

# SafeFish

2018-2021

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In submitting this report, the researcher has agreed to FRDC publishing this material in its edited form.

# Foreword

Australia's seafood industry, valued at AUD \$3.32 billion in 2018/19, has faced significant challenges over the last few years. The effect of COVID-19 disruptions and control measures, coupled with significant market closures, has led to lower demand and a reduced gross value of the industry. In these tough times there is increased competition in the market, making it more important than ever to maintain consistency in market access and build reputation as a supplier of safe food.

During this term of SafeFish, we have continued to work with our industry, government and research partners to deliver an impressive body of work addressing food safety and market access. Our strategic relationships with our partners have enable this work to progress smoothly, maximising the value our partners contribute in expertise and time.

Key successes have been our technical support to Codex Australia in their important work to keep the international trading platform science based and fair for all countries; tackling the complicated issue of vibrio risk in bivalve shellfish; supporting the rapid development of the oyster industry in northern Australia and reviewing important domestic standards addressing microbiological and marine biotoxin risks. In all this work we take a collaborative approach which enables a smooth transition from research outcomes to uptake through policy change.

I have had the great pleasure of Chairing SafeFish since 2014. During this period, governance and processes employed by SafeFish have matured. We now run a transparent program with open partnership meetings, stakeholder input and strategic planning. Our partnerships with Food Standards Australia, the Department of Agriculture Water and Environment, the Seafood Industry Association and the Seafood Trade Advisory Group recognise the value each organisation brings to the seafood industry and the benefits of working together to further market access. Our partnerships with the New Zealand Seafood Safety Research Platform and Seafood New Zealand leverage the work and expertise that exists in both countries to address common food safety issues.

In my final year as SafeFish Chair, I wish the program all the best for continued success in the new iteration. The financial support from a growing number of industry stakeholders and in-kind support from our partnership committee is a testament to the success of the program. Seafood is a highly variable commodity, produced across a wide range of environments, presented in many different formats, and supporting commercial, recreational and customary fishers. I have found the role of assisting SafeFish to be a trusted, independent resource to protect public health and food safety in this challenging environment rewarding and hope the program continues its success well into the future.

AZ M. HAZ

Dr. Anne M Astin PSM Independent SafeFish Chair

# Bio of Author

Dr Anne Astin is a distinguished food scientist and highly regarded administrator. She has held numerous board and senior executive positions across government, industry research and development and advocacy organisations. Alongside her role as Chair, she is a member of CSIRO's Food and Nutrition Advisor Committee, and the International Science Advisory Panel.

In 2011, Anne was awarded the Public Service Medal in the Victorian Division of the Queen's Birthday Honours for her services to the dairy industry, national food regulation and rural women. In 2010, she was inducted into the Victorian Women's Honour Roll for her work in biochemistry and as an advocate of women's leadership. In 2010 she also received the Australian Dairy Industry Council's Outstanding Service Award in recognition of her leadership and services to Australia's dairy industry, and in 2016 was awarded the Dairy Industry Association of Australia's John Bryant Gold Medal for outstanding service to the industry.

Anne was the inaugural CEO of the Victorian Government's statutory authority, Dairy Food Safety Victoria. She previously held several senior executive positions in the Victorian public sector, working in food policy and regulation, public health, agriculture, minerals and petroleum, natural resources and environment, land administration and forensic science. Prior to this, Anne was a senior tutor at Monash University, working in biomedical research and education.

Her wealth of leadership experience includes President and Chair of the Australian Institute of Food Science and Technology (AIFST), Chair of the Australian and New Zealand Implementation Sub Committee for Food Regulation (ISFR), Wellsprings for Women Inc., and Director of Australian Dairy Farmers Ltd, Dairy Australia, and the Melbourne Royal Botanic Gardens.

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- Food and Animal Biproducts Section, Export Standards Branch of the, Commonwealth Department of Agriculture, Water and the Environment (DAWE)
- Dairy, Eggs and Fish Program, Export Division, DAWE
- Fisheries Research and Development Corporation (FRDC)
- Food Standards Australia New Zealand (FSANZ)
- Australian Shellfish Quality Assurance Advisory Committee (ASQAAC)
- A representative of the Seafood Trade Advisory Group (STAG)
- Sydney Fish Market
- Seafood Importers Association of Australasia (SIAA)
- A representative of Seafood Industry Australia (SIA)
- A representative of the seafood processing industry from Simplot Australia
- An independent consultant representing the processing industry.

SafeFish would like to acknowledge the funding provided by the Abalone Council of Australia Ltd. (ACA), the Australian Abalone Growers Association (AAGA), Australian Council of Prawn Fishers (ACPF), Southern Rock lobster (SRL), Oysters Australia, the Tasmanian Salmonid Growers Association (TSGA), Australian Mussel Industry Australia (AMIA), the Sydney Fish Market, and the National and Commonwealth FRDC Research Advisory Committees. It would like to thank all industry Executive Officers for distributing information and outputs through their networks, and we would also like to acknowledge the support provided by its stakeholders to review and input into Codex and other internationally standards setting processes that SafeFish facilitates. We would also like to provide special thanks to the Fisheries Research and Development Corporation for its funding and ongoing support of this important market access platform.

A full list of stakeholders who have contributed to the program is available in <u>Appendix 1.</u> Without their input, the risk commensurate and practically appropriate advice provided by SafeFish would not be able to be generated.

# **Abbreviations**

ACA - Abalone Council Australia ACPF - Australian Council of Prawn Fisheries AAGA - Australian Abalone Growers Association AMIA - Australian Mussel Industry Association ASCRC - Australian Seafood Cooperative Research Centre ASQAAC - Australian Shellfish Quality Assurance Advisory Committee CAC - Codex Alimentarius Commission CCFFP - Codex Committee for Fish and Fisheries Products

- CCFH Codex Committee on Food Hygiene
- CCCF Codex Committee on Contaminants in Foods
- CCFA Codex Committee on Food Additives
- CCFH Codex Committee on Food Hygiene
- CCFO Codex Committee on Fats and Oils
- CCMAS Codex Committee on Methods of Analysis and Sampling
- CCRVDF Codex Committee on Residues of Veterinary Drugs in Foods
- **CP** Ciguatera Poisoning
- DAWE Department of Agriculture, Water and the Environment
- DSP Diarrhetic Shellfish Poisoning
- DST Diarrhetic Shellfish toxins
- EFSA European Food Safety Authority
- EWG Electronic Working Group
- FAO Food and Agriculture Organisation of the United Nations
- FRDC Fisheries Research and Development Corporation
- FSC Food Standards Code
- FSANZ Food Standards Australia New Zealand
- FTE Full Time Equivalent
- HAV Hepatitis A Virus
- JECFA The Joint FAO/WHO Expert Committee on Food Additives
- OA Oysters Australia
- ML Maximum Level
- PSP Paralytic Shellfish Poisoning
- PST paralytic shellfish toxins
- RTE Ready to Eat
- SARDI South Australian Research and Development Institute
- SIA Seafood Industry Australia
- SRL Southern Rocklobster Ltd.
- STAG Seafood Trade Advisory Group
- TSGA Tasmanian Salmonid Growers Association
- WHO World Health Organisation

# **Executive Summary**

# Background

SafeFish is an initiative that was developed by the South Australian Research and Development Institute (SARDI) in 2010 (Project 2010-752-10: SafeFish - Seafood Trade Expert Panel funded by the Australian Seafood CRC until 2015). Following this, the Fisheries Research and Development Corporation (FRDC) and several industry bodies provided funding under two separate grants: Project 2015-212 which ran from 2015-2018 and the current grant Project 2018-004 which ran from 2018-2021. Since its inception, SafeFish has successfully enabled seafood industry sectors to respond in a coordinated and professional manner to technical trade and market access impediments that arise, especially in relation to food safety and hygiene. It provides industry and government departments with access to technical and scientific capability to manage known risks and assists to identify and address new risks and market access barriers that emerge.

# Objectives

The two objectives of the SafeFish project are:

- 1. To deliver robust food safety research and advice to industry and regulators that underpins Australia's reputation as a producer of safe seafood.
- 2. To maintain and enhance the capabilities in Australia to provide that research and advice in a cost effective, efficient and timely manner.

# **Structured Approach**

SafeFish delivers four major platforms; governance, input into food safety standards; research into technical food safety issues and building food safety capability in the seafood industry, seafood regulators and researchers.

SafeFish is guided by an advisory panel (the SafeFish partners), following a defined <u>Charter</u>, and is supported by a Secretariat with an Independent Chair. The partners come from industry (Australian Shellfish Quality Assurance Advisory Committee (ASQAAC), the Seafood Trade Advisory Group (STAG), Seafood Industry Australia, the Sydney Fish Market, Seafood New Zealand and representatives from seafood processing), government (Food Standards Australia New Zealand (FSANZ), Department of Agriculture, Water and the Environment (DAWE), Fisheries Research and Development Corporation (FRDC)) and researchers (SARDI, UTAS, private consultants), bringing a variety of expertise, resources and linkages to the program. The partnership approach has been successful in leveraging the expertise and time provided by the member organisations to provide general oversight and strategic direction for the project. It is an active, engaged group of representatives, investing time and resources in key issues that impact seafood safety and trade through a unified platform. This group responds on several levels and through a variety of channels and is a strong asset to the seafood industry going forward as a central point of contact for when issues arise, as well as a tool to assist in driving resolutions.

# **Delivering Value**

SafeFish follows a formalised process to provide technical briefs to support the Australian delegation attending relevant Codex meetings that reflect the Australian seafood industry's position. SafeFish monitored the activities of seven different Codex Committees during this project, with over 190 documents being reviewed and 116 items directly being of relevance to seafood. Formal submissions following consultation with industry were made to Codex Australia around several topics including methylmercury, histamines, ciguatera, veterinary drugs, and amending the designated species of sardines. A technical representative was also funded to attend two Codex meetings to support Australian delegations. Input to Codex is essential to ensure the standards, guidelines and Code of Practices under development are based on sound scientific principles, are not overly onerous and provide a level playing field for Australian seafood exporters.

SafeFish follows a communication strategy policy to ensure that stakeholders are aware of the activities and outputs that are undertaken. A broad stakeholder network of regulators, researchers and industry

contacts is also maintained that are drawn upon for expertise and advice when required. Extension and adoption activities include seminars, workshops, training days, technical reports, articles, fact sheets and communiques. These are a key facet of the program and are designed to educate, facilitate capability building, and rapid uptake of outputs.

The technical program is underpinned by a strategy to identify current and emerging food safety and market access issues, prioritise them, and undertake technical research to provide potential solutions to overcome those identified as the highest priority. For the current project, these included: ciguatera poisoning, microplastics, biotoxins (specifically validating Diarrhetic Shellfish Poisoning test kits), vibrios in bivalve shellfish, and heavy metals. In addition to this, two submissions to FSANZ following reviews around the seafood related microbiological criteria, and the current marine biotoxin levels in the Food Standards Code was also undertaken. Technical research was either conducted by SafeFish researchers or outsourced to external experts in that field. International expertise was sourced when required. Major bodies of work were peer reviewed to ensure accuracy and scientific rigor.

This work has assisted the Australian seafood industry to meet their food safety obligations, provide novel risk-management options, assisted in maintaining or re-opening markets to Australian products, and provided technical support, training and capability to seafood businesses, the seafood industry, researchers and regulators.

# **Implications for Relevant Stakeholders**

SafeFish uses the Core funding received from FRDC and industry to carry out three types of projects:

- 1. Food safety incident response and management
- 2. Technical input to inter-government consultations on food regulations and market access
- 3. Proactive research, risk analyses and training.

Through these combined activities, SafeFish helps to enable market access and to maintain an excellent food safety record for Australian seafood. If these two objectives are not met effectively, several negative consequences may result. Examples of these consequences include:

- Health risks associated with consumption of unsafe seafood may increase
- Food safety compliance costs increase to the point where businesses cannot viably access certain markets
- Damage to reputation and brand due to illness or non-compliance with food safety regulation systems (experience shows that market access can be impacted significantly in this scenario)
- International and domestic trade of Australian seafood decreases
- Investors at all points of the supply chain suffer economic losses.

Whilst the SafeFish project cannot necessarily mitigate all the items detailed above, the services it provides goes a long way to assisting the seafood industry respond to issues in a fast, effective and unified manner to decrease the ramifications that arise as a result. Industry and regulators have demonstrated that they value and rely on the work undertaken by SafeFish and appreciate the role that it plays as a conjugate.

# Recommendation

To further assist with industry preparedness and incident response, SafeFish provides the following recommendation of an area for which it could potentially develop as part of its remit in the future:

• The provision of a seafood wide food safety/market access risk register as well as industry specific registers. This will include developing mitigation strategies and long/short term goals for addressing issues identified.

# Keywords

Seafood, safety, market access, food safety, Australia, ciguatera, microplastics, vibrios, biotoxins, partnership, trade, technical advice, trade barriers.

# Introduction

SafeFish is an initiative that was developed by the South Australian Research and Development Institute (SARDI) in 2010. Historically, it has successfully enabled seafood industry sectors to respond in a coordinated and professional manner to technical trade and market access issues. SafeFish provides industry and government departments with access to technical and scientific capability to manage known risks, assists to identify and address new risks and market access barriers that arise.

Major outcomes of SafeFish to date include:

- Creating a forum for scientific and technical experts to consider technical issues and provide advice to key government agencies involved in trade and market access negotiations for seafood, including during Codex negotiations for food standards
- Facilitating technical research that has provided trade advantage and opportunity to industry whilst minimising regulatory cost
- Responding under Codex/WTO trade principles to precautionary positions taken by trading
  partners. Impacts include avoiding increased testing compliance costs, time out of market and
  potential loss of markets. The opportunity to provide regional risk assessments to alleviate the
  impact of these cost consequences is critical for business profitability and sometimes survival
- Offering a significant level of technical support to the seafood industry and government during major seafood safety incidents to inform the risk management response of industry and the Controlling Authorities e.g., Norovirus in New South Wales, Tasmanian shellfish and marine biotoxins across many Tasmanian seafood sectors, and market access issues into China relating to heavy metals in Rock Lobster.

# Need

Maintaining and enhancing market access for Australian seafood is critical for future industry growth. SafeFish makes a significant contribution to this by carrying out three types of projects:

- Food safety incident responses. The SafeFish partners come together during each incident to provide industry and government with immediate technical information required to respond to the incident. Subsequently, technical input is provided to update policies for prevention of similar incidents and respond to them should they recur. Appropriate technical responses reduce the impact of food safety incidents and ensure better outcomes for future management.
- 2. Technical input to inter-government consultations on food regulations and market access. It is essential for the Australian seafood industry to participate in consultations such as Codex to ensure that proposed new, or modified, regulations are pragmatic and cost-effective for the Australian seafood industry. It is far easier to influence standards under development than after they have been finalised. Similarly, it is essential for the seafood industry to stay in close contact with Food Safety Australia and New Zealand (FSANZ) when domestic food safety regulations are reviewed.
- 3. Proactive research, risk analyses and training. The safety of Australian seafood is not negotiable in domestic and international markets. Over recent years SafeFish has conducted many activities to assist the industry anticipate and minimize food safety risks. The objective of the activities has always been to identify and mitigate risks before they cause a problem, or to grow knowledge to enable us to improve our risk management in a cost-effective manner.

# Objectives

The two objectives of the project were:

- 1. To deliver robust food safety research and advice to industry and regulators that underpins Australia's reputation as a producer of safe seafood.
- 2. To maintain and enhance the capabilities in Australia to provide that research and advice in a cost effective, efficient and timely manner.

# Method

To fulfil its objectives, SafeFish operated under four major platforms and completed the following processes under each:

# Platform 1: Governance

- Coordinated an advisory committee (SafeFish partnership members' panel) that provided recommendations and steerage of the project and its relevant outcomes and outputs. Facilitated quarterly meetings of the advisory committee to drive the operation and work program for SafeFish
- Provided a Secretariat body to run the day-to-day operations of SafeFish, including appointing and supporting an Independent Chair
- Operated under the arrangements specified in the SafeFish Charter, and the Communications Strategy and Plan.

#### **Platform 2: Input into Standard Development**

- Monitored issues affecting the seafood industry through six different Codex General Subject Committees, and one Codex Commodity Committee
- Followed a formalised process to facilitate input to Codex standards and guidelines under development through emails, phone calls, national meetings and teleconferences with key experts and industry representatives to identify and collate a unified response on issues affecting Australian seafood
- Liaised with industry, researchers and regulators to identify risk commensurate positions to proposed standards and to ensure that the position is appropriate and practical for industry to implement should it become formalised
- Provided technical briefs and participated in relevant meetings to support the Australian delegation attending relevant Codex meetings to ensure that the Australian position on the Codex items addressed industry concerns and was factually based
- Funded the attendance of technical experts at relevant Codex meetings and working groups. These experts were selected based on experience and knowledge of the issues under discussion. In addition to attending the meetings, the expert was heavily involved in the drafting process for the SafeFish technical briefs that were developed

- Responded to the World Trade Organization (WTO) Sanitary and Phytosanitary (SPS) notifications of new food safety regulations from trading countries by providing comment where appropriate and notifying industry of impending changes
- Responded to the Food Standards Australia New Zealand (FSANZ) calls for comment on tools that have been developed for industry, providing comment where necessary and notifying industry to raise awareness. In June 2019, SafeFish also provided comments for a FSANZ call to review the proposed amendments to the seafood microbiological criteria for seafood in Standard 1.6.1 of the Code. These comments were collated by SafeFish through collaboration with interested industry and regulator stakeholders. This process highlighted the need for a full review to be undertaken which has been detailed below in Results section of 'Platform 3: Technical work program'.

# Platform 3: Technical Work Program

- Coordinated the process of identifying and prioritising food safety and market access issues with the potential to impact individual Australian seafood sectors or the fisheries and aquaculture sectors as a whole. This process involved scoping issues and their potential risk in terms of trade and market access, public health, economic impact, media impact, political issues, environmental, sustainability and social issues and regulatory issues, and then prioritising issues via a risk-ranking framework. The prioritisation process is detailed in <u>Appendix 4</u>
- Progressed technical work annually to address those issues identified as the highest priority
- In general, two technical projects are undertaken annually. Wherever possible SafeFish funds were leveraged to generate larger projects addressing the issue of concern. Technical reports are either conducted by SafeFish researchers or outsourced to external experts in that field. International expertise was sourced when required. Major bodies of work were peer-reviewed to ensure accuracy and scientific rigor.

# **Platform 4: Extension and Communication Activities**

- Maintained a network of stakeholders from industry, researcher and government bodies. This network included both end-users of SafeFish outputs, and a list of experts comprising a wide range of skills and expertise, to be drawn-upon when required
- Prepared and distributed technical information sheets/briefings on seafood food safety hazards for use in potential food safety incidents
- Conducted seminars and workshops to disseminate research and train stakeholders and end users
- Designed, printed and distributed SafeFish technical reports to inform relevant stakeholders of research outputs
- Facilitated external scientific/peer review of technical work undertaken to ensure the accuracy and robustness of the output
- Prepared and distributed communication outputs (such as the annual report, brochures, fact sheets, updates, magazine articles etc.) to disseminate information on SafeFish to stakeholders including the development and maintenance of the SafeFish website.

# Results

Below is an overview of the SafeFish achievements within each platform throughout the life of the 2018-2021 SafeFish project.

### Platform 1: Governance

SafeFish is one of the leading platforms in the FRDC program for dealing with food safety and trade and market access issues for the Australian seafood sectors. SafeFish is comprised of collaborative and strategic partnerships between fisheries and aquaculture sectors, research providers and Government stakeholders. The partners work together to deliver the outputs and objectives of the program.

### SafeFish Partnership Panel

The SafeFish partnership members are an advisory committee that provided recommendations to the South Australian Research and Development Institute (SARDI) Executive for ratification. A formal agreement between FRDC and the South Australian Minister for Agriculture, Food and Fisheries governs the program.

The partnership members provided general oversight and strategic direction for the program. They also assisted in communicating the technical outputs of SafeFish through the appropriate channels in Australia and overseas to facilitate the resolution of issues. Depending on the issues being discussed, this group had the ability to invite observers or relevant stakeholders to be involved in meetings and/or processes and this ensured that appropriate and widespread representation was always achieved. The panel met three times annually to drive and set the work plan for the Secretariat to execute.

Partnership members over the 2018-2021 project are listed in Appendix 1.

# SafeFish Secretariat

A Secretariat body operated by the SARDI Food Sciences division from July 2018- December 2019 and SARDI and the University of Tasmania from May 2020-July 2021 facilitated the SafeFish project. The Secretariat comprised of a program manager, executive officer, codex coordinator, research and administrative support officer, researcher (total 0.9 FTE) and an external Independent Chairperson. The Secretariat coordinated and facilitated the day-to-day operations of SafeFish.

Members of the SafeFish Secretariat over the 2018-2021 project are listed in Appendix 1.

# **Charter of Operations**

The SafeFish Charter of Operations (herein referred to as 'Charter') governs the operations of the program. The Charter includes an overview of how SafeFish operates (defining the terms of reference and processes required to be undertaken within the different bodies that make it up), details the reporting and chain of command arrangements, demonstrates how the program provides value to its stakeholders (including outlining its strategic plan), defines the stakeholder relationships that are developed and maintained, and outlines the communication strategy that SafeFish operates within.

In 2019, the secretariat undertook a mapping exercise to determine the skills and capabilities of the SafeFish partner member group to assist with succession planning as well as identifying the strengths and weaknesses that potentially needed to be filled. It was determined that the group had expertise and strengths in the following areas:

- Understanding of food safety principles, market access and trade and the food regulatory systems
- Skills with stakeholder engagement, collaboration, negotiation and risk management
- Representation of technical and scientific fields
- Representation of regulatory and industry fields.

The mapping exercise however did identify the following gaps and areas of weakness:

- No skill set currently around epidemiology, economics, consumer science, public health (medical), marketing and public relations and statistics
- A low skill set around ecology, nutrition and technology
- No representation from salmon or prawn industries, or members from the domestic seafood retailers' sector
- Low commercial acumen skills.

After examining the results, the partnership panel determined that there was no immediate requirement to recruit additional members for the panel as the expertise could be sought on an as needed basis from the extended list of industry/technical representatives that the secretariat has access to. The process did however initiate discussions between the partnership panel representatives and their member organisations on succession planning for the SafeFish project to ensure that their membership remains on-going.

#### **Platform 2: Input into Standard Development**

#### **Codex Technical Input**

SafeFish monitors and has input into the review/development of several Codex Standards, Guidelines and Code of Practices of relevance to the Australian seafood industry. SafeFish aims to keep the relevant industry sectors informed of developments and helps to ensure that risk management approaches are commensurate to the level of risk within Australia. The adjournment of the Codex Committee on Fish and Fishery Products (CCFFP) in 2016 resulted in all seafood related activities being undertaken through General Subject Committees. The committees that SafeFish has had input into from 2018-2021 includes:

- Codex Committee on Contaminants in Foods (CCCF)
- Codex Committee on Food Additives (CCFA)
- Codex Committee on Food Hygiene (CCFH)
- Codex Committee on Fats and Oils (CCFO)
- Codex Committee on Methods of Analysis and Sampling (CCMAS)
- Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF)
- Codex Alimentarius Commission (CAC).

These Committees manage a wide variety of activities and whilst not all these activities are relevant to the seafood sector, resources are required to identify the items that are. Between July 2018 and May 2021 over 190 Codex related documents have been reviewed with 116 items of relevance to seafood. A full list of these items can be found in <u>Appendix 2</u>.

### Areas of Potential Impact to Australian Seafood where Input has been Provided

To ensure that the Australian position on the Codex agenda addressed industry concerns, SafeFish followed a formalised process to provide technical briefs for issues that were of a potential concern to the Australian seafood industry. An overview of the technical input coordinated for specific issues is detailed below:

### Methylmercury - Maximum levels in other fish species and sampling plans

In April/May 2019 the 13<sup>th</sup> Session of the CCCF agreed to re-establish an Electronic Working Group ( EWG ) to revise the discussion paper based on any new data submitted to Global Environment Monitoring System(GEMS)/Food Contamination database to consider whether it is feasible to proceed with the establishment of maximum levels (MLs) for additional fish species (This work follows Codex's adoption of MLs for methylmercury in tunas (at 1.2 mg/kg), alfonsino (at 1.5 mg/kg), marlin (at 1.7 mg/kg) and shark (at 1.6 mg/kg) in July 2018.). In July 2019, the Joint FAO/WHO Expert Committee on Food Additives (JECFA) issued a call for new data on methyl mercury and total mercury in all fish species which have not previously been submitted (data was to cover the last 12 years). Throughout the development of this work, SafeFish has engaged with several industry stakeholders to seek feedback and to notify them of this work/potential changes to the requirements (specifically ling, toothfish and species related sectors). SafeFish prepared formal technical submissions providing comments on the discussion papers produced by the EWG to Codex Australia in March 2021, February and September 2020, December 2019 and December 2018.

In May 2021 at the 14<sup>th</sup> Session of CCCF (virtually attended by Dr Hazel Farrell), the Committee agreed to start new work on establishing MLs for methylmercury in Orange Roughy and Pink Cusk-eel and request the JECFA to issue a call for more data specific for Patagonian toothfish. The Committee will also continue to progress sampling plans for methylmercury to ensure their practicality and a literature review will be undertaken to consider the possibility of developing a new guidance document for risk management of methylmercury in fish. It was also announced by the JEFCA Secretariat that the FAO/WHO will be convening another expert meeting to update the risk/benefit of fish consumption and as part would consider if there is sufficient evidence to support how selenium-mercury complexes impact toxicity.

# Diflubenzuron in salmon

In September 2019, SafeFish notified the Tasmanian Salmonid Growers Association that the Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF) were considering establishing a maximum residue limit (MR. L) for diflubenzuron in salmon at 10 $\mu$ g/kg, following a JECFA recommendation. The industry was also notified that FSANZ currently have a temporary MRL of 2 $\mu$ g/kg for diflubenzuron in fish muscle.

#### Histamine - Update on sampling plans and harmonisation of control guidance

In July 2019 the 42<sup>nd</sup> Session of the Codex Alimentarius Commission (CAC42) adopted the amendments made by the 50<sup>th</sup> Session of the Codex Commission on Food Hygiene (CCFH50) to the Code of Practice for Fish and Fishery Products (CXC 52-2003) to align with the Guidance for Histamine Control. SafeFish provided considerable input around the Australian position throughout the development of this work in FRDC Project No: 2015-212.

CCFH agreed to postpone the development of the histamine sampling plans as no consensus could be reached. The histamine control guidance (which was adopted by CAC41) has been published as a new Section 10 of the Code of Practice for Fish and Fishery Products (CXC 52-2003). The SafeFish website was updated to convey this publication.

### Canned sardine-type products

In early 2020, Codex received a proposal to amend the Codex Standard for Canned Sardines and Sardine-Type Products to include *Sardinella lemuru* (Scaly Mackerel) in the list of designated species. SafeFish engaged with representatives from the Western Australia Fishing Industry Council (WAFIC) and the South Australian Sardine Industry Association to notify them of the proposal and provided a submission to Codex Australia.

In addition to providing technical briefs for Codex issues of relevance to the seafood industry, SafeFish also provided the following domestic reviews/submissions:

# Review of Australia's agricultural and veterinary (agvet) chemical regulatory framework

In 2020, an independent panel consisting of Mr. Ken Matthews, Dr Mary Corbett, Dr Craig Suann and Dr Anne Astin was appointed to undertake a comprehensive first principles review of the regulatory framework for agricultural and veterinary (agvet) chemicals in Australia. The review examined the agvet chemicals regulatory framework's aims, structure and operation, and made recommendations on if it was fit for purpose and reduced unnecessary red tape. In March 2020 the independent panel released an issues paper for feedback. SafeFish reviewed the issues paper and prepared a submission.

### FSANZ review of food safety management tools

In April 2020, FSANZ reviewed all food safety management tools to strengthen food safety in the food service and closely related retail sectors. Retailers of ready to eat (RTE) processed seafood products were identified as one of eight sectors where food safety management could be improved. SafeFish notified processing representatives from Austral fisheries, Darwin Fish Markets, Decosti Seafood's, Ferguson's Australia, Melbourne Seafood Centre, Kailis, Mures, Raptis, Safcol, Samtass, Simplot Australia, and the Sydney Fish Market to advise them on the proposed changes and the call for comment to provide feedback.

#### **Technical Representatives at Codex**

SafeFish technical delegates were sent to the following Codex meetings to build technical capability and understanding of the Codex processes, and to assist the Australian delegation through the provision of technical expertise on issues that had the potential to affect Australian seafood:

- Dr. Hazel Farrell from the New South Wales Food Authority was scheduled to attend the 14<sup>th</sup> Session of the Codex Committee on Contaminants in Foods (CCCF14) meeting in Utrecht, The Netherlands in April 2020 however this meeting was postponed due to the COVID-19 outbreak. The meeting was held virtually in May 2021 and Dr. Farrell attended as the SafeFish technical representative where she assisted with providing input on Australia's position on the establishment of MLs for methylmercury in additional fish species, sampling plans, and other risk management recommendations, and input into discussions around ciguatera
- Dr. Hazel Farrell from the New South Wales Food Authority attended the 13<sup>th</sup> Session of the CCCF meeting in Yogyakarta, Indonesia in April/May 2019. At this meeting the Australian delegation provided specific technical input around the establishment of MLs for methylmercury in additional fish species and sampling plans, the deferral of the establishment of new MLs for lead in seafood and processed fish, and the removal of ciguatera from the priority list of contaminants and naturally occurring toxicants under evaluation by JECFA.

#### **Technical Representatives at International Meetings**

• In September 2019, Dr. Stephen Pahl from SARDI Food Sciences attended the 2019 World Seafood Congress in Penang, Malaysia. The purpose of the trip was to deliver an oral presentation on the research being undertaken in Australia to understand and manage

seafood safety risks associated to climate change and to continue to build the international profile of SafeFish. The Congress was attended by over 350 delegates from 41 countries. Key themes of the Congress included reducing post-harvest losses and waste, supply chain management, use of big-data to improve product traceability, development of novel products and seafood fraud prevention

- In August 2019, Alison Turnbull from SARDI Food Sciences (currently employed at the University of Tasmania) attended the Seafood New Zealand conference to deliver a presentation on Australian seafood safety and to represent SafeFish
- In July 2019, Alison Turnbull from SARDI Food Sciences (currently employed at the University of Tasmania) attended and presented on capitalising on market opportunities through investment in seafood safety at the New Zealand Safety Symposium, held in Christchurch, New Zealand
- In October 2018, Dr. Andreas Seger from SARDI Food Sciences (currently employed at the University of Tasmania) attended the 18<sup>th</sup> International Conference on Harmful Algae in Nantes, France. The conference offered insight into the latest developments in the field of biotoxins and allowed the opportunity to network with international ciguatera poisoning experts.

### Platform 3: Technical Work Program

### SafeFish Work Program and Prioritisation Process

The technical program is underpinned by a strategy to identify current and emerging food safety and market access issues, prioritise these issues, and undertake technical work to provide potential solutions to overcome those of highest priority.

Since the inception of SafeFish in 2010, there has been four full prioritisation processes facilitated (occurring in May 2011, June 2014, October 2016 and the most recent in July 2019). To scope and prioritise the issues that were identified, SafeFish produced hazard reports for each prioritisation round that provided information such as sectors affected, trade and market access information, public health impact, regulatory issues, economic impacts, reputational impacts - media and political, and environmental/sustainability issues that may be present. Using this information, the SafeFish partners then prioritised the issues through a risk assessment process. On the alternate years, a smaller inhouse process of issue identification and prioritisation is run by the Secretariat and the partners to set the work plan for that interim period.

#### **Technical Research**

The following details the technical research that has been undertaken as part of the SafeFish work program, to address the issues identified as high priority for the seafood industry throughout the life of the current project:

#### Work Instigated Between July 2018 and June 2019

#### 1. National Strategy for Ciguatera Research and Risk Management

In March 2019, SafeFish convened a ciguatera poisoning (CP) awareness workshop in Brisbane to bring together industry, regulators and researchers with an interest/expertise in Ciguatera to better understand the risks in Australia and Internationally and to showcase the different research activities currently occurring. In addition to this, a ciguatera working group was convened to develop a national <u>Ciguatera Research Strategy</u> for Australia (this was released in October 2019). The strategy summarises the current understanding of CP, and most critically,

prioritises research objectives for Australia. It presents the consensus of a multidisciplinary working group to provide a focal point for alignment of current and future CP research activities. The overall aim of the strategy is to reduce the occurrence of CP in Australia through improved risk management. Key aspects of the strategy include improved collection and storage of epidemiological and toxicological data, as well as nationally consistent methods to reliably quantify and report ciguatoxins. Closer work with fisheries biologists promises greater understanding of the risks posed by migrating fish (e.g., Spanish Mackerel) and will help determine the prevalence of ciguatoxin in resident fish species. Such prevalence data will be vital to improve currently employed CP management guidelines, that to date have remained un-validated. Internationally, CP research and awareness has gained momentum over recent years on the back of the FAO/WHO risk assessment process and the international ciguatera research strategy driven by the FAO, WHO, International Atomic Energy Agency and International Oceanographic Commission of UNESCO.

The SafeFish ciguatera working group will continue to monitor international ciguatera progress and facilitate the development of new ciguatera research projects to implement the national ciguatera strategy and build Australian research capability in the space.

### 2. Microplastic Research (Extension Activity)

Plastic pollution has become a significant environmental issue worldwide. World plastics production has increased from around 1.9 million tons in 1950 to more than 330 million tons in 2013. Although governments are looking to reduce use of plastics, it is still appearing in marine (and terrestrial) environments. Concerns have been raised that bound toxins, or constituents in the plastics ingested may then leach into tissues of organisms, and transfer through the food chain, although definitive links have not been found.

The European Food Safety Authority (EFSA), the World Health Organisation (WHO) and the Food and Agriculture Organisation of the United Nations (FAO) all agree that further research is required to determine the impact to human health from co-locating chemicals absorbed by the microplastics from the marine environment, however, all have indicated that the risk to human health from the ingestion of microplastics in seafood was relatively low.

In recognition of the increasing global concern regarding plastics in the marine environment, governments are reviewing risks around plastics and seafood consumption. To identify the prevalence of microplastics in Australian seafood, researchers Professor Bronwyn Gillanders, and Ms. Nina Wootton from University of Adelaide and SafeFish were successful in obtaining funding from FRDC (Project Number: 2017-199 lead organisation The University of Adelaide) to undertake the following:

- i. Determine how widespread the presence of plastics in Australian domestic fish sold for human consumption is, and how this varies across the country including potentially from metropolitan and non-metropolitan markets.
- ii. Place the presence/absence of plastics in Australian fish into the international context

Much research had been undertaken overseas demonstrating that microplastics occur in fish and invertebrates. In Australia, microplastics have been found in coastal sediment in southeast Australia and on-going research is investigating sediment from other regions (e.g., Spencer Gulf). At the time that this research commenced, there were no Australia wide study of plastics in fish or investigation of how levels in Australian fish compare relative to international studies.

The research found that microplastics were present in 44% of all seafood examined, but this ranged from 17% in calamari to 56% in filter feeding molluscs (oysters and mussels). For individual species the lowest average microplastic load was in Australian sardines from South Australia, whereas the highest average microplastic load was in coral trout from Queensland. Microplastic load varied by state for fish and filter feeding molluscs but not for crustaceans or

calamari. Comparisons to international literature suggest that the frequency of occurrence for Australian fish, crustaceans and molluscs is around the median of other studies. Microplastic loads in Australian fish and invertebrates were low in comparison to many international studies. The study concluded that although around 44% of the ~1800 organisms examined contained microplastics, the average number of microplastics per organism was low at around 1 piece. The results from this study provide baseline data on which further research can build.

# 3. Investigation of Rapid Test Kits for Diarrhetic Shellfish Toxins and Dinophysis (Extension Activity)

Diarrhetic shellfish toxins (DST) are a significant, yet largely unquantified issue for Australian shellfish. A significant human poisoning event resulting in 56 hospitalisations from DST contamination of pipis (*Plebidonax deltoides*) occurred in Ballina NSW in 1997. Since then, DST have been a major food safety challenge to NSW pipi production, with regular events plaguing the industry. DST detections are also increasing in other Australian states. There is a regulatory requirement to monitor DST in all Australian shellfish. Following the successful work by SafeFish and collaborators to validate rapid test kits for paralytic shellfish toxins in shellfish, improving risk management for that toxin group, SafeFish contributed to research undertaken to investigate DST rapid test kits for use with Australian shellfish species and a DST qPCR assay for the causative algal species for onsite farm use (FRDC Project No. 2017-203 led by Dr. Penny Ajani from the University of Technology, Sydney).

The research found that many of the kits on the market are not suitable for use with Australian bivalve species (pipis, cockles, Pacific Oyster, Sydney Rock Oysters and Blue Mussels). One kit, a qualitative kit produced by Neogen, showed promise and was worthy of future validation. Similarly, qPCR assays proved successful in identifying causative algal species and could be built into risk monitoring programs. An economic analysis is underway, examining the cost: benefit of replacing biotoxin monitoring with either the Neogen rapid test kit or the qPCR assays in three out of four weeks in low-risk areas (noting the Australian Shellfish Quality Assurance Program requires minimum monthly biotoxin monitoring). In addition to cost savings, these methods would provide important timely results for remote areas that otherwise would have difficulty accessing laboratories for full biotoxin analysis. This project is ongoing and will likely be completed by Mid-2021.

#### Work Instigated Between July 2019 and June 2020

#### 1. Ciguatera Awareness Strategy

The ciguatera research strategy for Australia that was developed in 2019 highlighted the need for increased awareness of CP among the public and medical community to improve reporting rates of cases (only an estimated 20% of cases are currently thought to be reported).

In response to this, SafeFish embarked on a CFP awareness campaign for Australian health care workers and recreational fishermen to identify what type of information would be most suitable and how that information should be best delivered. This included developing an online survey, articles in recreational fishing magazines and the development of other advertising media (video, infographics etc.). SafeFish worked closely with French Polynesian researchers who have extensive experience in this area to develop these materials.

Due to COVID-19 it was decided that the health care workers survey would be delayed allowing their focus to remain on recovery. Despite this, the SafeFish recreational fisher ciguatera awareness survey went ahead and was completed by 235 fishers/interested parties and promoted on social media through recreational fishing groups, Safe Food Australia, the NSW Food Authority, FRDC, recreational fishing champion Steve "Starlo" Starling and the Northern Territory Fisheries Department. The information gathered will assist to develop appropriate

awareness materials for promoting CFP and will be promoted through the same channels and made available on the SafeFish website.

The SafeFish national ciguatera poisoning research strategy was presented at the final workshop of the European ciguatera research program, EuroCigua in October 2019 and was well received by the FAO/WHO. A video summary of the workshop featuring our Australian efforts is now available online: <u>https://youtu.be/sgllrQlo\_C0?t=6487.</u>

In addition, the SafeFish strategy is listed in a review article by our French Polynesian colleagues on the global occurrences and trends of ciguatera (Journal of Harmful Algae, 2020). The strategy is described as a tool that could help assist Pacific countries in setting up their own surveillance and management programs: https://www.sciencedirect.com/science/article/pii/S1568988320301529

The data that Australia contributed to the WHO/FAO in response to the international call for data, for which the SafeFish ciguatera working group was originally established, features in the report of the expert meeting on ciguatera poisoning held in Rome on 19-23 November 2018. The report was released last year and is available here: Report of the Expert Meeting on Ciguatera Poisoning (fao.org)

Furthermore, the FAO has now released an online training module on ciguatera poisoning that may be of interest: <u>https://elearning.fao.org/course/view.php?id=648.</u>

In addition to this, several Australian research efforts are currently underway. These include:

- An FRDC funded research project (<u>FRDC 2019-060</u>) is currently underway to improve the detection of ciguatoxins in NSW Spanish Mackerel. The project is being led by Associate Professor Shauna Murray University of Technology, Sydney and conducted in partnership with IMAS, QLD Health Forensic and Scientific Services, NSW Food Authority, Sydney Fish Market and the Cawthron Institute
- Dr. Russell Stafford from QLD Health and OzFoodNet is spearheading the update and roll out revised of a ciguatera patient questionnaire and ciguatera case definition for consistent and improved reporting across all Australian states and territories
- An Australian Research Council (ARC) research project led by Associate Professor Murray (University of Technology, Sydney) has successfully isolated several Queensland *Gambierdiscus* microalgal strains and is currently analysing their ciguatoxin profiles to get a better handle on microalgal and ciguatoxin diversity in Australian waters.

#### 2. Review of Microbiological Criteria Relating to Seafood in the FSANZ Food Standards Code

In June 2019, FSANZ began the process of reviewing Standard 1.6.1 of the Australia New Zealand Food Standards Code (Microbiological Limits in Food) and the associated Schedule 27 to ensure that the standard was fit-for-purpose for the current risk-based preventative approach to food safety management. To assist with their review, FSANZ requested that SafeFish convene an expert working group to examine the standards and provide suggestions on the microbiological criteria relevant to seafood that could/should be amended.

The review determined the microbiological criteria that were food safety specific, and those that relate to process hygiene or performance, with a view to relocating the latter into a guidance document. To facilitate the process, SafeFish worked with the Seafood Standards Council of Seafood New Zealand and an Dr. John Sumner, an independent expert in microbiology. Due to Covid-19, a series of focused Zoom workshops were convened with over 40 expert participants (from industry, regulation and research) being involved from Australia and New Zealand.

The first workshop examined the definition of ready-to-eat food. The participants found the ready-to-eat definition was ambiguous in terms of dealing with product that may have been produced and entered the supply chain with the intent for cooking but was later used as readyto-eat product, e.g., raw fish products being used for sushi, sashimi, poke or ceviche. An alteration to the definition was drafted. It was also agreed that the Listeria component of the current definition should be transferred to the Listeria section of the Code, to enable the definition to be consistent across the whole Code. The second workshop focused on the criteria for standard plate counts and Staphylococcus aureus in cooked and raw crustaceans. It was agreed that these were process control criterion, that should be removed to the Compendium. Both Australian and New Zealand import standards have either removed or are in the process of removing these criteria and would not be impacted by this suggested change. The third workshop covered bivalves (E. coli standard, and a discussion of the best way to deal with risks from viruses and Vibrio parahaemolyticus), Salmonella, and Listeria. Following the workshops, a guidance document was prepared for FSANZ suggesting the microbiological criteria that could be moved from the Food Standards Code into a compendium document. In addition to this, suggested draft wording for the compendium to support improved food safety outcomes was provided. FSANZ indicated that it would consider the guidance, and circulate any potential changes broadly for further comment, as per their normal procedures.

### 3. Vibrio Risk Reduction in Bivalve Molluscan Shellfish

Outbreaks of gastrointestinal disease following consumption of oysters have been caused by *Vibrio parahaemolyticus* in Australia between 2016 and 2019. There have been over 30 illnesses reported from shellfish produced in a multitude of states in this period. Vibrios are naturally occurring marine bacteria that are found in most aquatic environments. Codex released guidelines on general principles of food hygiene to control pathogenic *Vibrio* species in 2010 following a series of pandemic outbreaks in regions of the world where it was previously unreported. Prior to the illnesses in Australia, the Australian Shellfish Quality Assurance Advisory Committee (ASQAAC) considered Vibrio bacteria and determined not to implement any risk management guidance due to there being no current epidemiology in Australia.

To better understand and manage the emerging risk of vibriosis in the shellfish industry, SafeFish and Ms. Michelle Harlock of the Tasmanian Department of Health and Human Services began the process of reviewing all Australian cases relating to vibrios in bivalve seafood and incorporating this information into a note for publication in the Journal for Communicable Disease Intelligence. In addition, given the critical food safety risk potential, SafeFish have also investigated the potential to include vibriosis as a notifiable disease in all states (not just some as currently occurs). Due to COVID-19 this latter body of work was halted to allow Health Departments focus on COVID-19 recovery.

# Providing Education and Awareness for Vibrio and Investigating Risk Management Options for the Australian Shellfish Industry

As a result of sporadic Vibrio outbreaks in Australia, in April/May 2021 SafeFish engaged Dr. Dorothy-Jean McCoubrey an international expert in vibrios, to facilitate a series of virtual webinars to improve the awareness and understanding of this issue, investigate potential management strategies and determine if further research/risk management is required in Australia.

The first webinar focused on providing a general introduction to vibrio species, a detailed overview of science around *V. parahaemolyticus* and an introduction to the best management strategies to mitigate the risk of vibrio poisoning. The second webinar extended on the management strategies for vibrios, as well as providing a case study of a prior event in

Tasmania from the view of the grower impacted and the regulator involved. The third webinar provided insight into the issue and management strategies from experts in the USA and Canada, as well as allowed the participants to discuss if future regulatory/management strategies were required in Australia.

The webinar series was well received with a good audience participation of between 80-115 attendees per session. Participants were from Australia and New Zealand (industry, regulators, health officials, DAWE, Ministry of Primary Industries New Zealand). The webinars were professionally recorded and are housed on the SafeFish website for public viewing – <u>vibrio</u> webinar series.

#### Work Instigated Between July 2020 and June 2021

### 1. Harmonisation of Marine Biotoxin Standards

After many years of discussion and development, SafeFish is in the final stages of completing an application to request Food Standards Australia New Zealand (FSANZ) to review the current marine biotoxin maximum levels (MLs) applicable to seafood in Standard 1.4.1, Schedule 19 of the FSANZ Food Standards Code (FSC), with a view to harmonising the Code with other International Standards, particularly Codex Standard (CXS 292-2008 'Standard for Live and Raw Bivalve Molluscs'). Currently in Australia, shellfish producers are facing the situation of having different domestic and export regulatory standards applied for marine biotoxins. This has caused confusion and extra work for regulators and laboratories to prepare the data. By harmonising the MLs, it will allow the Australian industry to follow the same rules as other international bodies, facilitating improved market access. The proposal requests a review of the following:

- i. Harmonising the ML for diarrhetic shellfish toxins (DST) in bivalve molluscs with the ML found in CXS 292-2008. This would involve lowering the ML from 0.20 mg Okadaic Acid equivalents/kg to 0.16 mg Okadaic Acid equivalents/kg
- ii. Harmonising the ML for paralytic shellfish toxins (PST) in bivalve molluscs with the ML found in CXS 292-2008. Currently the Code defines the ML in mg saxitoxin (STX) equivalents/kg whereas Codex requires expression as milligrams per saxitoxin dihydrochloride (STX.2HCl) equivalents/kg. As the STX dihydrochloride salt is 24% heavier than its free base, this results in a 24% difference between the standards, with the Codex standard being more conservative (0.8 mg STX.2HCl equiv./kg = 0.6 mg STX equiv./kg). We propose that both the value and expression of PST will align with CXS 292-2008.

Several international risk assessments undertaken by the European Food Safety Authority (EFSA) and the World Health Organisation (WHO) highlight the high level of toxicity of these two marine biotoxins and provide justification for why the levels have been set at this value in the Codex Standard. Australia and New Zealand currently have different levels set for biotoxins as New Zealand already aligns with Codex; harmonising biotoxin MLs in the Food Standards Code would resolve this issue. As part of the application process, SafeFish has assessed the levels of toxin in Australian shellfish across all producing states looking at the number of additional days closed as a result of amending the levels in the Code. It has been determined that the maximum impact on any state bivalve fishery (oysters, pipis, mussels, scallops or clams) of the change in regulation would be only one additional closure every second year.

#### 2. Situational Awareness in Ready-to-Eat Short-Shelf-Life Seafood

Ready to eat foods, along with convenience and delivery options, have been a growing trend in recent years. Seafood products are no exception, with the recent development of different fish and seafood species in market, new restaurants and delivery services operating, alternate channels for distribution, and new innovative ways to present or trade the products being developed. This has been further intensified in pace and change, due to the pressures that COVID-19 has made to our living realities. At the 2019 prioritisation workshop, it was determined that there was a need for a greater understand of the food safety issues, risks and gaps along the supply chain relating to short-shelf-life, ready to eat seafood was required. As such, in April 2021 SafeFish engaged external experts Dr. Cristina Lesseur (from Cristina Lesseur Advisory) and Ms. Meaghan Dodd (from Intuitive Food Solutions) to facilitate a stakeholder survey and situational review of the issue and to provide recommendations for potential further research.

The review identified the following gaps/actions that could/should be taken in the future:

- Reduce operational inconsistencies, mostly around cold chain segregation practices
- Raise awareness of the risks associated with consuming certain short-shelf-life readyto-eat seafood products with vulnerable populations (such as elderly, immunocompromised individuals and pregnant women)
- A need to harmonise and or simplify existing standards
- The potential of promoting the use of better handling and usage instructions from industry to their customers, to avoid misuse of substandard products
- Further investigation of hospitality and deliver sector supply chains to fully assess potential risks that are present and not well understood
- To develop training tools for industry to simplify regulations/standards and improve general knowledge of staff in these areas.

#### 3. FRDC Project 2020-092: SafeFish Extension Lobster (Extension Activity)

In October 2020, China detected two non-compliances for heavy metals in imported lobsters from Australia. The non-compliances were in relation to cadmium (Cd) levels exceeding the Chinese maximum level of 0.5 mg/kg in the "edible parts" of lobster. In response, all lobster trade between Australia and China was immediately halted and the General Administration of Customs of the People's Republic of China (GACC) requested an investigation by the Department of Agriculture, Water and the Environment (DAWE). Prior to the trade disruption, China accounted for around 91% of Australian lobster exports (total export value AUD \$722 Million; ABARES, 2021). Lobster exports to China fell by 80% in November 2020 compared to the same time the previous year. SafeFish was requested to lead this rapid response project to meet the needs of the investigation and all research activities were completed by June 2021.

#### **Platform 4: Extension and Communication Activities**

#### **General Technical Advice and Input**

SafeFish has continued to provide technical assistance in the form of incident response advice and management, to industry and regulators to enable them to appropriately manage food safety incidents when they arise. Examples include:

- Four technical information fact sheets/briefings on seafood food safety hazards of particular interest were produced. These included Cadmium in Crustaceans, COVID-19: Australian seafood risks, Use of AQUI-S (containing Isoeugenol), Microplastics in Seafood
- Assistance to WA and NT in expansion/development of bivalve industries in those states: seminars, workshops, one-on-one technical advice

- Assistance to develop projects around food safety/market access for industries as required, for example: vibrio in prawns, vibrio in tropical oysters, metals in lobster, food safety/market access needs for northern Australian oysters, bivalve market access to the USA
- Market access queries for pearl oyster meat to Singapore, bivalves to USA.

# SafeFish Annual Reports

An annual report for SafeFish has been produced for every fiscal year of the project. These reports are published on the SafeFish website and were disseminated via electronic and hardcopy distribution to all SafeFish stakeholders. Relevant information in this final report will be compiled into an annual report for the period of July 2020 to June 2021.

Copies of the annual reports for <u>2018 to 2019</u>, <u>2019 to 2020</u> and <u>2020 to 2021</u> can be found on the SafeFish website: <u>https://www.safefish.com.au/reports/annual-reports</u>

# **Technical Networks**

SafeFish maintains an extensive network of contacts from production to consumption that comprises a wide range of skills and expertise that can be drawn-upon when required. This network is used to provide fisheries and aquaculture sectors expertise, perspective and practical implementation advice on technical barriers to trade, scientific advice to resolve technical barriers to trade, and assist in providing input into the development of Codex standards. This group has knowledge in a wide range of fisheries and food safety disciplines, including residues, microbiology, viruses, natural toxins, risk assessment, epidemiology, economics, consumer science, trade, public health, nutrition and Codex.

# **Communication Strategy and Stakeholder Survey**

A stand-alone communication strategy and plan was developed to formalise SafeFish communication efforts throughout the project. A copy of the communication plan is included in <u>Appendix 5.</u>

In October 2020 a survey was conducted to identify what SafeFish stakeholders wanted and needed from the program going forward to assist with developing the rebid application for funding to the FRDC. The survey determined the elements of food safety and market access the program should assist with, and the services that were of value and should continue to be provided as well as any new items that could be included. The survey was sent to 279 stakeholders with 50 responses received (52% of respondents were from Industry sectors, 30% were regulators and 18% were service providers (labs, researchers or contractors)). Potential areas that stakeholders indicated SafeFish could focus and/or continue research on in the future were as follows:

- Climate change
- Ciguatera
- Microplastics
- Vibrios
- Biotoxins
- Risk register and response plans
- Training (for students, industry and shellfish regulators)
- Fish handling
- Aquatic plant names
- Sulphite use in abalone

- Listeria control in ready-to-eat products
- Impacts of sewage outfalls on marine environments

# Website

From the stakeholder survey, the SafeFish website was identified as the fifth most preferred format for our members to access SafeFish activities, outcomes and achievements. We continue to have high patronage to the site, with just under 6,500 hits over the life of the project (from 1<sup>st</sup> July 2018 to 25<sup>th</sup> May 2021) equating to on average 179 users per month, or 40 users per week. The main demographic of users has been from Australia, the United States, China, France and Brazil and the most popular pages visited were the homepage, the reports section, the Codex page and the technical program.

# SafeFish Updates

The following quarterly updates on activities and technical work was provided to industry stakeholder associations and can be accessed from the SafeFish website: <u>http://safefish.com.au/Media-Centre</u>

- An overview of SafeFish activities was provided for publication in the Seafood Trade Matters newsletters (March 2020, July 2020, September 2020 and January 2021)
- <u>SafeFish Industry Updates</u> were prepared for funding stakeholders and the partner members on a quarterly basis. These were also made publicly available on the SafeFish website (April 2020, June 2020, November 2020 and March 2021)
- <u>A communique</u> was produced following each partners meeting, detailing the main discussion points. This was distributed to relevant stakeholders via direct dissemination and through the website (August 2018, November 2018, April 2029, October 2019, July 2020, November 2020, March 2021).

# SafeFish Enquiries

SafeFish provided responses to technical enquiries around food safety and market access to industry, regulators and consumers on demand throughout the life of the project. Throughout this period, SafeFish received 101 separate enquiries, most of which were issue based and involved the Secretariat providing advice or identifying appropriate contacts in the field or where to obtain further information on the topic. Other enquiries received were notifications of potential emerging issues.

# Meetings, Presentations and Workshops

From 2018 to 2021 the SafeFish Secretariat has:

- Attended and presented at 23 different national and international conferences relevant to seafood
- Facilitated 15 stakeholder meetings to develop projects or provide updates on SafeFish activities
- Attended and presented at 25 industry meetings/research and development days/workshops
- Established and facilitated a working group of experts to review the microbiological criteria in the FSANZ food standards code relating to seafood and provided recommendations on items that should be reviewed in the code to bring them in-line with other international standards
- Facilitated 3 virtual webinars relating to vibrios and the risks to Australian shellfish, the potential management strategies, and future research priorities.

A detailed list of meetings, presentations and workshops that SafeFish has facilitated, attended and presented at are included in <u>Appendix 3.</u>

### **Magazine Articles and Publications**

To enable the dissemination and communication of the research that SafeFish has undertaken, the following articles and publications were produced and published in seafood related subscriptions or on the SafeFish website:

- SafeFish assisted to compose the following articles for the FRDC Fish magazine:
  - <u>Volume 28, Number 1 January 2020 'A decade of SafeFish'</u>. This article commemorated the 10-year anniversary of the SafeFish project, showcasing the platform and how it has assisted its stakeholders over the last decade
  - <u>Volume 26, Number 4 September 2018 'Protecting Australia's Safe Seafood Brand'.</u> This article provided an overview of the different tools and technologies available to use for traceability and authenticity of seafood
- An article was published in the Tasmanian Seafood Industry News quarterly magazine in the <u>Dec/Jan 2021 edition (Volume 27)</u> detailing the recent review by a SafeFish derived expert working group of the microbiological limits relating to seafood in the FSANZ Food Standards Code. In addition to this, another article on the microbiological review was published in the University of Tasmania/Institute for Marine and Antarctic Studies online newsletter 'Fish Bites' (Issue 14) titled <u>'Taking steps to clearer, more relevant seafood safety standards'</u>
- An article by SafeFish researchers was published relating to ciguatera poisoning on the 10<sup>th</sup> of December 2020 on Red Map titled <u>'Ciguatera Poisoning'</u>. A second article to the Bluewater Game Fishing Magazine is awaiting publication: 'Ciguatera poisoning the one that got away'. Both articles aim to increase ciguatera awareness and link to efforts that raised ciguatera awareness among recreational fishers through an online survey that SafeFish facilitated in early 2021 (see more information above in Section 'Technical Research: July 2020 to June 2021').

# **Technical and Communication Outputs**

A list of the technical and communication outputs that SafeFish have completed throughout the life of the project can be found below in the 'Project Materials Developed' section.

# **Discussion and Conclusion**

SafeFish has been successfully operating for over a decade with support from a range of industry, government and researcher stakeholders. Our reputation continues to grow as successes in working with industry and government to proactively address foods safety and market access issues build. In this term, other food safety organisations have looked to SafeFish as an example of successful collaborative structures and prioritisation mechanisms.

The volume of work conducted over the three years is significant and varied. The drivers for this work have been both proactive and reactive. SafeFish has continued to work closely with Codex Australia to have input into the development and revision of international food standards across 7 different Codex committees. Over 190 Codex related documents have been reviewed with 116 items of relevance to seafood. This has contributed to the development of international standards and guidelines that are risk commensurate to the Australian situation, avoiding unwarranted food safety requirements. Domestically we have conducted a robust and collaborative review of the current microbiological requirements in the Australian New Zealand Food Standards Code. Recommendations were made to Food Standards Australia New Zealand to ensure the Code remains fit for purpose and does not include unnecessary standards that create a cost burden for industry.

SafeFish has proactively worked to assist industry and regulators to assess emerging risks in seafood. Examples include microplastics in seafood, ready-to-eat seafood, and Vibrio in oysters. Such assessments increase our knowledge of the issues and determine whether there is a need for further investment in terms of additional research or management. We have also produced technical information on managing food safety hazards in a cost-effective manner, such as rapid test kits for diarrhetic shellfish toxins and practices for reducing vibrio risk in bivalve shellfish.

The strong governance of SafeFish is fundamental to its success and all partners agree the model of operations should continue in the future. The next grant for SafeFish includes an increased number of funding industry stakeholders and is supported by the same committed SafeFish partners (FSANZ, DAWE, FRDC, key industry members and researchers) who provide considerable in-kind to the project in both expertise and time. Perhaps the greatest value from the partnership approach has been the successful leveraging of this in-kind support to address key issues that impact seafood safety and trade. This group responds collaboratively on several levels and through a variety of routes and is a strong asset to the seafood industry going forward.

SafeFish has continued to invest in the development of capability in Australia to address food safety and market access issues. It is important that our regulators, researchers and industry personnel are well informed, well supported and able to respond to current and emerging issues appropriately. We continue to build a network of experts that can assist when required. We have provided opportunities for travel to technical conferences, organised expert working groups to address key issues.

The robust prioritisation process enables all stakeholders to submit issues for consideration and assessment. Our stakeholders gave good input to the prioritisation round during this project and were actively engaged in determining the outcome. The results allowed our limited resources (both industry and government) to be directed at the current and emerging issues of greatest importance to the Australian seafood industry.

SafeFish communication with stakeholders is supported by a communication policy including a variety of communication methods. The SafeFish website experiences high visitation rates on an ongoing basis. Regular communiques, annual reports and stakeholder updates assist to keep our stakeholders informed of our activities. Feedback from stakeholders helps to shape our on-going work program. The

next SafeFish project will see SafeFish working closely with our stakeholder groups to develop both sector and industry wide risk registers. These risk registers will feed into our prioritisation of projects and will form the basis of well-informed industry response plans for market access risks.

Overall, SafeFish has met the objectives of the project by delivering robust food safety research and advice to industry and regulators to underpin Australia's reputation as a producer of safe seafood, and by maintaining and enhancing the capabilities of SafeFish to provide that research and advice in a cost effective, efficient and timely manner. The increased support from the seafood industry to continue to fund SafeFish for a further three years is testament to the success of this project, and the need for such work in Australia.

# Implications

SafeFish uses the Core funding received from FRDC and industry to carry out three types of projects:

- 1. Food safety incident responses
- 2. Technical input to inter-government consultations on food regulations and market access
- 3. Proactive research, risk analyses and training

Through these combined activities, SafeFish helps to enable market access and maintain an excellent food safety record for Australian seafood. If these two objectives are not met effectively, there are several potential negative consequences:

- Risks associated with consumption of unsafe seafood increase, and illnesses occur
- Food safety compliance costs increase to the point where businesses cannot viably access certain markets
- Reputation and brand are damaged due to illness or non-compliance with food safety regulation occurs. Experience shows that market access can be significantly impacted
- International and domestic trade of Australian seafood decreases
- Investors at all points of the supply chain suffer economic loss.

Whilst the SafeFish project cannot necessarily mitigate all the items detailed above, the services it provides goes a long way to assisting the seafood industry respond to issues in a fast, effective and unified manner to decrease the ramifications that arise as a result. Industry and regulators have demonstrated that they value and rely on the work undertaken by SafeFish and appreciate the role that it plays as a conjugate.

Industry and Regulatory stakeholders of SafeFish will attest to the need for such services (with several historic incident response events such as heavy metals in rock-lobsters in 2021, PSTs in abalone and mussels in 2016/2017, and the loss of access to the EU market for abalone in 2012) being examples where SafeFish has provided emergency assistance and input. In addition to this, we have received commitment from industry and FRDC to provide future funding, with continued in-kind investment from FSANZ, the Department of Agriculture and other partner members. SafeFish has also recently opened partner meetings to stakeholders, which has strengthened the engagement and involvement from various seafood sectors and has assisted with building our collaborative model further. Over the project term, SafeFish has continued to have active engagement with Seafood New Zealand and the New Zealand Seafood Food Safety Program. It has also strengthened its connection to complimentary platforms such as the Seafood Trade Advisory Group, Fish Names Committee and Seafood Industry Australia.

# Recommendations

The FRDC and industry bodies (ACA, AAGA, ACPF, APFA, OA, SRL, WRL, AMIA, Pearl Consortium, Sydney Fish Markets, Sub-Antarctic Fisheries and TSGA) have agreed to fund SafeFish for a further four years to enable a continuity in the services and protection to the Australian seafood brand that the provision of SafeFish services offer.

To develop the re-bid proposal for the FRDC, the Secretariat canvassed existing funding partners for their continued support and circulated a stakeholder survey to identify if the services, activities and outputs that SafeFish currently provided were what our members needed and wanted. Throughout these consultation efforts, the Secretariat determined that for the future project the following additional elements should be delivered:

- The development of industry specific food safety risk registers, including ongoing scanning and updates to ensure that the risks to particular sectors are captured effectively
- Assisting the Seafood Trade Advisory Group in developing a module in the Exporter Training Package that would include identifying specific food safety risks, accreditation requirements and country standards to assist with seafood export
- To continue providing ciguatera research, with a specific focus on educating health care workers and recreational fishers
- To extend capability within SafeFish by engaging students to assist with research deliverables, and to provide additional training opportunities for stakeholders (through workshops, masterclasses etc.).

The mode of operation of the program will remain largely unchanged, however there will be an increase in operating funds and in-kind commitments from SARDI and IMAS to cover the development of the food safety risk registers, and engagement of students to assist with building capability and delivering research components.

# **Extension and Adoption**

In 2018 a formal 'Extension and Adoption' plan for SafeFish was developed to clearly indicate who the target audience was, the key messages we are aiming to deliver, and a method/action plan for our communication and research outputs to be disseminated. (Appended to final report).

The significant number of presentations and meetings attended by SafeFish staff, and the wide distribution of SafeFish outputs has ensured that the seafood industry and regulators are aware of SafeFish and the activities it undertakes. Close engagement with stakeholders and active investment in adoption has helped to facilitate uptake of research into policy and improved risk management practices.

As discussed above in the 'Further development' section, it has been confirmed that the SafeFish project has been funded to continue providing the same services from July 2021 to June 2025. The communication and extension/Adoption plans will therefore continue to be followed and updated as necessary to ensure that all stakeholders are aware of the outputs that are being produced.

Annual reports detailing the activities from 2018/2019, 2019/2020 and 2020/2021 were disseminated to all SafeFish stakeholders and are available on the SafeFish website. All other historic materials (reports, communiques, updates etc.) will be retained on the SafeFish website to ensure free access to any interested party, and new communications will be added as they are developed.

# **Project coverage**

Over the life of the project, 6 news articles based on research outputs or processes that SafeFish runs have been produced in seafood related publications (see 'News articles and publications' section in 'Results' above.

In addition to the news articles produced, SafeFish assisted the FRDC by producing informative fact sheets (and question and answer packages) to assist the seafood industry on AQUI-S, Hepatitis A Virus, and COVID-19 (see 'Project materials developed' section for more information).

# **Project materials developed**

The following is a list of all the technical and communication outputs that SafeFish have completed throughout the life of the project:

- '<u>Frequently Asked Questions Cadmium in Crustacea'.</u> April 2021. A resource for stakeholders to better understand cadmium, where it comes from, potential risks of high exposure, regulatory limits, and testing methods available
- 'Report on SafeFish Vibrio Workshop Series'. April 2021. Produced by Dorothy-Jean McCoubrey of Dorothy-Jean and Associates in collaboration with SafeFish. (Appended to final report as not publicly available on SafeFish website)
- SafeFish Charter V4. February 2021. http://safefish.com.au/About
- 'Ciguatera poisoning you can help!' Survey. January 2021
- SafeFish Annual Report 2019-2020. November 2020
- SafeFish Stakeholder Survey. October 2020
- 'Review of the microbiological criteria relating to seafood in the food standards code'. Recommendations provided to FSANZ of areas to potentially review/change in the Food Standards Code. July 2020. (Appended to final report as not publicly available on SafeFish website)
- SafeFish brochure. April 2020. (Appended to final report)
- Background document prepared for SafeFish expert consultative members involved in the review of the microbiological criteria relating to seafood in the Food Standards Code. April 2020. (Appended to final report as not publicly available on SafeFish website)
- SafeFish Annual Report 2018-2019. November 2019
- <u>'National Ciguatera poisoning Research Strategy'</u>. November 2019. This report presents a national CP research strategy aimed at mitigating risk for the seafood industry and reducing CP illness in Australia
- Brochure SafeFish 10-year infographic. October 2019. (Appended to final report)
- SafeFish 10-year anniversary logo. October 2019
- <u>'Hepatitis A Virus Fact Sheet'</u>. August 2019. Fact sheet and Q and A providing information on Hepatitis A virus in seafood in response to the contamination of Berries and leafy greens
- <u>'Microplastics research in Australia and New Zealand'</u>. August 2019. A compilation of the different research around microplastics in seafood currently occurring in Australia and New Zealand
- SafeFish Prioritisation Process. June 2019:
  - SafeFish Prioritisation Workshop Background Document (Hazard Identification Report for industry)
  - 2019 Workshop Report
  - 2019 Prioritisation Workshop Document
- <u>'Use of AQUI-S (Containing Iso-eugenol) Fact Sheet for Australian Seafood Businesses'</u>. February 2019. Following a trade recall of eels from South Korea due to the presence of iso-

eugenol residues, a fact sheet was developed for Australian seafood businesses to better understand AQUI-S and its use in Australia

- <u>'Oysters Australia IPA: The use of FRNA bacteriophages for rapid re-opening of growing areas</u> <u>after sewage spills'</u>. January 2019. This report is an investigation of the use of FRNA bacteriophages (phages) as indicators of viral contamination in shellfish after adverse sewage events
- <u>'Authenticity for the Australian Seafood Sector: A Review of Available Tools to identify</u> <u>substitution and mislabelling'</u>. August 2018.

# **Appendix 1: Project Staff and Researchers**

# SafeFish Secretariat Staff

- Independent Chair Dr. Anne Astin (contracted annually and retained on a stipend)
- Program Manager Ms. Alison Turnbull (2020-2021 University of Tasmania, 2018-2020 SARDI Food Sciences)
- Executive Officer Ms. Natalie Dowsett (SARDI Food Sciences)
- Codex Facilitator Dr. Stephen Pahl (SARDI Food Sciences)
- Administrative Support Officer/Researcher Ms. Navreet Malhi (SARDI Food Sciences)
- Researcher Dr. Andreas Seger (2020-2021 University of Tasmania, 2018-2020 SARDI Food Sciences)

# Industry Funding Stakeholders 2018-2021

- Abalone Council of Australia Ltd.
- Australian Abalone Growers Association
- Australian Council of Prawn Fishers
- Southern Rock lobster
- Oysters Australia
- Tasmanian Salmonid Growers Association (TSGA)
- Australian Mussel Industry Australia
- Sydney Fish Market
- National and Commonwealth FRDC Research Advisory Committees

# SafeFish Partnership Members July 2018 - June 2019

- Dr. Anne Astin (Independent Chairperson)
- Ms. Alison Turnbull (SARDI Food Sciences)
- Dr. Glenn Stanley (FSANZ)
- Mr. Mark Boulter (Safe Sustainable Seafood Seafood Importers Association of Australasia)
- Mr. Erik Poole (Sydney Fish Markets)
- Dr. Rochelle Prattley (Department of Agriculture)
- Ms. Shelly Alderman (Department of Agriculture)
- Ms. Jane Lovell (Seafood Industry Australia)
- Ms. Cathy Webb (Seafood New Zealand Observer)
- Mr. Spiro Markantonakis (Dover EX27 STAG representative)
- Ms. Nicole Stubing (FRDC)
- Dr. Cristina Lesseur (Simplot Australia Processing industry representative)
- Mr. Phil Baker (NSW Food Authority Australian Shellfish Quality Assurance Advisory Committee)

# SafeFish Partnership Members July 2019 - June 2020

- Dr. Anne Astin (Independent Chairperson)
- Ms. Alison Turnbull (SARDI Food Sciences)
- Dr. Glenn Stanley (FSANZ)
- Mr. Mark Boulter (Safe Sustainable Seafood Seafood Importers Association of Australasia)
- Mr. Erik Poole (Sydney Fish Markets)

- Ms. Shelly Alderman (Department of Agriculture)
- Ms. Jane Lovell (Seafood Industry Australia)
- Ms. Cathy Webb (Seafood New Zealand Observer)
- Mr. Spiro Markantonakis (Dover EX27 STAG representative)
- Ms. Nicole Stubing (FRDC)
- Dr. Cristina Lesseur (Simplot Australia Processing industry representative)
- Mr. Phil Baker (NSW Food Authority Australian Shellfish Quality Assurance Advisory Committee)
- Ms. Jayne Gallagher (Honey and Fox STAG representative)

# SafeFish Partnership Members July 2020 - June 2021

- Dr. Anne Astin (Independent Chairperson)
- Ms. Alison Turnbull (SARDI Food Sciences)
- Dr. Glenn Stanley July 2020 January 2021 (FSANZ)
- Dr. Andrew Keller January 2021 June 2021 (FSANZ)
- Mr. Mark Boulter (Safe Sustainable Seafood Seafood Importers Association of Australasia)
- Mr. Erik Poole (Sydney Fish Markets)
- Ms. Shelly Alderman (Department of Agriculture)
- Mr. Mark Phythian (Department of Agriculture)
- Ms. Veronica Papacosta (Seafood Industry Australia)
- Ms. Tania Soler July 2020 March 2021 (Simplot Australia, processing industry representative)
- Ms. Lisa Clark March 2021 June 2021 (Simplot Australia, processing industry representative)
- Ms. Cathy Webb (Seafood New Zealand Observer)
- Ms. Nicole Stubing (FRDC)
- Dr. Patrick Hone (FRDC)
- Dr. Cristina Lesseur (Processing industry representative)
- Mr. Phil Baker (NSW Food Authority Australian Shellfish Quality Assurance Advisory Committee)
- Ms. Jayne Gallagher (Honey and Fox STAG representative)

# SafeFish Contractors 2018-2019

The following contractors were engaged to assist with preparing technical research, to facilitate technical workshops, and/or to assist with developing SafeFish communication outputs/materials.

- Dr. Anne Astin (contracted as Independent SafeFish Chair 2015-2018)
- Dr. John Sumner of MS Consultants (contracted to Chair and expert workshop and facilitate the microbiological review of seafood criteria in the FSANZ Food Standards Code)
- Dr. Dorothy-Jean McCoubrey of Dorothy Jean and Associates (contracted to provide a series of virtual webinars on Vibrios in Australia, risk management options and potential future research)
- Dr. Feng Shi of Symbio Laboratories Pty. Ltd. (contracted to extract and analyse Paralytic Shellfish Poisoning (PSP) and Diarrhetic Shellfish Poisoning (DSP) data from the Symbio laboratory information management system for all Australian bivalve shellfish samples analysed between 2012-2017.
- Ms. Alison Turnbull of the University of Tasmania (sub-contracted to continue providing the delivery of the SafeFish program from Jan 2020 to June 2021).
- Dr. Andreas Seger of the University of Tasmania (sub-contracted to continue providing the delivery of the ciguatera research outcomes for SafeFish from July 2020 to May 2021).

- Mr. Bruno Carrocci of Arris Pty Ltd. (contracted to design, print and bind the 2018/2019, 2019/2020 and 2020/2021 SafeFish Annual reports and the 10-year anniversary logo and infographic)
- Dr. Hazel Farrell of the NSW Food Authority (Department of Primary Industries NSW) (contracted to be the SafeFish Technical representative to the Codex Australia delegation attending the 13<sup>th</sup>/14<sup>th</sup> session of the Codex Committee on Contaminants in Foods (CCCF) meetings).
- Ms. Belinda Cay of Ag Communicators Pty Ltd. (contracted to provide chairperson services for the 2019 SafeFish prioritisation workshop)
- Dr. Maria Cristina Lesseur of Cristina Lesseur Advisory (contracted to provide a review of food safety gaps/issues present within the supply chain of ready-to-eat short shelf-life seafood products)

# SafeFish Working Groups, Teleconferences and Workshops

Technical experts were convened to discuss and progress technical issues at working groups and in teleconferences. Workshops to extend research outputs were also facilitated and are show below:

# National Ciguatera Poisoning Research Strategy Workshop

- Dr. Andreas Seger SARDI Food Sciences
- Ms. Alison Turnbull SARDI Food Sciences/SafeFish
- Ms. Natalie Dowsett SARDI Food Sciences/SafeFish
- Dr. Sue Poole Queensland Department of Agriculture and Fisheries
- Dr. Glenn Stanley FSANZ
- Dr. Shauna Murray University of Technology, Sydney
- Dr. Ian Stewart Queensland Department of Health/Griffith University
- Dr. Richard Lewis University of Queensland
- Mr. Anthony Zammit NSW Food Authority
- Dr. Hazel Farrell NSW Food Authority
- Prof. Gustaaf Hallegraeff University of Tasmania
- Prof. Cristopher Bolch University of Tasmania
- Mr. Fernanda Cardoso Institute for Molecular Bioscience
- Mr. Tianjiao Zhao Institute for Molecular Bioscience
- Ms. Caroline Dornelles University of Technology, Sydney
- Dr. Maritna Doblin University of Technology, Sydney
- Dr. Phoebe Argyle University of Technology, Sydney
- Ms. Tracey Stamp Department of Health WA
- Ms. Hilary Bambrick Queensland University of Technology
- Ms. Lynn Fink Translational Research Institute
- Dr. Wasa Wickramasinghe University of Queensland
- Ms. Leanne Sparrow GBRMPA
- Dr. Michaela Larsson University of Technology, Sydney
- Ms. Dianne Johnson
- Mr. Mark Boulter Seafood Importers Association of Australasia
- Dr. Tim Harwood The Cawthron Institute
- Dr. Russell Stafford OzFoodNet, Queensland Health
- Mr. James Smith QLD Health Food Safety Standards and Regulation
- Mr. Cameron Bright Queensland Health
- Ms. Meaghan Dodd Intuitive Food Solutions
- Dr. Clemence Gatti Institut Louis Malarde
- Dr. Mireille Chinain Institut Louis Malarde
- Mr. Sam Murray The Cawthron Institute
- Ms. Patricia Beatty Professional Fisherman's Association
- Dr. Rose Wright OzFoodNet, Australian Government Department of Health
- Dr. Barbara Sendall QLD Department of Health
- Dr. Steve Carter QLD Health Food Safety Standards and Regulation
- Mr. Mitchell Groves SafeFood QLD
- Ms. Sofie Sandberg Metro South Public Health Unit
- Mr. Erik Perez QLD Seafood Industry Association
- Mr. Tony Hurley A Raptis and Sons Pty. Ltd
- Mr. Eric Poole Sydney Fish Market
- Prof. Alison Robertson University of South Alabama
- Dr. Michael Holmes QLD Department of Environment and Science
- Mr. Tony Riesenweber Queensland Seafood Industry Association
- Ms. Corinna Lange QLD Health Food Safety Standards and Regulation
- Dr. Andrew Bradbury

#### **Microplastics Steering Group Committee Meetings**

- Ms. Natalie Dowsett SARDI Food Sciences/SafeFish
- Dr. Cristina Lesseur Simplot Australia
- Mr. Jason Good Simplot Australia/ Australian Packaging Covenant
- Mr. Alex Craven FSANZ
- Dr. Matthew O'Mullane FSANZ
- Mr. Chris Izzo FRDC
- Mr. Peter Horvat FRDC
- Ms. Alison Turnbull SARDI Food Sciences/SafeFish
- Dr. Bronwyn Gillanders The University of Adelaide
- Ms. Nina Wootton The University of Adelaide
- Mr. Koster Sarakinis The University of Adelaide
- Mr. Erik Poole Sydney Fish Markets
- Mr. Jonathon Davies Seafood Industry Victoria
- Mr. Keith Henderson FSANZ

#### FSANZ Microbiological Review of Food Standards Code Workshop (Australian Participants)

- Dr. John Sumner M and S Consultants
- Ms. Alison Turnbull SARDI Food Safety and Innovation
- Ms. Natalie Dowsett SARDI Food Safety and Innovation
- Ms. Cathy Webb Seafood New Zealand
- Ms. Angela Davies FSANZ
- Mr. Anthony Zammit NSW Food Authority
- Mr. Brian Witherspoon SafeFood QLD
- Ms. Cathy Moir CSIRO
- Ms. Clare Winkel Consultant
- Mr. Clinton Wilkinson PIRSA SASQAP
- Mr. David Miles Coles
- Mr. Erik Poole Sydney Fish Market
- Dr. Janet Howieson Curtin University
- Ms. Jasmine Lacis-Lee Consultant

- Ms. Julie Gillies Huon Aquaculture
- Ms. Lisa Clarke Simplot
- Ms. Lisa Keating Tassal
- Mr. Mark Boulter Consultant
- Mr. Matthew O'Mullane FSANZ
- Mr. Owen Hunt DPIPWE
- Mr. Peter Lamb Tassal
- Mr. Phil Baker NSW Food Authority
- Ms. Rachel King Australian Council of Prawn Fishers
- Mr. Rob Solomon FSANZ
- Mr. Robin Sherlock SafeFood QLD
- Mr. Rodney Brett Huon Aquaculture
- Ms. Shelly Alderman DAWE Exports
- Ms. Sinead Ivory Austral Fisheries
- Mr. Stuart Elliot DAWE Imports
- Dr. Sue Poole QLD DPI
- Mr. Surinder Singh SA Health
- Ms. Tania Martin DAWE
- Ms. Tania Soler Simplot
- Mr. Thomas Callaghan SafeFood QLD
- Mr. Tom Goolwa Pippis Goolwa Pipi Co
- Dr. Wendy Henderson FSANZ
- Ms. Karen Loone Biosecurity Tasmania, DPIPWE
- Ms. Megan Burgoyne Biosecurity Tasmania, DPIPWE
- Mr. Stuart Quinn Public Health Services Dept of Health

#### FSANZ Microbiological Review of Food Standards Code Workshop (New Zealand Participants)

- Mr. David Jones Sanford Ltd
- Mr. Andrew Lucas Talleys Group Ltd
- Mr. Denver McGregor New Zealand King Salmon Ltd
- Mr. Scott Dannock Vela Fishing Ltd
- Ms. Marie McDonald -Sanford Ltd
- Mr. Leon Antunovich Wespac Mussel Distributors Ltd
- Ms. Angela Cummings Consultant
- Mr. Kerry Wright Consultant
- Ms. Cushla Hogarth Consultant
- Ms. Lara Navarro KONO Ltd
- Ms. Julie Bryant Consultant
- Mr. Mark Gornall Consultant
- Ms. Emily Clark OP Columbia Ltd
- Mr. Jim Dollimore Biomarine Ltd
- Mr. Nitesh Asre Moana New Zealand
- Ms. Paula Campbell Mt Cook Alpine Salmon
- Mr. Nigel Harris United Fisheries Ltd
- Ms. Jane Doré Independent Fisheries Ltd
- Mr. Gary Guo North Island Mussels Ltd
- Ms. Rebecca Clarkson Aquaculture New Zealand
- Mr. Duncan Bates Akaroa Salmon Ltd

- Daniela Stringer Sealord Group Ltd
- Ms. Katri Laike New Zealand Clams Ltd
- Mr. Sridhar Jaganathan Mt Cook Alpine Salmon
- Ms. Lisa Olsen MPI
- Ms. Marion Castle MPI
- Mr. Piers Harrison MPI
- Mr. Roger Cook MPI
- Ms. Fiona Thomson-Carter MPI
- Ms. Anne-Marie Perchec Merien MPI
- Mr. Josh Rajkumar- MPI
- Mr. Thomas Chen North Island Mussels Ltd

#### Ready-to-eat short shelf-life seafood project - Steering Group Committee

- Dr. Stephen Pahl SARDI Food Sciences/SafeFish Chair
- Ms. Alison Turnbull University of Tasmania/SafeFish
- Ms. Nancy Notaras Sydney Fish Markets
- Mr. Erik Poole Sydney Fish Markets
- Mr. Thomas Callaghan SafeFood Queensland
- Dr. Cristina Lesseur Independent advisor
- Ms. Meaghan Dodd Intuitive Food Solutions

#### **Vibrio Seminar Series - Presenters**

#### (attended by 131 stakeholders - list can be provided upon request)

- Dr. Dorothy Jean McCoubrey Dorothy Jean and Associates
- Ms. Alison Turnbull The University of Tasmania, SafeFish
- Ms. Natalie Dowsett SARDI Food Sciences, SafeFish
- Mr. Owen Hunt Department of Primary Industries, Parks, Water and the Environment Tasmania
- Mr. Dan Roden Tas Cleanwater Oysters
- Mr. Bill Dewey Taylors Shellfish Farms
- Dr. Enrico Buenaventura Bureau of Microbial Hazards, Food Directorate, Health Canada
- Mr. Phil Baker Australian Shellfish Quality Advisory Assurance Committee (ASQAAC)
- Ms. Deb Gardner Department of Primary Industries and Regional Development, Aquaculture Branch
- Mr. Gary Zippel
- Mr. David Balk Oysters Tasmania Project Manager
- Ms Lisa McKenzie Department of Agriculture, Water and the Environment
- Mr. Murray Barton Department of Health, Northern Territory

### **Appendix 2: Codex Input Provided by SafeFish**

Codex Committee	Total number of items received	Number items of relevance to seafood	
CCCF	68	41	
CCFA	16	2	
CCFH	42	39	
CCFO	11	2	
CCMAS	17	1	
CCRVDF	14	10	
Codex Other	9	8	
SPS	11	11	
FSANZ	2	2	
Total	190	116	



Throughout the life of the project, SafeFish has developed positions and/or notified key stakeholders for the following topics:

Date	Committee	Document #	Issue	Comment	Summary of Actions
				Contains adoption for	Reviewed report and informed ASBTIA and
6/07/2018	CAC	RED18-CAC	Report from the	guidance on histamine	Tuna Australia on MeHg and histamine
0/07/2018	CAC		41st Session of CAC	control and MLs for	discussion. Informed sardines EO on
				Methylmercury (MeHg)	histamine developments
			Electronic working	1st draft alignment of new	
10/07/2018	ССЕН	N/A	group (EWG) on	histamine guidance with	Reviewed document and forwarded to
10/07/2018	ССГП	N/A	bistamino guidanco	Code of Practice for Fish and	processor that had requested a copy
			filstaffine guidance	Fishery Products	
			EW/C on histomino	2 <sup>nd</sup> draft of revision to	
14/07/2018	CCFH	N/A	guidanco	sampling sections of	Reviewed document for content
			guiuance	commodity standards	
				Co-lead response to hygiene	
		N/A	EWG on histamine guidance	section comments.	
20/07/2019				Document continues to	Reviewed document for content
20/07/2018	CCFH			keep open list of species,	
				but words in discussion	
				focused on intent	
			EW/C on histomino	2 <sup>nd</sup> draft of edits to hygiene	
20/07/2018	CCFH	N/A	evvG on histamine	sections of commodity	Reviewed document for content
			guidance	standards	
				1 <sup>st</sup> draft alignment of new	
			FWC on histomina	histamine guidance with	
21/07/2018	CCFH	N/A	evidence	Code of Practice for Fish and	Reviewed document for content
			guiuance	Fishery Products -	
				Comments made by Canada	
				1 <sup>st</sup> draft alignment of new	
		N/A	FWC on histomina	histamine guidance with	
1/08/2018	CCFH		evvo on nistamine	Code of Practice for Fish and	Reviewed document for content
			guidance	Fishery Products -	
				Comments made by Iran	

Date	Committee	Document #	Issue	Comment	Summary of Actions
1/08/2018	ССҒН	N/A	EWG on histamine guidance	1 <sup>st</sup> draft alignment of new histamine guidance with Code of Practice for Fish and Fishery Products - Comments made by USA	Reviewed document for content
1/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by Thailand	Reviewed document for content
1/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of edits to hygiene sections of commodity standards -Comments made by Argentina	Reviewed document for content
1/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of edits to hygiene sections of commodity standards -Comments made by Thailand	Reviewed document for content
2/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by France	Reviewed document for content
3/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by Japan	Reviewed document for content
4/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by USA	Reviewed document for content

Date	Committee	Document #	Issue	Comment	Summary of Actions
4/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by Morocco	Reviewed document for content
4/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of edits to hygiene sections of commodity standards -Comments made by Morocco	Reviewed document for content
4/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of edits to hygiene sections of commodity standards -Comments made by USA	Reviewed document for content
6/08/2018	ССҒН	N/A	EWG on histamine guidance	1 <sup>st</sup> draft alignment of new histamine guidance with Code of Practice for Fish and Fishery Products - Comments made by Iran	Reviewed document for content
6/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of edits to hygiene sections of commodity standards -Comments made by Iran	Reviewed document for content
8/08/2018	ССҒН	N/A	EWG on histamine guidance	2 <sup>nd</sup> draft of revision to sampling sections of commodity standards - Comments made by Canada	Reviewed document for content
14/08/2018	ССҒН	N/A	EWG on histamine guidance	<ul> <li>1<sup>st</sup> draft alignment of new</li> <li>histamine guidance with</li> <li>Code of Practice for Fish and</li> <li>Fishery Products -</li> <li>Comments made by Norway</li> </ul>	Reviewed document for content

Date	Committee	Document #	Issue	Comment	Summary of Actions
16/08/2018	ССҒН	N/A	EWG on histamine guidance	1 <sup>st</sup> draft alignment of new histamine guidance with Code of Practice for Fish and Fishery Products - Comments made by USA	Reviewed document for content
17/08/2018	ССҒН	CL 2018/69-FH	Request for comments at Step 3 on the proposed draft revision of the General Principles of Food Hygiene (CXC 1-1969) and its HACCP annex	Deadline 15/10/2018	Reviewed document for content and SafeFish to maintain watching brief.
17/08/2018	ССҒН	CL 2018/71-FH	Request for comments on the proposed draft Code of Practice on Food Allergen Management for Food Business Operators	Deadline 15/10/2018	Informed SafeFish Partners if this needs to be addressed
17/08/2018	ССҒН	N/A	EWG on histamine guidance	2nd draft of revision to sampling sections of commodity standards - Comments made by USA	Reviewed document for content
23/08/2018	FSANZ	N/A	MR. L	FSANZ removing the MR. L for florfenicol and tylosin in fish and fish muscle, respectively	23/08/2018 - Email sent to aquaculture industry and vets

Date	Committee	Document #	Issue	Comment	Summary of Actions
24/08/2018	ССҒН	N/A	EWG on histamine guidance	Co-lead responses to 2nd draft sampling section comments. Final draft sampling section should be published soon.	Reviewed document for content
24/08/2018	ССҒН	N/A	EWG on histamine guidance	2nd draft of revision to sampling sections of commodity standards - Comments from Norway	Reviewed document for content
28/08/2018	ССҒН	CL 2018/72-FH	Guidance for the management of (micro)biological foodborne crises/outbreaks		Reviewed document, SafeFish to maintain watching brief
31/08/2018	CCFH	N/A	EWG on histamine guidance	Co-lead responses to 2nd draft hygiene section comments	Reviewed document for content
11/09/2018	Codex Australia	CL 2018/70-FH	Request for comments at Step 3 on the revision to COP for Fish and Fishery Products	Direct request, if the Codex Australia should send out a request to all CCFH panel members seeking comments by early October	Responded to Codex Australia
12/09/2018	ССҒН	CL 2018/70-FH	Request for comments at Step 3 on the revision to COP for Fish and Fishery Products	Deadline 2/10/2018	Reviewed document and notified key industry stakeholders including SIA, Tuna Australia, ASBTIA, Seafood Importers, TSGA, NAC, CFA, WFSA, WAFIC, TSIC, SAFCOL, SASIA, SIV, QSIA, NTSC, PFA, GABFIA, LEFCOL, ACWA, Clean Seas requesting comments and likely impact. Provided SafeFish submission to Codex Australia

Date	Committee	Document #	Issue	Comment	Summary of Actions
9/10/2018	ССҒН	CL 2018/70-FH	Request for comments at Step 3 on the revision to COP for Fish and Fishery Products	Sampling plans likely to be too excessive and no-one would use it.	Comment from stakeholder noted
16/10/2018	CCFO	CX/FO 19/26/1	Invitation to the 26th Session of Codex Committee on Fats and Oils	Meeting 25 Feb - 1 March 2019. Meeting to contain report on the outcome of monitoring conformity of named fish oils. Replies to CL 2017/74-FO	Reviewed agenda and maintain watching brief.
31/10/2018	CCCF		EWG for methylmercury in other fish species	New EWG	Emailed Codex Australia to get update on EWG and Australian delegate lead/EWG membership
6/12/2018	CCRVDF		Codex discussion paper on edible offal tissue	At CCRVDF24 the committee adopted a working definition of edible offal as "those parts of an animal, apart from meat from the carcass, that are considered fit for human consumption", but recognised that any definition formally adopted by CCRVDF should be harmonized with the definition used to CCPR. Discussion paper is seeking support to consolidate definitions.	Reviewed document and maintain watching brief

Date	Committee	Document #	Issue	Comment	Summary of Actions
13/12/2018	CCCF	N/A	EWG for methylmercury in other fish species	Received copy of draft EWG discussion paper	Reviewed document and SafeFish provided initial response to Australian delegate lead. Emailed key stakeholders including CFA, SIA, Seafood Importers, NTSC, Professional Fisherman's Association, QSIA, SIV, WAFIC, Wildcatch SA, Austral Fisheries, TSIC, Australian Longline, GABIA, and NRS of current work.
17/01/2019	CCCF	N/A	EWG for methylmercury in other fish species	Received draft copy of Australia's comment to EWG discussion paper	Reviewed comments and suggested a couple of changes to strengthen in Australia's comments
18/01/2019	CCCF	N/A	EWG for methylmercury in other fish species	Direct email received from a SafeFish stakeholder	Response noted
18/01/2019	CCCF	N/A	EWG for methylmercury in other fish species	Received email response from Australian Longline interested in being kept informed	Response noted
21/01/2019	CCCF	N/A	EWG for methylmercury in other fish species	Response from NRS program on past and future testing program	Response noted Checked NRS datasets:
22/01/2019	CCCF	N/A	EWG for methylmercury in other fish species	Received email response from Austral Fisheries interested in being kept informed	Response noted
30/01/2019	CCCF	CX/CF 19/13/1	Meeting Invitation and Provisional Agenda	13th Session of CCCF to be held in Yogyakarta, Indonesia 29 April - 3 May 2019	Forward to Hazel Farrell for registration

Date	Committee	Document #	Issue	Comment	Summary of Actions
6/02/2019	ССҒН	CL 2018/92/OCS-FH	Request for Comments on the alignment of the Code of Practice for Fish and Fishery Products (CXC 52- 2003) with the guidance for histamine control	Direct request from Codex Australia regarding input. Deadline 31 May 2019	Responded to Codex Australia for wide consultation, but SafeFish will review
6/02/2019	CCCF	CX/CF 19/13/13 - Draft	Discussion paper on maximum levels for methylmercury in additional fish species	2nd draft from EWG - comments by 12 Feb 2019 Discussion paper was a significant improvement over previous version	Reviewed document and worked with Australian delegate representatives. SafeFish provided submission and received draft copy of Australia's position
6/02/2019	CCCF	CX/CF 19/13/2	MeHg sampling plans	CCMAS did not endorse the MeHg sampling plans and were not in a position to respond to several of the questions.	Reviewed document and maintain watching brief
12/02/2019	CCCF	CL 2019/11-CF	Request for comments on the Priority list of contaminants and naturally occurring toxicants for evaluation by JECFA	Priority list contains dioxins, inorganic arsenic and ciguatoxins	Reviewed document and 2018 EFSA assessment on dioxins - New tolerable weekly intake for dioxin and dioxin-like PCBs in food of 2 pg/kg BW. Informed NRS and sought input in the practicalities of achieving this level.

Date	Committee	Document #	Issue	Comment	Summary of Actions
14/02/2019	CCRVDF	N/A	JECFA Call for data for the 88th meeting	Response required by 15th April 2019	Reviewed document, call includes toxicity and/or occurrence data for diflubenzuron (4-chloroaniline) in fish to allow establishing an ADI and recommend MR. L, and for selamectin all data necessary to assess the health risk and establish relevant Health Based Guidance Values and recommended MR. Ls in salmon.
15/02/2019	SPS		Thailand SPS 263	Comments due 15 April 2019	Reviewed document for alignment of metal contaminants to Codex, FSANZ and other international standards. Notified key industry stakeholders (predominately relevant national and state EOs)
22/02/2019	CCCF	CX/CF 19/13/8	Comments at Step 6 on the draft guidelines for risk analysis of instances of contaminants in food where there is no regulatory level or risk management framework established	Comments due 5 April 2019	Reviewed document- maintain watching brief

Date	Committee	Document #	Issue	Comment	Summary of Actions
1/03/2019	ССҒН	CL 2018/92/OCS-FH	Request for Comments on the alignment of the Code of Practice for Fish and Fishery Products (CXC 52- 2003) with the guidance for histamine control	Comments due 30 April 2019	Reviewed document and timelines. Advised key stakeholders (predominately relevant national and state EOs) on opportunity to comment. Provided submission to Codex Australia
8/03/2019	CCFO	REP19/FO	Report of the 26th Session	Contains discussion surrounding monitoring to fish oils standard	Reviewed document for content
15/03/2019	CCMAS	CX/MAS 19/40/5	Revision of the recommended methods of CXS 234 - preamble and structure	Comments due 15 April 2019	Reviewed document for content - maintain watching brief
15/03/2019	CCMAS	CX/MAS 19/40/6	Revision of the guidelines on measurement uncertainty (CXG 54 - 2004)	Comments due 15 April 2020	Reviewed document for content - maintain watching brief

Date	Committee	Document #	Issue	Comment	Summary of Actions
18/03/2019	CCCF	CX/CF 19/13/11	Discussion paper on the establishment of new maximum levels for lead in commodities according to a prioritization approach	Sources of lead on agricultural lands should be removed, including vehicle batteries; electric fencing batteries; and old, discarded vehicles and machinery. Metal detectors can be used in slaughterhouses and fish processing facilities to detect lead shot or fishing sinkers in wild meat and fish.	Reviewed document for content
21/03/2019	CCFICS	N/A	CCFICS Electronic Working Group (EWG) on Food Fraud		Emailed Codex Australia registering interest. Australia will be participating in the EWG and will consult with interested parties when documents and information become available. Maintain a watching brief.
21/03/2019	SPS		Macau SPS 24	ML for SO2 in fish products	Reviewed notification, informally translated and advised ACA, AAA, ACPF, APFA, STAG.
29/03/2019	SPS		Taiwan SPS 488	Inorganic arsenic limits in fish oils	Reviewed notification and advised TSGA, Nu-Mega and Ocean Oils.
2/04/2019	CCMAS	CX/MAS 19/40/7	Request for comments: Revision of the Guidelines on Sampling (CXG 50 - 2004)		Reviewed document for content
6/05/2019	CCCF	N/A	Draft travel report	Hazel Farrell's CCCF13 travel report	Reviewed report and content uploaded onto CCCF meeting website

Date	Committee	Document #	Issue	Comment	Summary of Actions
17/05/2019	CCFA	CL 2019/49-FA	Request for general information on the availability of data related to nitrates and nitrites	requests general information on the availability of: (i) occurrence data and / or dietary exposure to nitrates and nitrites; and (ii) surveys of natural occurrence and/or contamination levels of nitrates and nitrites in food and levels of nitrates and nitrites occurring from use as additives	Reviewed document for content
28/05/2019	ССҒН	CL 2019/50-FH	Requesting proposals for new work and/or revisions of existing standards		Reviewed document for content
9/07/2019	SPS	MFDS Notice No. 2019-57	Korean Food Code amendments	MR. L for ethoxyquin in aquatic products, fish names for pufferfish	Reviewed notification and uploaded onto SafeFish website and given to STAG for further distribution.
26/07/2019	ССҒН	CL 2019/69-FH	Request for comments at Step 6 on the draft Code of Practice on food allergen management for food business operators		Reviewed document for content. Maintain watching brief

Date	Committee	Document #	Issue	Comment	Summary of Actions
31/07/2019	CCCF	N/A	Establishment of MLs for methylmercury in additional fish species (New Zealand assisted by Canada)	Invitation from Codex Aust for EWG;	Emailed Codex Australia that SafeFish is interested in the issue and will engage through the lead delegate.
31/07/2019	CCCF	N/A	Radioactivity in feed and food (EU assisted by Japan)	Invitation from Codex Aust for EWG;	Reviewed call and maintain watching brief
8/08/2019	CCFA	N/A	GSFA Online/2019 update	updated version (up to CAC42) of the GSFA Online is now available on the Codex website	Noted - no further dissemination required
20/08/2019	ССҒН	CL 2019/70-FH	proposed draft revision of the General Principles of Food Hygiene (CXC 1 - 1969) and its HACCP annex		Reviewed document for content, Maintain watching brief
20/08/2019	ССҒН	CL 2019/71-FH	Proposed draft guidance on the management of biological foodborne outbreaks		Reviewed document for content; Maintain watching brief,
27/09/2019	CCCF	N/A	MLs for Hg in fish	Email from Australian delegate lead regarding provisional timelines for EWG	Reviewed timeline and informed that we are expecting industry representatives to upload data into the GEMS database

Date	Committee	Document #	Issue	Comment	Summary of Actions
4/11/2019	Codex Australia	N/A	Carryover in feed and transfer from feed to food of unavoidable and unintended residues of approved veterinary drugs	Report from FAO/WHO expert meeting to provide scientific advice and risk management options. SFCMA and Renders Association of Aust already on distribution list	Reviewed document for content
12/11/2019	Codex Australia	N/A	Hazards associated with animal feed	Report from FAO/WHO expert meeting to provide scientific advice and risk management options. SFCMA and Renders Association of Aust already on distribution list	Reviewed document for content
13/11/2019	CCCF	N/A	Upcoming CCCF meeting	SafeFish sponsorship of Hazel Farrell	Emailed Codex Australia and Australian Delegate lead informing that SafeFish would like to sponsor Dr Hazel Farrell (NSW Food Authority) to support the delegation.
4/12/2019	ССҒН	REP20/FH	Report of the 51 <sup>st</sup> Session of the Codex Committee on Food Hygiene	Forward workplans include vibrio in seafood and viruses in food	Reviewed report for content. Maintain watching brief Summary included on Nov-19-Apr20 SafeFish update to Partners.
10/12/2019	CCCF	N/A	EWG discussion paper - Methylmercury in additional fish species	Comments due 3 Jan 2020.	Reviewed document and provided submission to Australian CCCF lead delegate.

Date	Committee	Document #	Issue	Comment	Summary of Actions
16/12/2019	CCCF	N/A	EWG discussion paper - Methylmercury sampling plan	Comments due 3 Jan 2020.	Reviewed document and sent to key industry stakeholders (ASBTIA, Tuna Australia) for comment. Provided submission to Australian CCCF lead delegate.
28/01/2020	CCCF	CX/CF 20/14/xx	2nd draft Discussion paper on maximum levels for methylmercury in additional fish species		Reviewed document in collaboration with Australian delegation representatives. Notified key industry representatives including ASBTIA, Tuna Australia, Austral Fisheries, Australian Longline of developments and opportunity to comment of discussion paper and sampling plans. Submitted SafeFish comments to Australian CCCF lead delegate
4/02/2020	CCCF	CL 2020/24-CF	Priority list of contaminants and naturally occurring toxicants for evaluation by JECFA	Contains dioxins and dioxin- like PCBs, Arsenic (inorganic and organic) Comments due 19 March 2020	Reviewed current Australian data in GEMS for relevant compounds and if SafeFish was the custodian of any other relevant data or if we could upload known Australian data into GEMS. No further action at this time.
14/02/2020	CCRVDF	CL 2020/17-RVDF	Requesting comments on MR. Ls for residues of veterinary drugs in foods	Includes Diflubenzuron in salmon (muscle plus skin in natural proportion)	Reviewed document and notified TSGA for opportunity to comment

Date	Committee	Document #	Issue	Comment	Summary of Actions
14/02/2020	CCRVDF	CL 2020/18-RVDF	Requesting comments on the priority list of veterinary drugs for evaluation, re- evaluation by JECFA		Reviewed document for content
18/02/2020	CCCF	CX/CF 20/14/1	Invitation and provisional agenda		Checked status of Dr Hazel Farrell as being part of the Australian delegation at CCCF14
24/02/2020	CCCF	CL 2020/22 CF	Request for comments at Step 3 on the proposed draft revision of the COP for the prevention and reduction of lead contamination in foods	Metal detectors or x-rays can be used in slaughterhouses and fish processing facilities to detect and facilitate removal of lead shot or fishing sinkers in wild game and fish	Reviewed document for content. Disseminated to partners seeking advice. Maintain watching brief
25/02/2020	CCRVDF	CX/RVDF 20/25/1	Invitation and provisional agenda	Contains report on Joint FAO/WHO Expert Meeting on Carry-Over in feed and transfer from feed to food of unavoidable and unintended residues; proposed MR. L for diflubenzuron in salmon; discussion paper on extrapolation of MR. Ls	Maintain watching brief. Previously disseminated to partners in quarterly update seeking advice.

Date	Committee	Document #	Issue	Comment	Summary of Actions
16/03/2020	CCCF	CL 2020/22 CF	Request for comments at Step 3 on the proposed draft revision of the COP for the prevention and reduction of lead contamination in foods	Dr Hazel Farrell seeking clarity over the prevention/reduction of lead	Responded to request
18/03/2020	CCCF	N/A	Postponement of CCCF14 due to Covid-19	Replies to requests to comments through Circular Letters should still be submitted within the established deadlines as this will facilitate planning of next steps by the Codex Secretariat, Committee Chairs and host secretariat of the relevant committee	SafeFish to maintain a watching brief on all relevant issues.
18/03/2020	CCRVDF	N/A	Postponement of CCRVDF25 due to Covid-19	Replies to requests to comments through Circular Letters should still be submitted within the established deadlines as this will facilitate planning of next steps by the Codex Secretariat, Committee Chairs and host secretariat of the relevant committee	SafeFish to maintain a watching brief on all relevant issues.

Date	Committee	Document #	Issue	Comment	Summary of Actions
23/04/2020	CCRVDF	CL 2020/17-RVDF	Request for comments on MR. Ls for veterinary drugs	Comments now due COB 2 November 2020 Contains recommended MR. L for diflubenzuron at the JECFA recommendation in salmon of 10 µg/kg in muscle plus skin in natural proportions.	Emailed TSGA to advise and inform on timeframe for comment, if required.
24/04/2020	Codex Australia	N/A	Codex Committee on Contaminants in Foods - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
24/04/2020	Codex Australia	N/A	Codex Committee on Food Additives - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
30/04/2020	ССҒН	CL 2020/32-FH	request for proposals for new work and/or revision of existing Standards	Need to remain on list	Responded to Codex Australia
1/05/2020	Codex Australia	N/A	Codex Committee on Fish and Fishery Products - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
1/05/2020	Codex Australia	N/A	Codex Committee on Food Hygiene - stakeholder distribution list	Need to remain on list	Responded to Codex Australia

Date	Committee	Document #	Issue	Comment	Summary of Actions
1/05/2020	Codex Australia	N/A	Codex Committee on Fats and Oils - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
1/05/2020	Codex Australia	N/A	Codex Committee on Methods of Analysis and Sampling - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
12/05/2020	SPS	G/SPS/N/CHN/1150	MR. L: Maximum level of contaminants in certain foods.	Comments due 10 July 2020	Translated and sent out to all SafeFish stakeholders
12/05/2020	SPS	G/SPS/N/CHN/1151	Pathogenic microorganism limits in pre- packaged foods.	Comments due 10 July 2020	Translated and sent out to all SafeFish stakeholders
12/05/2020	SPS	G/SPS/N/CHN/1152	Pathogenic microorganism limits and sampling requirements for ready-to-eat food in bulk.	Comments due 10 July 2020	Translated and sent out to all SafeFish stakeholders
12/05/2020	SPS	G/SPS/N/CHN/1153	Labelling requirements for pre-packaged foods.	Comments due 10 July 2020	Translated and sent out to all SafeFish stakeholders

Date	Committee	Document #	Issue	Comment	Summary of Actions
20/05/2020	Codex Australia	N/A	Codex Committee on Residues of Veterinary Drugs in Foods - stakeholder distribution list	Need to remain on list	Responded to Codex Australia
30/07/2020	CCRVDF	CL 2020/42-RVDF	Request for comments on the approach to extrapolate MR. Ls to one or more species and proposals for MR. L extrapolation	Adaption of grouping of fish to extrapolate MR. Ls	Reviewed document and pertinent background information. Emailed key aquaculture-based stakeholders (NAC, APFA, ABFA, AAGA, ASBTIA, YSGA, Cleanseas, Nutrisea, Skretting, Ridley) on recent developments and opportunity to comment.
5/08/2020	Codex Australia	N/A	Histamine guidance in COP	Seeking update	Requested update from Codex Australia on the anticipated timeframe on when the histamine guidance will be published in the Code of Practice for Fish and Fishery Products.
12/08/2020	CCCF	CL 2020/52-CF	Request for comments on MLs for methylmercury in additional fish species, including sampling plans and other risk management recommendations		Reviewed document and notified relevant industry stakeholders including ASBTIA, Tuna Australia, Austral Fisheries and Australian Longline on developments. Enquired with the Australian delegate on the origins of a potential review of other risk management recommendations Checked on GEMS upload of mercury/methylmercury data for toothfish. Responded to a request and informed Austral Fisheries and Australian Longline of laboratories in Australia or New Zealand accredited for testing of methylmercury in fish.

Date	Committee	Document #	Issue	Comment	Summary of Actions
18/08/2020	CCCF	CL 2020/53-CF	Request for comments on work on review of Codex texts for contaminants	Approach to identify the need for revision of standards and related text developed by CCCF	Reviewed document, Maintain watching brief
8/01/2021	CCFFP	CL 2020 61 FFP	Request for comments on the establishment of an Electronic Working Group (EWG) to evaluate a proposed amendment of the Standard for Canned Sardines and Sardine-Type Products (CXS 94- 1981)	Philippines proposed to chair EWG and draft TOR	Reviewed document. Proposed Terms of Reference for the EWG was acceptable. Maintain watching brief.
13/01/2021	CCCF	N/A	Options paper to consider a trade significance criterion for methylmercury ML setting in additional fish species		Reviewed document and provided Austral Fisheries and Australian Longline an update on progress and to confirm toothfish trade data. Emailed submission to Australian CCCF delegate lead.
5/02/2021	ССҒН	CL 2021/04-FH	draft Guidance for the Management of Biological Foodborne Outbreaks		Reviewed document for content. Maintain watching brief

Date	Committee	Document #	Issue	Comment	Summary of Actions
25/02/2021	CCRVDF	CL 2021/05-RVDF	The principles and approach for the parallel review of a new veterinary drug by JECFA / national regulatory agencies		Reviewed document for content and emailed TSGA, APFA, ABFA, ABTAS, NAC ASBTIA on matter and requested topic can be forward to other interested stakeholders and enquired if SafeFish can be of any assistance in preparing a response.
25/02/2021	CCCF	N/A	MeHg in additional fish	Latest version of discussion paper from EWG	Reviewed document and emailed relevant industry stakeholders including ASBTIA, Tuna Australia, SETFIA, Austral Fisheries, Australian Longline with update and highlighting future species for consideration, discussions on trade significance and proposed sampling plan. Provided submission to Australian CCCF delegates.
2/03/2021	CCCF	N/A	MeHg in additional fish		Provided trade significance options paper to Dr Hazel Farrell.
10/03/2021	CCCF	CX/CF 21/14/1	invitation and provisional agenda	Virtual session	Confirmed Dr Hazel Farrell's willingness to join the Australian delegation and formally nominated her and requested for registration as part of the Australian delegate be considered.
12/04/2021	CCFA	CL 2021/24-FA	Alignment of the food additive provisions of commodity standards		Reviewed document for relevant changes.

Date	Committee	Document #	Issue	Comment	Summary of Actions
14/04/2021	CCRVDF	JECFA88	Toxicological evaluation of certain veterinary drug residues in food: prepared by the eighty-eighth meeting of the Joint FAO/WHO Expert Committee on Food Additives (JECFA)	Contains an addendum for diflubenzuron but JECFA made the same recommendations	Reviewed document for content
14/04/2021	CCCF	N/A	CCCF14 - maximum levels for mercury in additional fish species	Final discussion paper - contains proposal for toothfish but EWG noted that more data might be needed.	Reviewed document and emailed Austral Fisheries and Australian Longline on developments and if they would be prepared to sample larger fish for paired analysis.
21/04/2021	CCCF	N/A	CCCF14 - maximum levels for mercury in additional fish species		Obtained and prepared historical summary of global export data for relevant seafood species for the Australian delegation. Provided submission to Australian CCCF delegate.
30/04/2021	CCRVDF	CX/RVDF 21/25/1	Invitation and provisional agenda	Virtual session scheduled for 12-16 July. Contains FAO/WHO Expert meeting on carry-over in feed, feed to food, MR. L of diflubenzuron, extrapolation of maximum residue limits	Maintain watching brief in order to review final papers.

Date	Committee	Document #	Issue	Comment	Summary of Actions
30/04/2021	CCRVDF	CL 2021/6/OCS- RVDF	Request for comments on the recommendations for edible offal and other animal tissues of relevance for the purpose of harmonization and elaboration of maximum residue limits for compounds with dual uses		Reviewed document for content. Maintain watching brief
26/05/2021	ССҒН		Guidelines for the Safe Use and Reuse of Water in Food Production	Annex II Fishery Products	Reviewed document and emailed National EOs (AMIA, Tuna Australia, TSGA, APFA, ASBTIA, ACPF, ACA, OA, SIA, ABFA, AAGA) on developments and opportunity to input. The draft guideline utilises a risk-based approach to determine if water is fit for purpose.
26/05/2021	CCCF	N/A	Delegate report from Dr Hazel Farrell		Reviewed and accepted report
31/05/2021	CCCF	N/A	Draft CCCF14 Report		Reviewed draft CCCF14 report and enquired on the note regarding potential impact of the selenium-mercury complexes.

## **Appendix 3: Meetings, Workshops and Presentations**

Below is a list of meetings, workshops and presentations that SafeFish have facilitated and/or attended.

Date	Туре	Event Name	Content	
04/07/2018	Presentation	Australian Maritime Safety Association Workshop	Presentation on Abalone	
08/04/2018	Meeting	SafeFish Partners Meeting	Governance, policy and steering	
21/08/2018	Meeting	SafeFish Partners Meeting	Governance, policy and steering, prioritisation	
29/08/2018	Meeting	FRDC Stakeholders Meeting	SIRP Discussions	
11/09/2018	Science Day	ASQAAC Science Day	Scientific presentations on Shellfish	
12/09/2018	AGM	ASQAAC AGM	Governance, policy and steering	
10/10/2018	Meeting	Visit from FSANZ CEO Mark Booth	Discussion of SafeFish work	
19/10/2018	Workshop	WINSC Workshop Safety @ Sea	Presentations on Seafood Safety	
19/10/2018	Dinner	WINSC 20th Anniversary Gala Dinner	Gala Dinner	
02/11/2018	Forum	FSANZ Incident Forum	Incident Response workshop	
14/11/2018	Meeting	SafeFish Partners Meeting	Governance, policy and steering	
7/02/2019	Meeting	ShellMAP meeting		
6/03/2019	Workshop	Vibrio research needs in NT	Work with researchers in NT to define research needs for vibrio risk management in developing shellfish industry	
7/03/2019	Meeting	ShellMAP Tasmania	Discuss emerging food safety issue with shellfish regulators	
27/03 - 28/3/2019	Workshop	National Ciguatera Workshop	To develop a national strategy for ciguatera risk management	
4/04 - 5/04/2019	Workshop	Trans-Tasman food safety workshop	Aim was to produce develop a trans-Tasman food safety research centre	
29/04 - 30/04/2019	Workshop and presentations	SRL Biotoxin Risk management workshop	Overview of Australian/ New Zealand Situations, discussion on current management, updating management plans	
6/05/2019	Meeting	STAG	Discussions on goals and communication for STAG 2019-2022	

6/05/2019	Meeting	STAG Meeting	SafeFish and STAG collaboration and future joint efforts
28/05/2019	Meeting	National Food Safety steering committee meeting	Developing concept and business model for a sustainable National food safety research coordination.
31/05/2019	Meeting	Microplastics in seafood steering committee	Discuss steering committee TOR, comms plan and sample plan.
21/06/2019	Meeting	National Food Safety steering committee meeting	Developing concept and business model for a sustainable National food safety research coordination.
1/7 - 2/7/2019	Workshop and Presentation	New Zealand Food Safety Symposium	Discussions around New Zealand Food Safety Science and Research Centre and collaborations
4/07/2019	Seminar and Presentation	Cawthron Seminar	Capitalising on market opportunities through pro-active management of food safety risk in the Australian seafood industry
15/07/2019	Meeting	National Food Safety steering committee meeting	Developing concept and business model for a sustainable National food safety research coordination.
21/07 - 22/07/2019	Workshop and presentations	Northern Australia Aquaculture Industry Situational Analysis Workshop	Presentation on Food Safety and the risks associated with bivalve shellfish aquaculture.
25/07/2019	workshop	SafeFish Prioritisation workshop	Determination of high priority issues and SafeFish work plan
30/07/2019	Conference/Presentation	Australasian Abalone Convention	Presentation on SafeFish and STAG with Jayne Gallagher, market access talk
31/07 - 03/08/2019	Conference/Presentation	Seafood New Zealand Conference	Presentation on Australian Seafood Safety
11/08 - 13/08/2019	Conference/Presentation	Trans-Tasman Rock Lobster Conference	
18/08/2019	Conference/Presentation	Shellfish Futures Tasmania	Update on SafeFish priorities and work
18/09 - 19/9/2019	Conference/Presentation	Australian Shellfish Quality Assurance Committee Workshop in WA	Keynote presentation: The history of shellfish Quality Assurance
24/09/2019	Meeting presentation	Victoria lobster and crab fisheries resource management group	To discuss marine biotoxin risk management in lobster
27/09/2019	Meeting presentation	Animal Health Australia	Discuss SafeFish model of operation
22/10 - 24/10/2018	Workshop	Northern Territory Oyster Workshop	Discussion around food safety for oyster production

October 2019	Workshop	Northern Australia Aquaculture Industry Situational Analysis Workshop	Phil Baker
9/10/2019	Meeting	SafeFish Partners Meeting	Discussions around 19-21 work program, member updates, codex
09/10 - 12/10/2019	Conference	Seafood Directions	Natalie Dowsett, Anne Astin and Alison Turnbull representing SafeFish
10/11/2019	Workshop	WINSC Women in Seafood Australasia Power Up Breakfast	Natalie Dowsett and Alison Turnbull representing SafeFish
December 2019	Conference	National Recreational Fishing Conference	Andreas Seger. Presentation 'Ciguatera poisoning'.
26/02/2020	Workshop	WASQAP Classification framework workshop	AT to assist with ASQAAC input into the WA SQAP program and provide incident advice
26/02/2020	Meeting	Dept of Health, Dept of Fisheries	Discussions on current Alexandrium bloom events
6/04/2020	Zoom Workshop	FSANZ review of micro criteria in FSC Workshop 1	Natalie Dowsett and Alison Turnbull. Reviewed the definition of ready-to-eat food in FSC
18/06/2020	Zoom Workshop	FSANZ review of micro criteria in FSC Workshop 2	Natalie Dowsett and Alison Turnbull. Standard plate counts, S. Aureus in cooked and raw crustacea.
7/09/2020	Zoom Workshop	FSANZ review of micro criteria in FSC Workshop 3	Natalie Dowsett and Alison Turnbull. Bivalves ( <i>E.coli</i> standard, viruses and <i>V. Parahaemolyticus</i> ), Salmonella and Listeria.
15/10/2020	Zoom meeting	ASQAAC Annual General Meeting	Alison Turnbull represented SafeFish
21/10/2020	Zoom meeting	FRDC response to FSANZ Act review	Alison Turnbull represented SafeFish
5/11/2020	Zoom meeting	DAWE meeting regarding lobster trade issue	Alison Turnbull represented SafeFish
11/11/2020	Zoom meeting	STAG lobster working group	Alison Turnbull represented SafeFish
12/11/2020	Zoom meeting	SafeFish Partners Meeting	Discussions around new SafeFish rebid, chair succession planning, project work, member updates and codex
13/11/20	zoom meeting	FRDC response to FSANZ Act review	Alison Turnbull represented SafeFish
16/11/20 - current	Zoom meetings - numerous	Lobster survey	Alison Turnbull represented SafeFish

17/11/20	Zoom meeting	National diarrhetic shellfish rapid test project	Alison Turnbull represented SafeFish
12/08/2020	Zoom Workshop	Seafood Safety New Zealand Conference	Alison Turnbull represented SafeFish
12/09/2020	Zoom Workshop	Seafood Safety New Zealand vibrio workshop	Alison Turnbull represented SafeFish
15/12/20	Zoom meeting	Food Safety Alliance Australia meeting	Alison Turnbull represented SafeFish
January and February 2021	multiple phone conversations	potential funders	Alison Turnbull represented SafeFish
2/09/2021	Meeting	Alistair Hobday	Alison Turnbull represented SafeFish, discussions on potential collaborations over climate change
16/2/2021	Zoom workshops	Seafood Trade and Market Access priorities for the Export Standards Branch, DAWE	Alison Turnbull represented SafeFish
24/2/2021	Zoom Workshops	NRS Technical Panel	Alison Turnbull represented SafeFish
24/02/2021	Zoom workshops	Working group to shortlist SafeFish Chair for 2021-25	Alison Turnbull, Natalie Dowsett, Mark Boulter, Cristina Lesseur, Erik Poole
4/03/2021	Team's meeting	Anti-microbial survey from CSIRO	Alison Turnbull represented SafeFish
16/3/2021	Team's meeting	National GS1 traceability Advisory Group	Alison Turnbull represented SafeFish
17/3/2021	Team's meeting	Combined Industry China Market Access COVID 19 requirements DAWE meeting	Alison Turnbull represented SafeFish
4/01/2021	WeMeet session	National laboratory capability committee	Alison Turnbull represented SafeFish
21/04/2021	Zoom webinar	Webinar 1: Introductory Session to vibrios	Alison Turnbull and Natalie Dowsett represented SafeFish and facilitated webinars
22/04/2021	Zoom webinar	Webinar 2: Vp Best Management Practices	Alison Turnbull and Natalie Dowsett represented SafeFish and facilitated webinars
28/04/2021	Zoom webinar	Webinar 3: Options for control policies for vibrios	Alison Turnbull and Natalie Dowsett represented SafeFish and facilitated webinars

## **Appendix 4: SafeFish Prioritisation Process**

The generation of the SafeFish work program includes a systematic approach to capturing and identifying issues (existing and emerging), prioritising the issues, and undertaking technical work to provide potential solutions to overcome technical barriers. The following sources of information and data are scrutinised by the Secretariat annually to identify emerging and existing issues that affect the Australian seafood industry:

- Recently published scientific and regulatory literature
- Trade databases containing statistics on rejections/detentions of seafood from key trading partners
- International human illness outbreaks related to seafood consumption
- Advice from industry trade groups (e.g., Seafood Trade Advisory Group, Seafood Importers Association etc.)
- Advice from industry and regulatory stakeholders
- Advice from SafeFish partners
- Advice through Codex forum and new international seafood risk management policies.

Following this process, a list of issues is generated which is then filtered by the Secretariat and SafeFish partners to only include those that fall within the scope of the program (parameters used to determine this include: food safety related; cost to facilitate work; threats to trade; and remit of the SafeFish platform). The resulting list of issues is then included in the prioritisation process specified below:

A comprehensive prioritisation process to fully scope and rank the issues identified is coordinated by the Secretariat every three-years, this entails the following:

- The secretariat scopes each issue that has been identified. The scoping document includes a
  description of the issue, outlines who it affects, provides existing trade and market access data
  where available, and specifies the public health, economic, environmental, reputational and
  regulatory implications)
- A prioritisation workshop (facilitated by the independent consultant) involving key stakeholders (partnership members, technical and industry expert/(s), panel members and other relevant parties) is then held to rank the issues based on pre-set criteria. This determines the issues with the highest priorities that then form the technical work program for the next period.

Throughout the life of SafeFish, four full prioritisation processes have been facilitated (May 2011, June 2014, October 2016 and the most recent in July 2019). On the interim years, a smaller in-house process is facilitated by the Secretariat and involves the following:

- The SafeFish partners are provided with a list of issues that were identified as high priority at the last comprehensive prioritisation process but have not yet had technical research completed to resolve them
- Emerging issues not already captured are identified using the process documented above
- A scoping document (using the same parameters as above) is developed for any emerging issues that were identified
- A meeting is called with all partners and relevant stakeholders where a brief overview of each issue being prioritised is given. Following this, each participant is asked to determine a

priority value for the issues (and rank them from highest to lowest priority e.g., 1 to 5 etc.). The Secretariat will document each individual vote as a record of the process.

Following this, the technical work program for the next period is generated.

# **Appendix 5: Communication Plan**

Stakeholder (key interest)	Communication method (how)	Frequency (when)	Key messages (what)	Comments (who/what)
<ul> <li>Commonwealth Ministers -Agriculture and Trade</li> <li>SARDI</li> <li>Health Regulators</li> <li>Seafood Industry Australia</li> <li>(Governance and program success)</li> </ul>	Annual Report	Aug-Sept	Key successes	Mail to SARDI ED, Minister's office
SafeFish Partners: FRDC, DAWE, FSANZ, SIA, SIAA, Industry reps (Food safety, trade and market access for all Australian seafood)	All reports and updates Partner meetings Emails	As produced 3 per year As required	All activities, priority issues	Email, meetings, mail
<ul> <li>SafeFish contributing partners: ACPF, AAGA, ACA, SRL, OA, TSGA, MIA, SFM, RACs</li> <li>(Trade and market access, food safety for issues impacting them)</li> </ul>	Annual reports SafeFish updates Published reports Partner meeting agenda Presentations Attendance at meetings Relevant codex briefings	Aug-Sept 3 per year As relevant 3 per year As requested, 1 per year As required	All activities	Phone/email/mail to EO, face to face meetings
<ul> <li>State fishing associations</li> <li>National Aquaculture Council</li> <li>Commonwealth Fisheries Association</li> <li>Indigenous Reference Group</li> <li>RecFishing (Trade and market access, food safety for issues impacting them)</li> </ul>	Annual report Published reports if relevant	Aug-Sept As relevant	SafeFish activities and successes	Mail to EO

Stakeholder (key interest)	Communication method (how)	Frequency (when)	Key messages (what)	Comments (who/what)
<ul> <li>Bass Strait scallops</li> <li>Abalone association of Australasia</li> <li>Australian Barramundi Farmers Association</li> <li>Australian Southern Bluefin Tuna Industry Association</li> <li>Western Rock Lobster</li> <li>Australian Prawn Farmers Association</li> <li>(Trade and market access, food safety for issues impacting them)</li> </ul>	Annual report Publications as relevant SafeFish updates Codex items if relevant	Aug-Sept As relevant 3 per year As required	SafeFish activities and successes	Mail Email - direct or to EO
<ul> <li>Seafood processors and distributers (Trade and market access, food safety for issues impacting them)</li> </ul>	Annual Report SafeFish updates Published reports if relevant Codex briefings if relevant	Aug-Sept 3 per year As produced As required	SafeFish activities - research, workshops, resources Key successes Codex items	Email/mail to EO and listed EO/businesses
Researchers - self-identified (scientific interest, future work)	Annual report Publications as relevant SafeFish updates Codex items if relevant	Aug-Sept As relevant 3 per year As required	SafeFish activities and successes Key priorities for research	Mail Email - direct or to EO

Key: FRDC – Fisheries Research & Development Corporation, DAWE – Department of Water and the Environment, FSANZ – Food Standards Australia New Zealand, SIA – Seafood Importers Association, SIAA – Seafood Importers Association of Australia, ACPF – Australian Council of Prawn Fishers, AAGA – Australian Abalone Growers Association, ACA – Abalone Council of Australia, SRL – Southern Rocklobster, OA – Oysters Australia, TSGA – Tasmanian Salmonid Growers Association, MIA – Mussel Industry Australia, SFM – Sydney Fish Markets, RACs – Research Advisory Committees.