*transitional–recovering'* category.

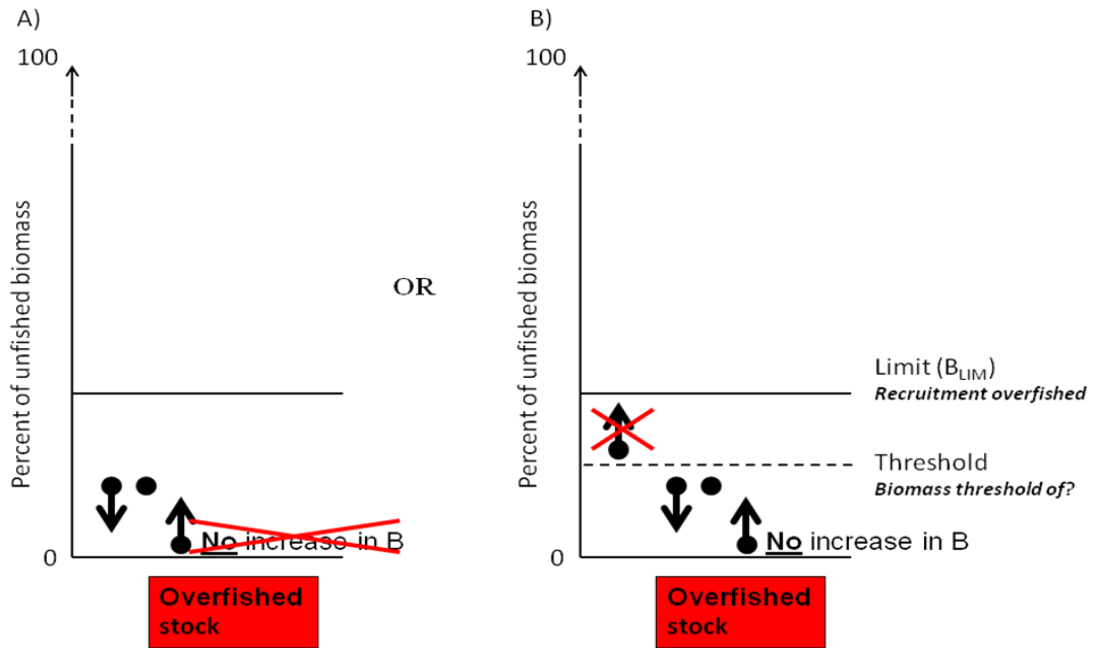
c) to retain the status quo.

Agreed: The Advisory Group agreed to retain the status quo for the SAFS reports 2014, noting that Western Australia have provided the following caveats:

WA caveats: The current definition used by SAFS differs from the WA Auditor General's definition. Where this difference does not affect the status assessment it is appropriate these stocks be included in the 2014 SAFS reports. At this stage it is unlikely any stocks represented in 2014 SAFS reports will be affected by this difference.

Decision required: If option b is agreed upon, Advisory Group to define a suitable 'threshold'.

Figure 4: Diagrammatic representation of the proposed revisions to the requirements for moving a stock out of the '*overfished*' category and into the '*transitional–recovering*' category. A) option a – stocks would be moved from '*overfished*' classification to '*transitional–recovering*' as soon as appropriate management has been put in place; B) option b – stocks would not be moved from '*overfished*' classification until a threshold level of biomass recovery had been reached.



Transitional–recovering stocks and Transitional–depleting stocks

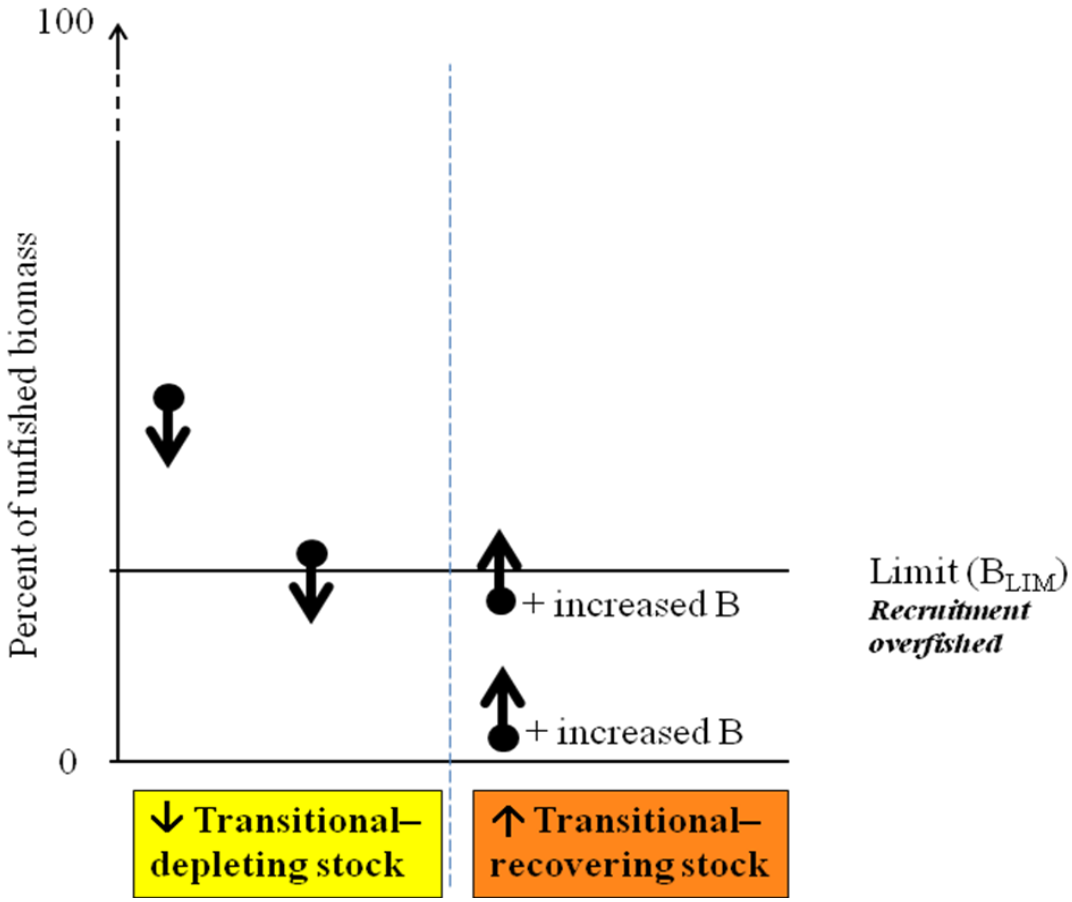
Some Advisory Group members recommended the use of the colour orange for the '*transitional–recovering*' classification and yellow for '*transitional–depleting*'. This change would indicate that it is better to be overfishing a stock that is currently above the limit reference point than to be successfully managing the recovering a stock that is currently below the limit reference point.

Decision required: Does the Advisory Group agree that it is better to be overfishing a stock that is currently above the limit reference point than to be successfully managing the recovering a stock that is currently below the limit reference point?

Decision required: If so does the Advisory Group agree to make the '*transitional recovering*' classification orange rather than yellow?

Agreed: The Advisory Group agreed to retain the status quo for the SAFS reports 2014.

Figure 5: Diagrammatic representation of potential colour change for '*transitional-recovering*' stocks



Environmentally limited stocks

1. A number of jurisdictions identified a need for a better way of dealing with stocks depleted by causes other than fishing (e.g. climate change). For the inaugural SAFS reports the lack of an adequate mechanism for dealing with these stocks was identified after drafting had commenced. As an interim measure the Advisory Group agreed that "*When stocks are overfished or decreasing and this is due to environment rather than fishing pressure this should be outlined under the heading 'Environmental effects on species X stocks'.*" Given the ambiguity of this approach the Advisory Group have indicated that for future editions stocks should be explicitly included in the classification framework, or removed from the reports. Jurisdictions were requested for information on how they deal with these stocks. Information provided by the jurisdictions is included as attachment 1 to this document.

The Advisory Group discussed the following options:

1. Splitting '*overfished stocks*' into two separate categories, 'overfished stocks' and 'environmentally limited stocks' (or similar).
2. Making no change to the framework and instead removing from the reports any stocks that are depleted from non-fisheries causes.
3. Changing the term '*overfished*' to '*depleted*' to reflect that depletion is not caused by fishing.

The first two options listed above would require the least disruption to the current classification framework. If option 3 were chosen all of the definitions within the framework would need to be adapted to accommodate this change.

Decision required: Advisory Group to decide whether to: 1) include a new '*environmentally limited*' category; 2) remove these stocks from the reports; 3) change the terminology '*overfished*' to '*depleted*' and rework all definitions to suit this.

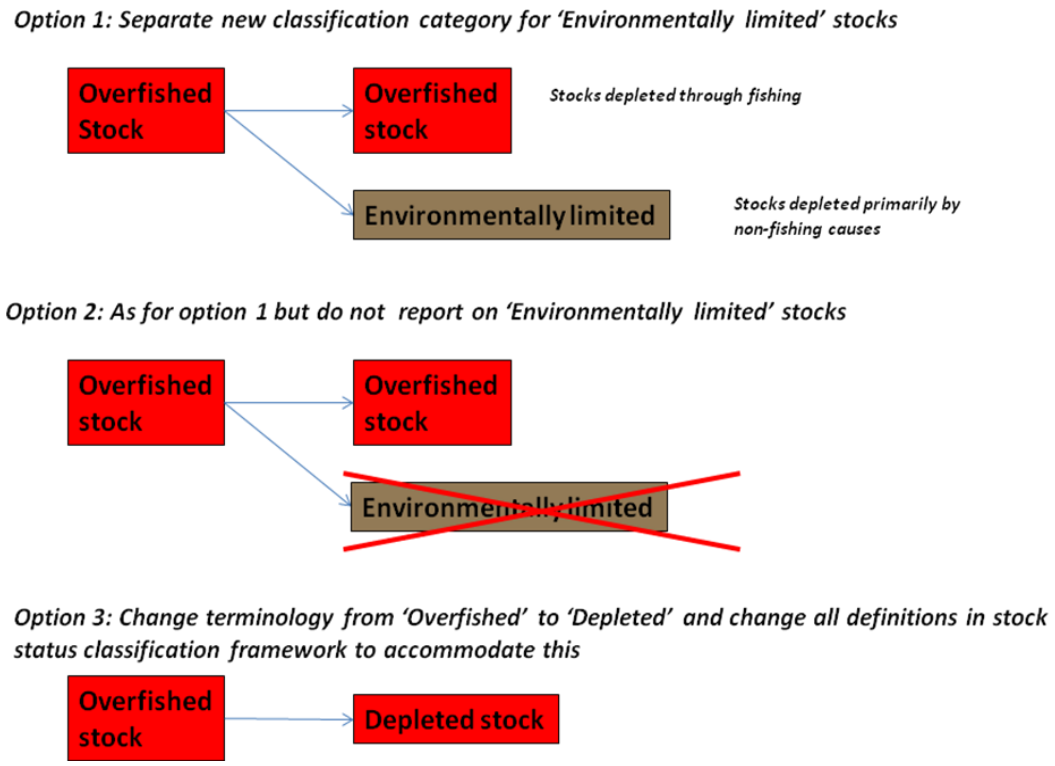
Agreed: The Advisory Group agreed that there should be a classification category called 'environmentally limited' for the 2014 reports (option 1).

Decision required: If option 1 is selected suitable terminology and a suitable definition need to be decided on.

Agreed: The Advisory Group agreed that definition should include:

- The stock has been reduced to a level at which there is a significant risk of recruitment failure.
- This reduction has not been due to overfishing or lack of appropriate fisheries management.
- There is good evidence that the reduction is related to substantial environmental changes or shocks, or disease outbreaks.
- Fisheries management has responded appropriately to the environmental change in productivity.
- The Advisory Group indicated that this is an 'exceptional' category that they do not expect to see used often.

Figure 6: Diagrammatic representation of options for dealing with stocks depleted by causes other than fishing.



Undefined

Concerns were raised by Advisory Group members regarding the substantial number of '*undefined*' stocks in the inaugural reports. In light of the number of '*undefined*' stocks the Advisory Group considered whether there was

a need to adjust this criteria, allowing for the removal of low volume stocks. While a number of jurisdictions decided against this there is still disagreement amongst the group.

A number of Advisory Group members indicated that the focus should be shifted towards defining currently '*undefined*' stocks and it was agreed that a risk based approach should be applied these stocks.

The following excerpt from the inaugural SAFS reports outlines the weight of evidence approach that was applied to stocks in 2012:

In the Status of key Australian fish stocks reports, a weight-of-evidence approach has been used to establish an evidentiary base to support stock status determination. This is achieved by systematically considering a range of biological and fisheries information. The approach provides a structured, scientific process for assembly and review of indicators of biomass status and levels of fishing mortality. For most fish stocks, particularly in the smaller fisheries, only a subset of the types of evidence is available and/or useful. Expert judgment plays an important role in stock status determination, with an emphasis on documenting the key evidence and rationale for the decision. The decision-making process is undertaken separately for abundance and fishing pressure.

Lines of evidence used in the weight-of-evidence approach include:

- *empirical indicators (catch, effort, catch rate, size- or age-based indicators, spatial and temporal distribution of the fishery)*
- *risk assessments*
- *fishery-independent surveys*
- *quantitative stock assessment models*
- *harvest strategies.*

Decision required: Advisory Group to decide whether the above text adequately allows for the use of risk assessments in assessing stock status.

Agreed: The Advisory Group agreed that the text provided in 2012 adequately allows for the use of risk assessments in assessing stock status.

Decision required: If the above text is deemed to be inadequate the Advisory Group to decide on appropriate changes to better clarify that the use of a risk assessment approach is appropriate.

N/A

Agreed: The Advisory Group agreed that on a case by case basis, some stocks identified within a species may not require a stock status assessment. These stocks must have an historically low to negligible catch, must be generally not targeted and must not be part of a cross jurisdictional stock. The reports would note the estimated level of catch but would not undertake a status assessment. The agreed process is that if a jurisdiction wants to do this with a particular stock they would nominate it to the Advisory Group with the reasons why and the Advisory Group would approve this on a case by case basis. The catch graphs will not include catch from those stocks that are not assessed, nor will this catch be shown in the maps. The stock will not be captured in the summary statistics at the front of the SAFS reports.

Agreed: The Advisory Group agreed that in cases where there is an unassessed stock, the stock status table would look like this (the WA stock in the table is an example of a stock not assessed):

Jurisdiction	South Australia	Victoria	Tasmania		Western Australia
Stock	Stock A	Stock B	Stock C	Stock D	Stock E
Stock status		↑	↑		Neg
Indicators	Biomass and Fishing mortality	CPUE	Catch		

*neg = historically low catch, no stock status

Equivalence in reporting

Some Advisory Group members have recommended moving to an equivalence approach for reporting in the SAFS reports. This type of systems could be established for automatically translating between jurisdictional

classification systems and the SAFS national system. This could also be used to translate between the SAFS national system and certifications provided by group such as the Marine Stewardship Council (MSC). To date this approach has not been discussed at length by the SAFS Advisory Group. Preliminary conversations defining what is meant by 'equivalence' and how this might work are required.

Decision required: Advisory Group to decide whether to peruse the development of a system of equivalence for SAFS reporting.

Decision required: Advisory Group to define what is meant by a 'system of equivalence' and come to some preliminary agreement on how to develop this approach for use in the SAFS reports, beyond 2014.

Agreed: The Advisory Group agreed that introducing standards and a framework for equivalence reporting would not be done for the SAFS reports 2014. However, they would consider this as part of the larger SAFS project dealing with scoping future directions, especially for currently certified species (e.g. MSC).

Stakeholder reviews

As a final note it has been recommended that following sign off by the Advisory Group on a revised national classification framework a survey of stakeholder acceptance should be undertaken. This survey would assess:

- Stakeholder acceptance of the revised classification framework (terminology, definitions etc)
- More general stakeholder acceptance of changes having been made (regardless of what the changes are).

Attachment 2: An example of the Advisory Group's preferred tabular layout for the main features section of the Species template

Main features and statistics for species *x* stocks/fisheries in Australia, 2010

Jurisdiction	Queensland	C'wealth	Northern Territory	Western Australia
Fishing method				
Trolled baits	✓	✓	✓	✓
Lures	✓	✓		
Handlines	✓	✓	✓	
Droplines	✓	✓		✓
Etc				
Management methods				
Limited entry	✓	✓		✓
Size limits	✓	✓		
Vessel restrictions	✓	✓	✓	
Prohibited species		✓		
Catch limits	✓		✓	✓
Effort limits			✓	✓
Spatial closures				✓
Active vessels	167 in ECSMF 43 in GOC Etc	33 in X fishery	12 in Y fishery	14 in Z fishery
Catch				
Total	1085 t	88 t	254 t	372 t
Commercial	385 t in the ECSMF 231 t in the GOCLF 51 t in the GOCIFF	88 t in X fishery	254 t in Y fishery	284 t in Z fishery
Recreational	415 t in the ECSMF 3 t in the GOC	No catch	No catch	88 t in W fishery
Indigenous	Unknown	No catch	No catch	No catch
Markets				
- Domestic:	Brisbane	Sydney, Brisbane	Darwin	Perth
- Export:	Japan	Japan	Japan	Japan

Attachment 3: A letter from Dr Lisa Pope and Dr Jennifer Ovenden to FRDC regarding stock structure explanations in the SAFS reports 2012

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

School of Biological Sciences

The University of Queensland
Brisbane Qld 4072 Australia
Telephone +61 7 3365 1863
Email l.pope@uq.edu.au
Internet www.slb.uq.edu.au

28 February 2013

Dr Patrick Hone,
Executive Director,
Fisheries Research and Development Corporation,
25 Geils Court,
Deakin, ACT. 2600

Dear Dr Hone,

We applaud the publication of the recent government report, Flood *et al.* (2012), and particularly the use of biological stock structure, rather than 'fishery' to assess the sustainability of commercial fishing around Australia. This topic is of great interest to us, as it forms a key area of our research at the University of Queensland. As the report invites comments, (p 18), we take this opportunity to provide feedback to assist with the ongoing assessment of fish stocks around Australia. We believe the use of population genetics to define 'biological stocks' could be improved in future reports, and our comments below address this issue.

Lisa Pope has an extensive experience in the use of population genetics to assess population dynamics. Lisa holds a UQ postdoctoral fellowship until end 2014. Jenny Ovenden has recently joined the University of Queensland and has 16 years of experience in the application of genetics in stock structure analyses of commercial species in Australia. Cynthia Riginos is a senior lecturer at the University of Queensland with 18 years experience in identifying geographic and biological traits that contribute to population structure in marine animals. Together, we have the experience, expertise and commitment to make a substantial contribution to the use of population genetics to define marine biological stocks.

We have received funding to generate a database of Australian marine population genetic data, including commercial, threatened, endangered and protected species. This project has been underway for one year, and we are now beginning analysis of the full data. Currently around 1/3 of the 49 biological stocks in the Flood report have existing population genetic data. Based on general patterns of population genetic structure in marine species we could utilise our dataset to 1) ensure

existing genetic data is incorporated optimally into the definition of biological stocks, 2) use patterns across multiple species and bioregions to make generalisations about genetic boundaries that could be used for biological stock assessments, 3) highlight priority species for which there is no genetic data for stock assessment and for which such data is likely to be most informative.

Of the 49 commercial 'species' discussed in the report, 35 were wholly or partly subdivided into biological stocks. Genetic data were considered in the definition of 28 'species' (i.e. 80% of 'biological' species stocks). Relevant and recent genetic literature was cited for the definition of the majority of these biological stocks. However, for six species the report states there was no existing genetic information on stock structure, yet published papers are available (e.g. greenlip abalone, southern calamari, southern rock lobsters and sandbar sharks). For a further four species, internal reports or older papers are cited, but more recent studies have been published in the primary literature and were not utilised (e.g. Gould's squid, blacktip sharks). Seven of the 28 'genetic stocks' are based on 'grey' literature (i.e. not published in peer-reviewed scientific journals) and therefore do not meet the normative standards of peer reviewed science. We acknowledge that sometimes genetic studies have insufficient power to define stocks due to a range of factors such as poor sampling or low variability of markers. If 'grey' literature is used to define stocks, as was the case for the overfished school shark, it is difficult to assess the quality of the information used.

The genetic database we have generated may benefit the preparation of the next report, allowing existing genetic information to be fully incorporated. Our analyses to determine general marine biogeographic barriers around Australia may aid in determining stock structure for species with little information, as well as prioritising future species for research. We believe our contribution would significantly improve future updates of this report. We would be happy to discuss preliminary analyses from the database and how to focus our efforts on outcomes that will be of value to the Australian fishing industry now and in the future. We thank-you for the opportunity to provide feedback and look forward to your reply.

Sincerely,

Lisa Pope JRovenden

Dr. Lisa Pope, Dr. Jenny Ovenden and Dr. Cynthia Riginos

cc. Matt Flood, Ilona Stobutski and Andy Moore, ABARES

Attachment 4: The EOI for the proposed project defining biological stocks for the SAFS reports (Dr Jennifer Ovenden)

FRDC Expression of Interest

(ComFRAB)

Application Reference: JO015

Project Title: Defining Biological Stocks for Status of Key Australian Fish Stocks Reports

Applicant: University of Queensland

Administrative Contact: John Shaw - Ph: 07 3365 1503 Email: j.shaw4@uq.edu.au Organisation: University of Queensland Position: School Manager

Principal Investigator: Jennifer Ovenden - Ph: 07 3346 0806 Email: zljovend@uq.edu.au Organisation: University of Queensland Position: Principal Research Fellow

Co-Investigator(s): Andy Moore - Ph: 02 6272 3090 Email: anthony.moore@daff.gov.au Organisation: ABARES Position: Fisheries Scientist

Lisa Pope - Ph: 0427 964 433 Email: l.pope@uq.edu.au Organisation: University of Queensland Position: Postdoctoral Fellow

Start Date: 01-Jul-2014 **End Date:** 30-Jun-2016

Project Budget

	Salary	Travel	Operating	Capital	Cash Contribution	FRDC Contribution	Applicant (In kind)	Other (In kind)	Project
14/15	$74,225	$1,600	$5,500	$0	$0	$81,325	$0	$50,000	$81,325
Justification	$74,225 will be provided by FRDC as partial payment of salaries and entitlements to UQ and ABARES; $5,500 will be provided to cover some of the costs involved with the expert workshop and $1,600 will contribute to project team workshops. UQ is contributing $X of in-kind, consisting of meta-database of Australian marine species population genetics records.								
15/16	$101,170	$1,664	$0	$0	$0	$102,834	$0	$50,000	$102,834
Justification	$101,170 will be provided by FRDC as partial payment of salaries and entitlements to UQ and ABARES; $1664 will contribute to costs of project team workshops. UQ is contributing $X of in-kind, consisting of meta-database of Australian marine species population genetics records.								
Total	**$175,395**	**$3,264**	**$5,500**	**$0**	**$0**	**$184,159**	$0	$100,000	**$184,159**

Theme

Ecologically sustainable development

Objectives

1 To produce an integrated evidence-based approach for defining biological stocks

2 To produce short, written summaries and maps of the biological stock structure of SAFS species

Flow of Benefits

Name	Commercial	Recreational	Traditional
Commonwealth	12.50	0.00	0.00
NSW	12.50	0.00	0.00
NT	12.50	0.00	0.00
QLD	12.50	0.00	0.00
SA	12.50	0.00	0.00
TAS	12.50	0.00	0.00
VIC	12.50	0.00	0.00
WA	12.50	0.00	0.00

Need

A key aim of SAFS 2012 was to report at the biological stock level as the biological stock is the basic unit for stock assessments. However a large amount of the time in drafting and reviewing SAFS 2012 involved defining stocks and ensuring authors used all available information to define each stock. This was a substantial drain on already limited resources. Some authors had limited knowledge of the genetic or other research that had been conducted and how to use this information to define population boundaries. In many cases a consensus on defining the stock boundaries was not reached between authors or the stock definition did not use all the available information.

The complex and varied nature of techniques which include molecular markers (genetics) and physical markers (otolith microchemistery, physical and chemical tagging, parasites and morphology), can make it difficult to derive a clear stock definition. The SAFS review/planning workshop highlighted a clear need to resolve this issue for future SAFS reporting.

This project will develop a ranked evidence based approach to bring together all available information to define biological stocks for SAFS species. The system will be developed in collaboration with experts in molecular and physical tagging. The system will provide a ranking for each line of evidence based on its advantages and limitations. The second tier of this project will be to implement this approach to define stock structure for each SAFS species in consultation with chapter authors.

Planned Outcomes and Benefits

The output of this project is the development of a transparent evidence-based approach for combining and ranking stock structure information for SAFS species. This project will be run in parallel with the SAFS process and directly link with the FAFS project team and authors. Once this approach has been developed and reviewed the project team will roll it out for all SAFS species. We envisage that this information would be web-based and directly linked to the SAFS species status profile as a separate page including a map. The terminology will be clearly explained and the language used in the stock structure explanation will be at a level that can be communicated to a wide range of users.

The users of this work will be SAFS authors, which will mean a substantial saving in time for chapter authors and reduce debate among authors or research groups. Noting that there may be situations where reporting needs to occur in-line with management unit rather than the biological stock.

This approach will be directly used in future SAFS reports for each species. However the technique has far wider application than SAFS and will be useful in defining stock structure in other Australian fish stocks; it will provide a way of assimilating a range of complex sometimes disparate data. Having a technique that can provide guidance on how to weight various forms of evidence in a systematic and transparent manner should prove very useful to the wider fisheries science and management fields.

Consultation

This project has been developed in consultation with the SAFS advisory group, ABARES and FRDC. The project team have held a workshop to develop a web-based questionnaire which was circulated to members of the SAFS advisory group, and authors of SAFS 2012. All respondents indicated that biological stock summaries for SAFS species would be aid in developing future versions of the SAFS report.

The SAFS review/planning workshop July 31 2013 highlighted a clear need to resolve this issue for future SAFS reporting. The development of this project received unanimous support from the steering committee.

Methods

Coordination with SAFS

It is expected that this project will run simultaneously with the SAFS project. It will aim to provide written summaries of biological stock structure for SAFS species. Andy Moore is part of the ABARES SAFS production team and chapter author and is the ideal link between developing and rolling out the weight-of-evidence approach in collaboration with the SAFS project.

The team will work with SAFS authors to ensure the end-product of this project (species-specific information on biological stock structure) is used in SAFS reports.

Literature review

The team will perform a literature review on ways to determine biological stock structure, focusing on the field of fisheries science and management while also touching on other relevant areas such as ecology, dispersal and life-history theory. It will include details on the theory and practise of commonly used methods of collecting stock structure data (such as population genetics, parasites, physical tagging) as well as examining methods that may be important in the future. The Australian marine environment will be described, as will the range of species-types included in the SAFS reports.

The literature review will also include an examination of the meaning of 'biological stock structure' and ensure that this is clearly expressed in the SAFS report.

Proposed solution to integrated stock definition

The team will develop a ranked evidence based approach that will combine and weight stock structure evidence that will be applicable to the widest range of species and which will be simple to implement and explain. We will consult with experts in various fields of stock structure analysis to develop this methodology and discuss the approach with a panel of experts at a workshop.

Expert workshop

The approach will be presented for critical analysis to a panel of experts.

The team will incorporate expert input and apply the method to SAFS species.

Rolling out the approach for SAFS species

The team will collate information used to define biological stock boundaries in the current SAFS report, and add information that may have been missed or which may be new.

The ranked evidence based approach will be applied to all SAFS species. All available data types, including fisheries data, will be included in developing the species stock structure profiles. The project team will also provide mapping of species boundaries across the range of the species. We envisage that this information would be web-based and directly linked to the SAFS species status profile as a separate page including a map.

Consultation with SAFS authors

The project team will consult directly with SAFS authors on the stock structure profile developed for each species through this project. There may be situations where reporting needs to occur in-line with management unit rather than the biological stock.

The team will present the final results to a SAFS workshop.

Related Projects and Research Capacity

Jenny - Scoping current and future genetic tools; Determination of management units for grey mackerel; Stock structure of Spanish mackerel; Ocean's eleven: a critical evaluation of the role of population, evolutionary and molecular genetics in the management of wild fisheries; Crinkles in connectivity: combining genetics and other types of data to estimate movement and interbreeding between populations.

Lisa - UQ post-doctoral fellowship to develop an Australian marine population genetic database to determine patterns of genetic diversity/connectivity around Australia.

Andy - part of the SAFS production team; author ABARES Fishery Status Reports; FRDC project on defining stock structure in western gemfish.

Outputs & Extensions

This project aims to develop a transparent weight-of-evidence approach for combining and ranking stock structure information for SAFS species. This project will be run in parallel with the SAFS process and directly link with the SAFS project team and authors. This approach will be directly used in future SAFS reports for each species. However the technique has far wider applicability than SAFS and will be useful in defining stock structure in other Australian fish stocks. It provides a way of assimilating a range of complex and sometimes disparate data. Having a technique that can provide guidance on how to weight various forms of evidence in a systematic and transparent manner should prove very useful to the wider fisheries science and management fields.

Once this approach has been developed and reviewed the project team will roll it out for all SAFS species. We envisage that this information would be web based and directly linked to the SAFS species status profile as a separate page including a map.

Extension with the SAFS team and authors will be coordinated through Andy Moore (part of the ABARES SAFS team). Extension to the SAFS advisory group will be via direct contact and presentations at SAFS workshops.

Attachment 5: The SAFS Advisory Group's species selection list for SAFS 2014

SAFS 2012 species - all species from the 2012 reports will be included in the SAFS reports 2014
Priority 1 – are the new species to be included in the SAFS reports 2014 (18 in total)
Priority 1a – indicates potential 100 percent in-kind species for SAFS reports 2014 - it is unlikely these species will be included in the SAFS reports 2014
Priority 2 – indicates species that will be excluded from the 2014 reports

SAFS 2012 Species	Lead	Support	Proposed to be addressed in SAFS reports as negligible catch species	To include in SAFS 2014?
Gould's squid (*Nototodarus gouldi*)	Comm	TAS		Yes
Bigeye tuna (*Thunnus obesus*)	Comm	none		Yes
Blue grenadier (*Macruronus novaezelandie*)	Comm	none		Yes
Swordfish (*Xiphias gladius*)	Comm	none		Yes
Brown & Grooved tiger prawn (*Penaeus esculentus*)	Comm	QLD; WA; NSW		Yes
Deepwater flathead (*Neoplatycephalus conatus*)	Comm	none		Yes
Gummy shark (*Mustelus antarcticus*)	Comm	NSW; SA; TAS; VIC; WA		Yes
School shark (*Galeorhinus galeus*)	Comm	SA; TAS; VIC; NSW		Yes
Southern bluefin tuna (*Thunnus maccoyii*)	Comm	none		Yes
Tiger flathead (*Neoplatycephalus richardsoni*)	Comm	NSW; TAS; VIC		Yes
White banana prawn (*Fenneropenaeus merguiensis*)	Comm	WA; QLD		Yes
Yellowfin tuna (*Thunnus albacares*)	Comm	none		Yes
Australian salmon (*Arripis trutta & Arripis truttaceus*)	NSW	SA; TAS; VIC; WA		Yes
Balmain bugs (*Ibacus chacei & I. Brucei & I, peronii*)	NSW	QLD		Yes
Eastern rock lobster (*Sagmariasusverreauxi*)	NSW	none		Yes
Sand whiting (*Sillago ciliata*)	QLD	NSW		Yes
Sea mullet (*Mugil cephalus*)	NSW	QLD; WA		Yes
Barramundi (*Lates calcarifer*)	NT	QLD; WA		Yes
Blacktip sharks (*Carcharhinus tilstoni, C.limbatus, C. sorrah*)	NT (shark futures)	NSW; QLD; WA		Yes
Crimson snapper (*Lutjanus erythropterus*)	NT	QLD; WA		Yes
Mud crab (*Scylla serrata and S. Olivacea*)	NT	NSW; QLD; WA		Yes
Saddle-tail snapper (*Lutjanus malabaricus*)	NT	QLD; WA		Yes
Blue and red endeavours (*Metapenaeus endeavouri & M. Ensis*)	QLD	Comm; WA		Yes
Coral trout (*Plectropomus & Variola spp*)	QLD	Comm, NT		Yes
Dusky flathead (*Platycephalus fuscus*)	QLD	NSW; VIC		Yes
Eastern king prawn (*Melicertus plebejus*)	QLD	NSW		Yes
Moreton bay bugs (*Thenus australiensis & T, parindicus*)	QLD	Comm; WA		Yes
Red-throated emperor (*Lethrinus miniatus*)	QLD	WA		Yes
Spanish mackerel (*Scomberomorus commerson*)	QLD	Comm; NT; WA		Yes
Stout whiting (*Sillago robusta*)	QLD	NSW		Yes
Tropical rock lobster (*Panulirus ornatus*)	Comm	QLD		Yes
Greenlip abalone (*Haliotis laevigata*)	SA	TAS; VIC; WA		Yes
Sardine (*Sardinops sagax*)	SA	Comm; NSW; VIC; WA		Yes
Southern rock lobster (*Jasus edwardsi*)	SA	TAS; VIC		Yes
Blacklip abalone (*Haliotis rubra*)	TAS	NSW; SA; VIC; WA		Yes
Commercial scallop (*Pecten fumatus*)	TAS	Comm; Vic		Yes
Giant crab (*Pseudocarcinus gigas*)	TAS	SA; VIC; WA		Yes
Southern calamari (*Sepioteuthis australis*)	TAS	Comm; NSW; SA; VIC		Yes
King george whiting (*Sillaginodes punctatus*)	VIC	SA; WA		Yes
School whiting (*Sillago flindersi*)	VIC	Comm; NSW; TAS		Yes
Blue swimmer crab (*Portunus pelagius*)	WA	NSW; QLD; SA		Yes
Dusky shark (*Carcharhinus obscurus*)	WA	Comm; NSW; SA; NT		Yes
Goldband snapper (*Pristipomoides spp.*)	NT	WA; QLD		Yes
Snapper (*Pagrus auratus*)	SA	NSW; QLD; SA; VIC; WA		Yes
Red emperor (*Lutjanus sebae*)	WA	NT; QLD		Yes
Sandbar shark (*Carcharhinus plumbeus*)	WA	NSW; QLD; NT		Yes
Saucer scallop (*Amusium balloti*)	WA	QLD		Yes
Western king prawn (*Melicertus latisulcatus*)	SA	QLD, WA		Yes
Western rock lobster (*Panulirus cygnus*)	WA	none		Yes

Potential new species for 2014	Lead	Support	Proposed to be addressed in SAFS reports as negligible catch species	Priority	To include in SAFS 2014?
Grey mackerel (*Scomberomerus semifasciatus*)	QLD	NT; WA		1	Yes
Banded morwong (*Cheilodactylus spectabilis*)	TAS	VIC		1	Yes
Palid octopus (*Octopus pallidus*)	TAS	SA; VIC		1	Yes
Garfish (*Hyporhamphus melanochir*)	SA	VIC; WA; TAS		1	Yes
Jack mackerel (*Trachurus declivis*)	TAS	Comm; NSW		1	Yes
Yelloweye mullet (*Aldrichetta forsteri*) (*MSC*)	SA	WA; VIC; TAS		1	Yes
Pipis (*Donax spp*)(*MSC*)	SA	NSW		1	Yes
Murray Cod (*Maccullochella peelii*)	SA	NSW; QLD; VIC		1	Yes
Mulloway (*Argyrosomus japonicus*)	SA	NSW; QLD	WA	1	Yes
Yellowtail kingfish (*Seriola lalandi*)	NSW	QLD	WA	1	Yes
School prawns (*Metapenaeus spp*)	NSW	QLD; VIC		1	Yes
Yellowfin bream (*Acanthopagrus australis*)	QLD	NSW; VIC		1	Yes
Tailor (*Pomatomus satatrix*)	QLD	NSW; WA; VIC		1	Yes
Pink ling (*Genypterus blacodes*)	Comm	NSW		1	Yes
Southern sand flathead (*Platycephalus bassensis*)	Vic	TAS; SA	WA	1	Yes
King threadfin (*Polydactylus macrochir*)	NT	QLD, (maybe WA)		1a	Maybe
Gloomy octopus (*Octopus tetricus*)	TAS	WA		1a	Maybe
Elephantfish (*Callorhinchus milii*)	Comm	TAS		1a	Maybe
Flat oyster (*Ostrea angasi*)	TAS	none		1a	Maybe
Venerupis clams (*Venerupis spp*)	TAS	none		1a	Maybe
Grey morwong (*Nemadactylus douglasii*)	NSW	none		1a	Maybe
Eastern Sea Garfish (*Hyporhamphus australis*)	NSW	none		1a	Maybe
Patagonian toothfish (*Dissostichus eleginoides*) (MSC)	Comm	none		1a	Maybe
Spotted warehou (*Seriolella punctata*)	Comm	none		1a	Maybe
Mirror Dory (*Zenopsis nebulosus*)	Comm	none		1a	Maybe
Jackass Morwong (*Nemadactylus macropterus*)	Comm	none		1a	Maybe

Potential new species (historically heavily fished or overfished) for 2014	Lead	Support	Proposed to be addressed in SAFS reports as negligible catch species	Priority	To include in SAFS 2014?
Black jewfish (*Protonibea diacanthus*)	NT	QLD		1	Yes
Golden snapper (*Lutjanus johnii*)	NT	QLD	WA	1	Yes
Gemfish (eastern and western)	Comm	NSW		1	Yes
Australian herring (Tommy Rough)	WA	SA		1a	Maybe
Rock flathead (*Platycephalus laevigatus*)	VIC	none		1a	Maybe
Orange Roughy (*Hoplostethus atlanticus*)	Comm	none		1a	Maybe

Priority 2 species for 2014	Lead	Support	Proposed to be addressed in SAFS reports as negligible catch species	Priority	To include in SAFS 2014?
Katelysia clams (*Katelysia spp*)	SA	TAS		?	?
Bastard trumpeter (*Latridopis forsteri*)	TAS - priority 2	???		2	No
Long-snouted boarfish (*Pentaceropsis recurvirostris*)	TAS - priority 2	???		2	No
Greenback flounder (*Rhombosolea tapirina*)	TAS - priority 2	VIC		2	No
Leatherjacket (Monacanthidae spp)	TAS - priority 2	???		2	No
Long-finned pike (*Dinolestes lewini*)	TAS - priority 2	???		2	No
Short-finned pike (*Triacanthodes ethiops*)	TAS - priority 2	SA		2	No
Golden Perch (*Macquaria ambigua*)	SA	none		2	No
Blue mackerel (*Scomber australasicus*)	NSW	WA; Comm; SA; TAS		2	No
Siler trevally (*Psuedocaranx dentex*)	NSW	Comm; WA; Vic; SA		2	No
Northern King Prawn (*Penaeus longistylus*)	QLD	none		2	No
Roes abalone (*Haliotis roei*)	SAFS 2012 priority 2 species	WA		2	No
Whiskery shark (*Furgaleus macki*)	SAFS 2012 priority 2 species	WA		2	No
Blue-spotted emperor (*Lethrinus spp*)	SAFS 2012 priority 2 species	WA; NT; QLD		2	No
Blue Warehou (*Seriolella brama*)	Comm	Tas		2	No

Attachment 6: Alistair Hobday's presentation for the proposed Fishery status reports: health-check for Australian fisheries.

Proposal

Healthcheck for Australian fisheries

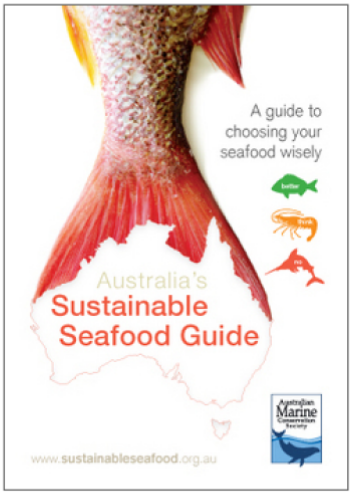
FRDC EOI

Alistair Hobday (CSIRO), Matthew Flood (ABARES), Emily Ogier (IMAS)

For SAFS workshop Oct 21-22, 2013
Canberra

Sustainable seafood is important for markets and consumers

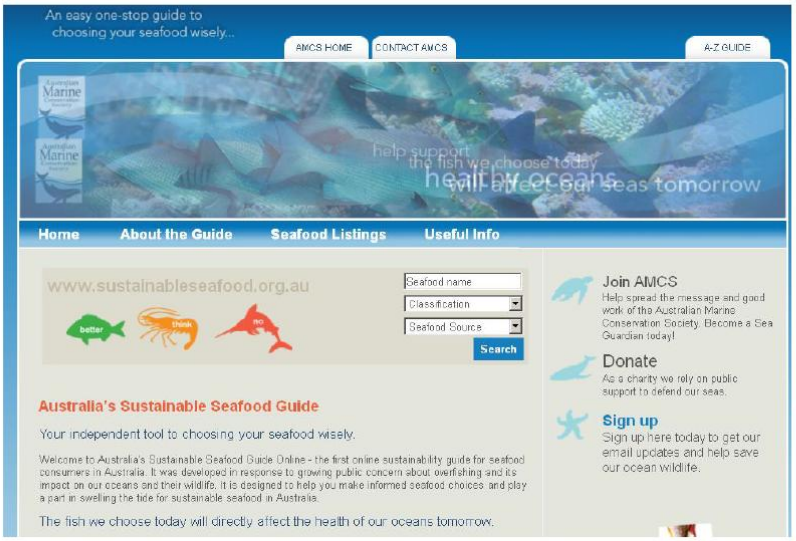
AUSTRALIA'S SUSTAINABLE SEAFOOD GUIDE



Do you love your seafood but also love our oceans? Are you concerned about what you eat from the sea and how it got to your plate? Then grab your copy of Australia's only independent national guide to choosing sustainable seafood. This attractive user-friendly Guide gives you an insight into the sustainability of over 100 seafood species commonly found in our fishmongers and restaurants. In response to public demand this updated edition now includes canned, imported, regional seafood and more.

Price: $9.95

Quality of reporting varies



Hence, SAFS reporting is critical, with a focus across Australia, at stock level

Are these reports serving Australian seafood industry?

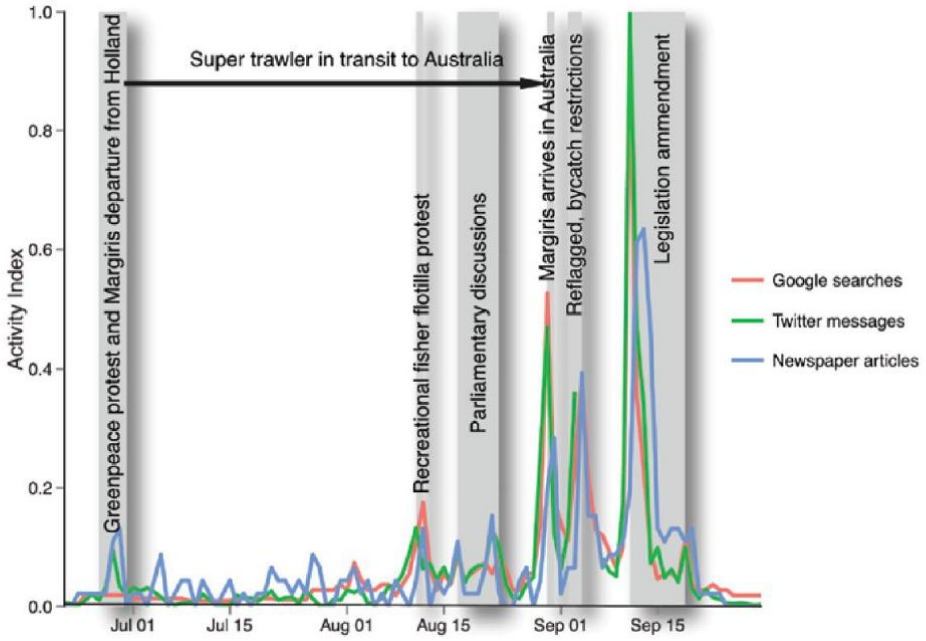
- Some independent, some not…some good, some bad…
- All report on status of fish stocks – biological sustainability
- Consumers and higher levels in supply chains want independent verification
  - Society is not making choice just on biological sustainability
- Social license increasing important
  - Fisheries need to be engaged

Social license is important

What do we need?

- A wide ranging and independent summary of Australia's world leading status of fisheries
  - International science literature supports this
- Is the time of engagement and dialogue over?
  - Social media and outreach means even if political will favours industry (not always a given) campaigns can bypass industry engagement.

Social media is too fast to play catch-up – be proactive



“Healthcheck” - Objectives

1. In consultation with fisheries stakeholders identify a broad range of criteria for reporting the status of Australian fisheries (vs stocks)
   - Biological, economic, social, governance, etc….
2. Develop a web-based and summary template for reporting the status of Australian fisheries across a range of criteria
3. Undertake preliminary assessment of selected fisheries to demonstrate approach
   - Not to be public unless agreed
4. Develop a pathway for linking these fishery-level reports with the stock reports (SAFS) and the operalisation of the reports into the future
   - Jurisdictions, FRDC, independent,

Range of issues

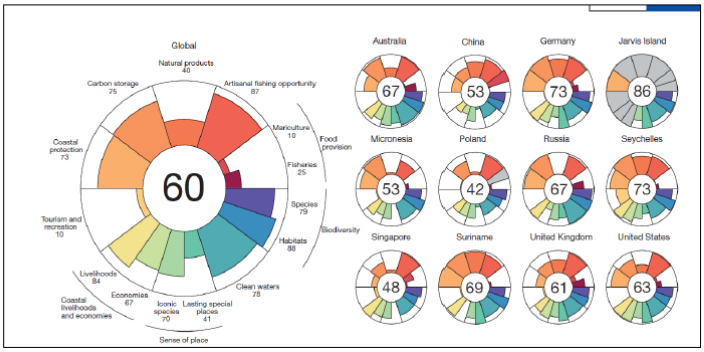
While the set of indicators and reporting criteria would be developed in consultation, some example indicators might be based on;

- Stock status – as from SAFS report
- Economic performance
- Research investment
- TEP issues and how addressed
- Availability of recruitment indicators
- Disease risk
- Social indicators
- Recreational issues
- Market role (e.g. domestic, international, food, petfood)
- Carbon footprint or storage potential
- Eco-certification status
- Tourism role

This project will not include new data collection

Example “Healthcheck”

- A variety of reporting options (not summations)



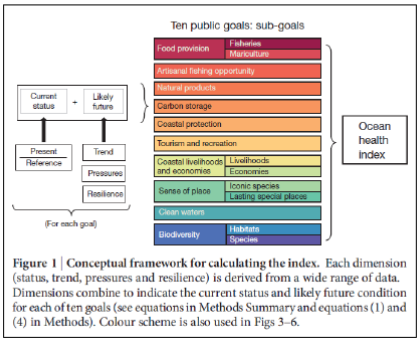
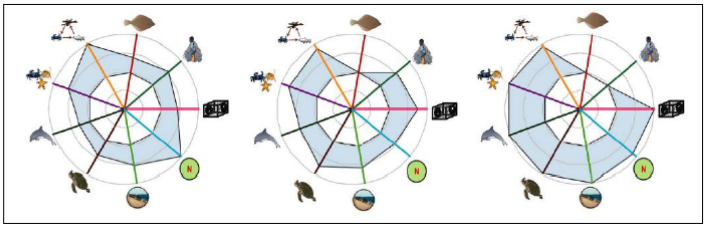


Figure 1 | Conceptual framework for calculating the index. Each dimension (status, trend, pressures and resilience) is derived from a wide range of data. Dimensions combine to indicate the current status and likely future condition for each of ten goals (see equations in Methods Summary and equations (1) and (4) in Methods). Colour scheme is also used in Figs 3–6.



Fishery	Stock status	TEP issues	Recruitment indicator		Disease risks	Climate vulnerability	Recreational issues	Market risk	Carbon footprint	Overall	Additional information on strengths and issues for each fishery
	Indicator - Level of performance										
SRL - Tas	L	L	H		M	M	M	H	H	3	Additional information provided here
SRL - SA	L	M	H		M	L	L	H	H	3	Additional information provided here
SRL - Vic	M	L	H		M	L	L	H	H	3	Additional information provided here
Abalone	L	L	H		H	M	M	L	M	2	Additional information provided here
Scalefish	M	M	L		L	L	M	L	M	0	Additional information provided here
Scallop	H	L	M		M	L	M	L	M	1	Additional information provided here
Etc...											Additional information provided here

Related Projects

- This project would draw information from a wide range of published research and synthesis reports, including SAFS, Ecological Risk Assessment reports, eco-certification projects, bycatch management projects, national social indicators reports, and via discussion with stakeholders, non-traditional information that can be included in the assessments.
- The two most closely related projects are the SAFS project led by Matthew Flood and FRDC 2013/204 led by Emily Ogier – both are co-PI's for this proposal.
- **We propose to use the same oversight group as for SAFS project**
  - **Will that be appropriate?**

Outputs & Extensions

- Australian fisheries consider a much broader range of issues than just status of the target species. This recognition is important for the seafood industry and for customers nationally and internationally.
  - This project will test the concept of reporting on fisheries indicators that are broader than stock status.
- Consistent comparative treatment of Australia's national and state fisheries is important, and will also allow comparisons with international fisheries.
  - Without proactive presentation of the health of our fisheries, third party reports (e.g. seafood guides) may fill the gap. These reports, while often comprehensive, fail to consider the range of indicators that we will consider.
- The main output will be templates for the reporting of fisheries status across a wide range of indicators. These templates will be in both printed (e.g. report card style) and in web-based format which allows a hierarchy of information to be presented, as well as linking to resources held in disparate locations, and regular updating.
- These materials will be targeted for use by managers, policy makers, marketers, and the public to assess a range of seafood issues.
- The approach for updating and operationalising these reports will be discussed and developed during the project.

If funded…

- A collaborative, consultative investigation of what will be needed to project Australian fisheries
  - Develop in collaboration with SAFS process
  - Develop in consultation with fishery stakeholders
  - Risk management will be foremost in mind