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Seafood EMS

Walking the Talk —

Seafood EMS Case Studies

... more about the experiences of the pilot groups

SEAFOOD SERVICES AUSTRALIA

LEADERS IN INDUSTRY DEVELOPMENT

SEMS

WALKING THE TALK – SEAFOOD EMS CASE STUDIES

... MORE ABOUT THE EXPERIENCES OF THE PILOT GROUPS

Seafood Services Australia Ltd is proud to bring you, in this publication and others in the series of Seafood EMS Resources, the distilled wisdom of the industry leaders who have pioneered seafood environmental management systems in Australia.

The Seafood EMS Resources result from an intensive R&D program made possible by the Australian Government's investment of $1.65 million of Natural Heritage Trust funds through industry partnership programs, including the *EMS National Pilot* and *Pathways to Industry EMS* programs. The seafood industry invested $3 million in-kind in these latter two programs.

This R&D capitalised on the innovative strategic investments in environmental management systems in the seafood industry by the Fisheries Research and Development Corporation, with strong support from the Australian seafood industry.

The industry has earned a leading reputation around the world and among other primary industries for these ground-breaking initiatives and its enthusiastic uptake of seafood EMS. By using the *Seafood EMS Resources*, you're taking advantage of the best EMS experience currently available.

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SEAFOOD SERVICES AUSTRALIA

Natural Heritage Trust

Australian Government
Fisheries Research and Development Corporation

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… more resilient to change now that we understand continual improvement … better community perceptions from our credible, positive stories … higher credibility e.g. with conservation groups, because our EMS is based on scientific principles … stronger relationships between us (UNITY!!) …

Victoria — Bay and Inlets

… we've changed the political landscape since getting into EMS … the community recognition we've gained is helping our survival … the notion has grown that the industry is a valued part of the community …

Tasmania — oysters

… our staff enjoy their jobs more — much happier … proven sustainability means the business is more secure … we're leading by good example in Landcare, local government etc … EMS links up our QA, QMS, OH&S, management plans and controls, licence conditions and audit processes … improved capacity to promote all-round quality and respond to market access issues …

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… EMS gives us a common language to communicate risks and threats and to talk about them in a non-threatening way … communication channels between skipper and crews are opening up … training has increased people's awareness of their responsibility … third-party certification is generating digestible information to show the community …

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… our participants took control of the agenda and expressed best practice in a form that's gone down well in the wider community … stakeholders are more aware of the positive steps we're taking in managing risks … the discipline in preparing cases in some detail has been good for us … the status of our industry has gone up …

EMS reminds us that the future is ours to manage

Congratulations to the seafood industry — leaders in environmental management systems!

Five years ago, the notion that the Australian seafood industry would become a world leader in environmental management systems would have been considered far-fetched.

Today, the industry's EMS leadership is widely acknowledged throughout the world and our nation.

This achievement is testament to the inspiration and untiring effort of the staff and directors of Seafood Services Australia Ltd and of the many industry people who have contributed their expertise and time to making EMS work. Prominent among them are the members of the six pilot groups who, by trial and error, showed the way ahead for seafood industry innovators. They have demystified EMSs and have provided easily understood models specifically for the seafood industry.

The seafood industry's achievements have built on longstanding research and development investment in environmental management by the Fisheries Research and Development Corporation. The recent successful outcomes of the six pilot projects were enabled by timely investment by the Australian Government, starting in 2003: some $1.65 million of Natural Heritage Trust funding was allocated through industry partnership programs, including the *EMS National Pilot and Pathways to Industry EMS*. The seafood industry, in turn, invested $3 million in-kind in these latter two programs.

Through these initiatives, lessons learnt by the seafood industry are being transmitted to other Australian primary industries, further increasing their effectiveness. It is highly satisfying that these collaborations between the Australian Government and industry to enhance the future profitability and sustainability of primary industries have been so successful.

In five years, stimulated by Australian Government initiatives such as the Natural Heritage Trust, there has been a sea-change in attitudes about what is possible in managing the environment. Challenges that seemed insurmountable then can now be met by systematic approaches. Importantly, seafood environmental management systems also allow the industry to *demonstrate* responsible, sustainable natural resource management. Knowledge of this environmental responsibility is starting to spread throughout the community, with many eventual economic, environmental and social benefits in prospect from increased community confidence in the industry.

This publication, *Walking the Talk — Seafood EMS Case Studies*, is one of ten paper-based and electronic "Seafood EMS Resources", including an interactive CD ROM and a website. It relates experiences of the pilot groups, supplementing *Seafood EMS Recipes for Success.*

It is with an immense sense of pride that I commend this publication to everyone who has the long-term profitability and sustainability of their seafood business or sector at heart.

The Hon. Sussan Ley, MP
Parliamentary Secretary to the
Minister for Agriculture, Fisheries and Forestry

TOOLS TO HELP YOU TO DO BUSINESS BETTER — THE SEAFOOD EMS RESOURCES

You can't afford to waste time and money when you're running a business. So there's a lot to be said for taking advantage of the experiences of other people.

SSA's Seafood EMS Resources help you to do just that. Thanks to investments by the Fisheries Research and Development Corporation, the seafood industry and the Australian Government's Natural Heritage Trust Pathways to Industry EMS program, you can "pick the brains" of seafood industry people who have pioneered environmental management systems (EMSs) for our industry. We're proud that with their help, we've led the way in EMS — not only among Australian primary industries but world-wide.

We've thoroughly tested and refined all the Seafood EMS Resources so that you can start preparing an EMS — tailored to your unique situation — right now. Here they are:

Choose the right environmental management system

… take a quick read through the **Seafood EMS Chooser**

Develop your EMS and put it into practice

… follow the **Seafood EMS Self-assessment and Training Manual** — it also lets you have your skills and knowledge recognised under the National Seafood Industry Training Package

Save time with handy worksheets

… included with the Seafood EMS Self-assessment and Training Manual, the **Seafood EMS Worksheets** help you to work through each EMS step

Prefer an interactive program?

… then you'll really like the **Seafood EMS CD ROM** — it helps you to set goals for the environment, food safety and quality, OH&S, profitability and community relations, and to integrate them into your day-to-day business activities

Be rigorous — get assessed

… the **Seafood EMS Assessor's Guide** can be used by an EMS Assessor to judge your skills and knowledge against the EMS units of competency in the National Seafood Industry Training Package

Get recognised, get community support

… the Seafood **EMS Communication Kit** helps your EMS achievements to be recognised and supported by the community

Grab new ideas

… visit the Seafood EMS website — **www.seafoodems.com.au** — to bring you new EMS resources and ideas

Pick the brains of the trail-blazers

… Seafood EMS **Recipes for Success** tells you about the experiences of people in the Seafood EMS pilot groups

… and Walking the Talk — **Seafood EMS Case Studies** gives you more information if you need it

Get together with your stakeholders

… the **Engagement of Stakeholders Study** helps you to decide on the best strategies

Case Study 1
Northern Territory Barramundi Fishery

The Barramundi Fishery EMS was developed by the Northern Territory Seafood Council and Barramundi Licencee Committee (a subsidiary of the NTSC). The Barramundi fishery is considered to be a significant fishery in the Northern Territory, at point of sale last year the fishery was valued at $5.17 million (Northern Territory Government, 2005).

The fishery targets Barramundi *(Lates calcarifer)* and King threadfin *(Polydactylus sheridani)*. Northern Territory Fisheries reports indicate that there has been an increasing trend towards fishing in more remote areas. Current major commercial fishing areas include Murgenella, North Arnhem, Blue Mud Bay, Roper River, parts of the Van Diemen Gulf and Daly River Regions. Although the EMS developed focuses on the commercial barramundi fishery, there are a number of other stakeholders in the fishery including recreational fishers, fishing tour operators and indigenous fishers. A number of the areas fished are also considered to have conservation values.

The barramundi fishery currently contains 24 fully transferable licences, reduced from 25 in 2003 under a government buy back scheme. The fishery uses gill nets and is regulated through restrictions on gear, such as mesh size and the amount of nets allowed on each boat. The Barramundi Licensee Committee has instituted some of these limitations, including limits on extra net able to be kept on a boat. The Barramundi fishery is open from February 1 to September 30 each year.

Source: Northern Territory Seafood Council

Gill nets are a selective method of fishing, but a range of non-target species are caught, some that are retained and others that are not. An experienced operator is able to limit bycatch by careful selection of areas for net placement. Incidental

capture of dugongs, turtles and crocodiles has been recorded in the past. Guidelines to minimize dugong and crocodile interactions have been developed by the Northern Territory Seafood Council and form part of the EMS. The Barramundi Licensee Committee has agreed on limitations to the take of shark – a non-target, byproduct – as part of the National Plan of action for the conservation and management of sharks.

The Northern Territory Seafood Council set out to develop an EMS to apply to all Barramundi fishers licensed to operate in the Northern Territory Barramundi fishery.

Methodology

In 2003 the Northern Territory Seafood Council expressed an interest in becoming involved in the Natural Heritage Trust funded Seafood EMS Project. As a result Seafood Services Australia organized for two progressive Barramundi fishers from Karumba in Queensland to come and discuss the benefits of an EMS with a number of seafood industry members including Northern Territory Barramundi Licensee Committee representatives. At the time of this meeting the NTSC had already begun work on a number of documents relevant to the environmental management of the Barramundi fishery including:

- A Code of Practice for the Fishery
- A Five Year Strategic Plan for the Fishery
- Protected Species information for professional fishermen - Dugong

After meeting with Karumba Barramundi fishers, Gary and Claudine Ward, the Barramundi Licencee Committee and Northern Territory Seafood Council, decided to sign onto the Seafood EMS Project. The Northern Territory Barramundi Fishery EMS used the documents that had already been started as its basis. NTSC also planned to incorporate the Environment Australia fisheries ecological assessment when it occurred; this assessment had not occurred at the date of publication and is not listed as a required assessment by Department of Environment and Heritage.

Throughout 2004 the NTSC continued to develop the three listed documents and also began to develop a code of conduct for the fishery and a guide on interactions with crocodiles. The idea behind this being that the documents could be combined with a clear risk assessment to form the EMS. The documentation that forms the basis of the EMS was developed by the NTSC with input from members of the Barramundi Licencee Committee. Each of the documents were progressed, then circulated to industry for input and endorsed at Committee meetings.

In January 2005 an EMS Officer joined the NTSC to progress EMS for a number of fisheries including the Barramundi EMS.[1]

A key factor in the development of the NT Barramundi Fishery EMS was to get government support and recognition for the work undertaken by NTSC. NTSC were successful in communicating their 'good news story' to the Fisheries Department and in August 2004 the NT Minister for Fisheries launched their five year strategic plan and the EMS development process. 2004 also saw the running of the first ever Darwin Seafood Festival, an opportunity to showcase "Clean Green" Northern Territory seafood industry sectors.

Source: Northern Territory Department of Primary Industry, Fisheries & Mines

In January 2006 the completed EMS was taken to the Barramundi Licencee Committee for their endorsement. The EMS was endorsed and printed in March 2006. The completed EMS is seen as being a "Barra Fisher's Bible" it is made up of twelve sections including components of an EMS such as a risk assessment complimented by further industry relevant information sections that can be used as stand alone documents, such as:

- Code of Conduct
- Code of Practice
- Interactions with Crocodiles
- Interactions with Dugongs
- Interactions with Turtles (under development)
- Interactions with Sawfish (under development)

1. An EMS Officer was employed briefly in 2004, however, the person who was acting in the position had to depart for personal reasons and the position was left vacant for some time.

Timeline

2002	Interactions with dugongs information completed
2003	Claudine and Gary Ward, Barramundi fishers from Karumba, meet with NT fishers to discuss the benefits of EMS. Work commenced on 2004-2009 Strategic Plan for the Northern Territory Barramundi Fishery, and Northern Territory Barramundi Fishery Code of Practice. Northern Territory Seafood Council signed onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project to develop an EMS for the Barramundi Fishery in the Northern Territory.
2004	The Five Year Strategic Plan and EMS development process was launched by the NT Minister for Fisheries, Kon Vatskalis First ever Darwin Seafood Festival was held showcasing "Clean Green" Northern Territory seafood
2005	EMS Officer was employed by NTSC with funding from the Fisheries Research and Development Corporation. Barramundi Fishery Code of Practice and General Code of Conduct completed and approved by licence holders Interactions of Barramundi nets with crocodiles was completed Second annual seafood festival held including an introductory EMS workshop
2006	Licence holders signed off on the Barramundi EMS. Barramundi EMS published and circulated widely throughout the Northern Territory

Motivation

Resource Access

Recreational and tour based fishing for Barramundi is a popular and profitable past time in the Northern Territory. It is common for local media to portray the commercial fishery in a negative light. By improving their environmental performance and demonstrating this to regulators and the local community the NTSC and Barramundi fishers are aiming to illustrate that they are responsible operators that should be allowed continued access to the shared resources that support their livelihoods.

Government support

NTSC felt that getting involved in the development of EMS would assist them to get support from their government and related regulators. Although community support is considered an important factor in the continued operation of the fishery NTSC realizes

that this will probably improve over a longer time period and feels that the EMS offers and opportunity to work with government.

Challenges and learnings

Time and Resources

Staff availability

The principal investigator for this project was the Chief Executive Officer of the NTSC, often other priorities needed addressing and time spent on the EMS was reduced. In addition, the CEO became ill for a long period of time in the project, therefore slowing its progress. The employment of an EMS Officer significantly improved the amount of time available to progress the project.

Availability of fishermen

The Barramundi fishery is open from February 1 to September 30 each year. Many Barramundi boats stay out for long periods of time, up to months. It is not effective to hold meetings while the season is open, therefore the time that is available to work address any industry driven processes in limited.

Ongoing costs

The EMS pilot project provided a small amount of funding to assist the development of the EMS. Other short term funding has been made available from the Fisheries Research and Development Corporation for the EMS Officer position. NTSC has concerns about how their EMS will be able to continue once associated funding expires, although the EMS will be in place there will be costs associated with auditing and review that may not be within the NTSC's current budget.

Source: Northern Territory Department of Primary Industry, Fisheries & Mines

Communication and engagement

NTSC recognize that a longer time period will be required to build relationships within the Barramundi fishery so that all fishers have the opportunity to understand the EMS concept and participate in its development. This EMS development focused on bringing licence holders onboard, it will be a further challenge to change the behaviour of crews. A key point in developing future EMS in the Northern Territory will be identifying the culture of the different fisheries involved to work more effectively together.

It was also noted that timeframes for changing community perceptions will be long, with the need to build a good reputation for the fishery. It was felt that working to have public support from the government would be the most effective way for the Barramundi fishers to maintain resource access while creating a better public image. Working first with government came with its own challenges as it was found that many government agencies have no understanding of EMS. For the EMS to be an effective tool for getting government support regulators need to endorse the process.

This pilot also considered that making a difference will occur at a local level and that the local government must be involved in the process. Through the development and continued association with the Northern Territory Seafood Festival the seafood council is working to change public perceptions in the long term.

Industry priorities

Industry priorities affect the day to day operations of any business. In the case of the Northern Territory Barramundi Fishery early in the pilot project a Supreme Court case on poaching led to a ruling that triggered a review of the Barramundi Fishery Management Plan. In February and March 2004 it was unknown whether the Barramundi fishery would continue to exist in the future. When a decision was made to allow the commercial fishery to continue the development of the EMS was continued.

Knowledge transfer and capacity building

NTSC feels that a significant amount of mystique surrounds EMS and this tends to be generated by groups that have a vested interest. There was a need to dispel this myth and educate fishers that developing an EMS is not 'rocket science'. An EMS can be made complex by the amount of detail added to its various elements. Developing the EMS is a learning experience.

Benefits to date

Empowerment

A big positive change that has occurred as a result of the project is that the pride of fishermen involved has increased; it has moved them away from a victim mentality. Fishermen now feel that they have opportunities to be involved in the management of their fishery.

Government support

In 2004 the Northern Territory Minister for Fisheries launched the Barramundi Fishery Five Year Strategic Plan and publicly supported the decision of the industry to develop an EMS. This supported generated significant media interest and a range of stories; both positive and negative towards industry were broadcast. It is the belief of the NTSC that continued government support will assist in generating more positive media and influence on the local community.

A Template for other fisheries

The development of the Barramundi fishery EMS is considered to be a positive investment for industry. Although the current benefits are quite limited NTSC see many potential benefits in terms of continued resource access and security. The method used for the development of the Barramundi EMS will now provide a template for the development of EMS for other fisheries sectors.

Source: Northern Territory Department of Primary Industry, Fisheries & Mines

Where to from here?

- NTSC will be working to roll out of EMS across eight fisheries.
- The Northern Territory seafood industry has agreed to a rise in their levy which will assist in providing a full time Environmental Officer position. Some effort will be put into considering options for the EMS officer position, including looking at ways to tap into the NRM process.

Recommendations from this experience

- Having someone whose primary responsibility is to work on EMS is helpful.
- Be persistent when communicating, the seafood industry fascinates people and they are starved of knowledge. It is important to think about whom you target when communicating and how you explain your story.

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Case Study II
Pearl Producers Association Case Study

The Pearl Producers Association (PPA) represents the interests of all 16 operators licensed to harvest the pearl oyster *Pinctada maxima* in Western Australia and carry out pearl culture activities.

Pearl production based on *Pinctada maxima* is a highly valuable industry sector generating almost $200 million per annum in export value and contributing over $600 million to the Australian economy (WA Fisheries 2005, ABARE 2005). It is also unique in mixing fishing and aquaculture to produce a rare gem rather than seafood. The 'cultured' pearling industry is relatively new having begun in earnest in the late 1970's and only reached consistent commercial levels of production as recently as the early 1990's and full production in 2000. Prior to this the 'pearling industry' was solely based on fishing pearl oyster for production of 'mother of pearl'. The state of the pearl oyster stocks is extremely sustainable under a disciplined quota management regime and the industry enjoyed significant worldwide market demand and high prices in the early 1990's.

Pearl Production Areas in WA

Source: Pearl Producers Association

Pearl production occurs in remote areas of the north west Australian coast between Exmouth to the WA/NT border and across the Arufura Sea. The majority production is based in Western Australia. Although remote, many of the areas where pearling occurs are considered to have multiple use values including recreational fishing, conservation tourism, indigenous sites and commercial fishing.

Pearling activities have been assessed formally by Department of Environment and independent researchers and found to have very low, almost benign, environmental impacts. The pearl oyster catch and production is regulated by a strict quota system strongly based on scientific research. Pearl oyster fishing is carried out through hand collection by divers. Seeded oysters are held for 'grow out' in net panels suspended from the surface of the water. No artificial feeds or chemicals are used to manage the production process.

Under the Natural Heritage Trust funded Seafood EMS Pilot project the PPA set out to develop an EMS template to provide an overarching approach to environmental management for any pearl production enterprise. The aim of developing the template was to focus on aspects and activities that would be relevant to any pearl production operation creating consistency across the industry while allowing individual businesses to focus on internal processes and procedures. It is expected that the template will be used to develop an enterprise specific EMS for each pearling licencee.

Methodology

PPA had embarked on a strategy to formally establish and communicate the environmental credentials of its members as far back as 1998. This industry strategy has included two major research studies, two risk assessment workshops with full stakeholder involvement, an environmental gap analysis, establishment of an environmental code of conduct and an environmental impact research program.

In 1998 the Pearl Producer's Association contracted Enzer Marine Environmental Consulting to undertake an academic study on the impact of pearling *(Pinctada Maxima)* in Western Australia. The overall findings of the study were that the industry was environmentally benign; however, it encountered a number of areas where knowledge gaps existed to fully substantiate the findings.

Following on from this initial work, in 2001 International Risk Consultants (IRC) undertook a study of the pearling industry to assess the current environmental status of the industry and make recommendations for future best practice management. A key aspect of the project was to incorporate a process to provide Environment Australia with sufficient information to assess the environmental sustainability of the pearl oyster fishery under the new *Environmental Protection and Biodiversity Conservation Act (1999)*. This study identified knowledge gaps, assisted in providing an approach to meeting those gaps and provided a risk ranking on pearling activities. The study also assisted PPA develop a pearling environmental code of conduct and an environmental research and development plan.

In 2003 PPA recognized an opportunity to progress it's strategy by becoming part of the Seafood EMS Pilot Project. PPA based their project on a case study pearl farm operated by the MG Kailis Group with the aim to produce and trial an EMS template that could be used by individual pearling companies to develop an EMS for their own enterprise. The

Source: Pearl Producers Association

scope of the PPA EMS template extends from the point of entry of oysters to the pearl farm lease through to the final removal of oyster from the lease having completed its pearl production life when harvested for mother of pearl and pearl meat. The EMS template applies only to environmental factors; it does not include any other elements such as food safety or occupational health and safety which PPA has already implemented formally into industry through alternative mechanisms.

The template EMS manual developed in the case study is clearly based on the ISO14001 model. The manual begins with the PPA Environmental Policy establishing the vision, direction and guiding principles for environmental management within a pearling operation. The policy also establishes industry level and farm operational level responsibilities. The EMS Manual then acts as a framework for the implementation of the Environmental Policy based around 15 elements relating to operational activities, each with a specific objective.

The EMS template provides an overarching approach to environmental management that gives individual pearl producers a firm foundation for the development of their own EMS manual. It provides information on aspects and activities that would be relevant to any pearl production operation allowing individual businesses to focus on internal processes and procedures. Use of the EMS template is expected to catalyze the generation of enterprise level EMS outcomes throughout the industry.

A key factor in the environmental management carried out by the industry through PPA, including their work on developing the EMS template, has been the strong involvement of a range of stakeholders. The initial pearling environmental risk assessment in 2001 and a formal risk assessment review - undertaken in 2004 as part of the EMS template development - were both carried out as workshops with a wide range of participants

invited and attending. Participants in these workshops included representatives from government and non-government agencies, such as the WA Conservation Council, Indigenous Affairs and Recfishwest. Experts in the fields of environmental impact were invited to present their findings and discuss application of systems in the pearling industry. The 2004 risk assessment review workshop applied the SSA Seafood EMS CD which provided an extremely helpful workshop tool for the process of the review and live capture of the review outcomes.

The initial project aimed to develop and trial an EMS template with Broome Pearls (part of the MG Kailis Group). In late 2005 Paspaley Pearls, the largest pearling company, also signed up to trial the pearling EMS template across their organisation.

Between MG Kailis and Paspaley Pearls more than 70% of annual allocated pearling quota has been included in EMS study process.

Timeline

1998	Desktop study on environmental impacts of pearling – Enzer Report
2001–02	Risk assessment workshop, ecological and environmental management gap analyses, research requirements and recommendations – IRC Report
2002	Pearling industry environmental code of conduct developed - PPA Pearling Environmental Management Systems Guidelines developed – PPA/IRC
2003	Environmental R&D Strategic Assessment for Pearling undertaken by PPA with agreement from the WA Government – PPA/IRC/Dept of Fisheries WA PPA signs onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project (to develop and trial a pearling industry EMS template using MG Kailis as case study)
2004	Pearling environmental risk assessment review carried out using SSA CD Application to FRDC for benthic environmental impact study on pearl farms successful
2005	Second pearling business, Paspaley Pearls, signs on to use the EMS template

Motivation

Resource access

The main motivation behind the pearling industry's involvement in the EMS pilot project is the expectation that it will assist in establishing a clearer outline in their efforts to formalize their environmental credentials. In turn, these demonstrated environmental credentials

assist industry in their efforts to retain access to the natural resources required for round pearl production, that is, the wild pearl oyster species *(P.maxima)* and open water lease sites for grow out.

Environmental protection

The pearling industry relies on a pristine environment to maintain the health of pearl oysters which in turn maximizes high quality pearls. The PPA recognizes that the only sound approach to the ongoing sustainability of their industry is through maintaining the integrity of the environment that supports it.

Source: Pearl Producers Association

Paspaley have identified in their EMS a wish to manage their business for the benefit of future generations.

Demonstrating and improving environmental performance

The development of an EMS template gives the pearling industry a consistent method of demonstrating sound environmental performance. It is expected that by having formal documentation to illustrate and substantiate the limited environmental impacts of pearling activities and the steps that people are taking to ensure these impacts are minimized, pearl producers will be in a position to rectify and eliminate ill informed criticism of their environmental performance.

MG Kailis became involved in the project as they had already been developing Environmental Management Plans for each of their sites and wanted to ensure a consistent industry wide application of EMS. MG Kailis, as a member of the PPA, supports the view that industries need to be proactive in demonstrating their environmental credentials to ensure the community is aware of the industry's contribution to environmental sustainability. This project was seen as an ideal way to assist the industry body and demonstrate commitment to environmental management.

The MG Kailis Group is committed to responsible environmental management, which they believe is a key factor in any business growth.

Practical regulation

It is also expected that by demonstrating and continually improving their environmental performance MG Kailis and Paspaley Pearls will be able to influence future regulatory requirements to ensure practicality and reasonableness in management decision making. Demonstrating that industry can effectively self regulate in environmental management will mean there is no need for over regulation and that required regulation will be based around procedures that are already in place and proven effective.

Challenges and learnings

Time and resources

The ongoing availability of staff to work on the EMS was a challenge in relation to the project timeframe. In the MG Kailis case study the task of providing details for the EMS manual was championed by the Compliance and Project Manager who become quite ill for some of the project life. Given that the other roles and responsibilities of this position would have had to be shared amongst other staff, the EMS development – a voluntary initiative – was slowed for this period.

PPA also learnt that time was a major factor in EMS development. Time is necessary to build an understanding of the issues, benefits and the necessary relationships leading to commitment and confidence in the EMS process. Commercial imperatives have continued to relegate the EMS development to lesser priority but the PPA has accepted that an effective EMS will not be able to be implemented without a profitable and long term outlook for the industry overall and each company specifically looking to invest in it.

EMS Concepts - Continual Improvement

Another key factor for PPA is working out how the EMS process can be effectively progressed once the EMS template has been made available to all pearling companies.

The PPA strategy is to maintain a regular and interactive risk review processes involving industry and external stakeholders to assist with continual improvement and update to EMS processes within industry overall and each company. Having developed EMS manuals companies will be encouraged through this approach to continue review and update these documents to extract the maximum benefit.

The recently established PPA Environmental Research program will continue integrating outcomes from the stakeholder reviews and ensure the results are interpreted and built into the baseline EMS information presented to industry. This may see the template reconfigured on a regular basis to ensure consistency across the industry.

Adaptability and integration into existing systems

PPA has long maintained a formal and high quality OHS system across industry, especially in relation to diving. Aquatic animal health disease management practices have also been initiated and all pearl oysters are tested by government laboratories before transport between zones within the industry. Food safety practices are currently being introduced as well.

Each of these processes will be working alongside the EMS as part of a company's overall best practice management approach to their activities and integrated into everyday operations.

Communication and Engagement, External Issues and Stakeholders

Given the industry's level of financial success while still in its early life culture change has been the biggest challenge to obtaining immediate industry buy on to the EMS concept. The pearling industry makeup reflects all Australian primary industries – hardworking family owned companies which require time to absorb the messages that assist change from a platform of early success.

The PPA engages professional staff to assist industry members to understand the issues that may impact on the two most important issues to their business – access to the natural resources they need to grow pearls and access to markets to sell the pearls. Developing industry best practice codes was a robust process with varying levels deemed the accepted base in each company. Agreeing on final details took two years in the case of the environmental policy alone.

It is a fact that the Australian community is seeking greater demonstration by all industries that their continued operations must be in an environmentally sustainable manner. Without this verification continued access to natural resources would be forever questionable. The messages were simple, industry knew its operations were environmentally sustainable but needed to prove this in a formal and strategic manner including research to support claims.

The PPA strategy was to use the risk assessment as an opportunity to bring all stakeholders together to discuss issues facing the industry. This was seen as an opportunity for the industry to educate people on pearling industry management and other methods being applied for managing risk issues. It also ensured that any issues that were in the minds or on agendas of the external stakeholders could be laid on the table and discussed in an open forum with gaps in information identified and research determined to help fill the gaps.

Subsequent reviews have been held to further engage all stakeholders in understanding progress and to again provide an opportunity for issues to be raised.

Benefits to date

Industry Engagement

The most important benefit has been the acceptance of the pearling industry participants that establishing an EMS process was about them taking control of the agenda within their industry and expressing industry best practice in a form acceptable to the wider community. Industry had to be confident that by exposing themselves to this process they would not be providing ammunition for external sources to impose unreasonable expectations. The process followed has ensured that all parties have seen the EMS development as a continuous 'work in progress' and that by accepting all views and identifying reasonable issues upon which to seek change the progress has been faster than expected.

Industry is also enjoying a internal collaboration that has previous been strained and this has spilled over into other matters within the industry which will see improvements in efficiency and effectiveness such as considerations of standard grading or certification schemes for Australian pearls.

Source: Pearl Producers Association

Stakeholder Engagement

One of the key benefits of the SSA EMS Pilot project and development of the PPA EMS template has been the avenues it has created for formal stakeholder engagement.

A number of the people that attended the PPA risk assessment workshops have a strong interest in the environment (conservation, tourism and other users such as recreational fishing) but limited understanding of the pearling industry. The risk assessment workshop gave the industry an opportunity to increase stakeholder awareness of the environmental aspects of pearl production and the positive steps the industry is taking towards managing risks.

The process also instils some discipline on behalf of the stakeholder groups to have prepare their case in some detail on any issues that wished to raise at the workshops because they too would be peer reviewed given the extent and diversity of stakeholders and experts attending. Unsubstantiated claims were not accepted.

Status for the Pearling Industry

The involvement of the pearling industry in this process has increased the status of the industry as environmentally responsible and taking a proactive approach to the issue of environmental management systems and several other best practices in their industry. The pearling industry has been involved in the Commonwealth Natural Resource Management process, marine management planning processes within WA, pearl lease management criteria development, aquatic animal health management, animal welfare management and general improvement in community understanding of the pearling industry's environmental management credentials.

Previous challenges to accessing the necessary resources for the pearling industry have improved given the ability to better describe and provide evidence of the environmental management systems applied in the industry. Special pearling zones have recently been recognized in marine park plans in areas previously rejecting any such commercial activity.

Where to from here?

The PPA EMS template will be made available to all Western Australian pearling companies as the base platform for building their individual company EMS approach.

PPA is also looking to increase its overall services to pearl producers in the Northern Territory and the EMS template will be part of the package of benefits on offer.

PPA will continue to progress its strategy of building the environmental management credentials for the pearling industry through:

- continuous improvement in the pearling EMS including reviewing current pearling EMS with external stakeholder involvement
- continuing research programs to fill identified gaps in knowledge
- education processes, including courses, within the pearling industry about EMS and the benefits
- continuous improvement in industry best practice
- education processes to the wider community, including workshops by the pearling industry about EMS and the benefits

Recommendations from this experience

- Establish industry commitment to demonstrate their environmental credentials
- Involve stakeholders early in the EMS development – gaining community and stakeholder support is easier when they are actively involved in the process.
- Set clear directions for all participants especially that constructive input is the most important.
- Change, especially cultural change, will take time. Resistance takes much longer.
- Be prepared to compromise and work within industry best practice determined through industry consultative processes.
- Work with the industry baseline and incorporate the management systems your individual business already has in place.
- Start small with environmental aspects initially in your EMS but be prepared to integrate with other business management systems or make your EMS an 'integrated management system'

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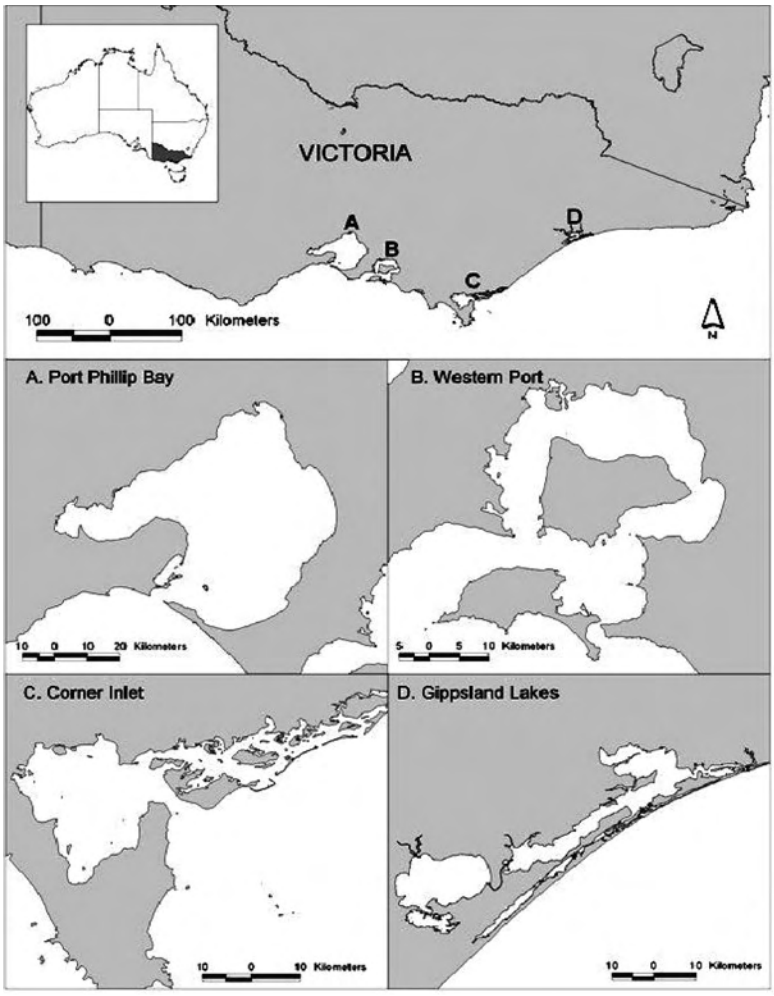
Case Study III
Victoria Bay and Inlet Fisheries Association

The Victorian Bay and Inlet Fisheries are inshore fisheries that have strong historical participation by families who operate small business. The fisheries have existed for over 170 years using a range of fishing methods, predominantly haul seine, mesh net, purse seine, and demersal longline. Fishers operate under a range of licences:

- Western Port – Port Phillip Bay Access Licence;
- Purse Seine (Port Phillip Bay) Fishery Access Licence;
- Corner Inlet Fishery Access Licence; and
- Gippsland Lakes Fishery Access Licence.

Most fishers operate on small 7-8 metre long boats and the majority of produce is caught daily and sent fresh to the Melbourne Fish Market and local retailers.



Source: Victoria Bay and Inlet Fisheries Association

The bay and inlets are a popular tourist destination, they are also adjacent to urban areas, therefore the fishery is highly visible and in an area utilized by a range of stakeholders that have direct or indirect interests in the health of the marine environment. The resources of the fishery are considered to have a range of values including conservation and recreational fishing. Opposition to commercial fishing in the bays and inlets has grown over time and is driven by conflict over access to fish resources.

All professional fishing activities are regulated through a number of means such as, gear and boat size limitations, weekend and seasonal closures, and size limitations on species caught. In addition, fishers have implemented a range of voluntary industry codes of practice to address local issues.

Since 1989 fishing effort has decreased from reductions in fishing licences through voluntary buy backs and area closures. As a result overall catch has also decreased, catch rates per fisher have remained stable and the value of catch has increased regularly. An average of 1300 tonnes of seafood is harvested from this fishery each year valued at approximately $7 million wholesale.

Victoria Bay and Inlet Fisheries Association members set out to develop an EMS covering all fishing methods used by the VBIFA members to demonstrate the actions they were taking to protect the marine environment and operate responsibly to community and government representatives.

Methodology

The VBIFA EMS process was based on the core steps for developing an EMS set out in for ISO 14001 and in SSA's Seafood EMS 'Green Chooser' and related materials. In addition, the VBIFA EMS was written to contain background information on the fishery providing a document that could be used to assist in informing a range of stakeholders with a clear understanding of the fishery and its operating conditions.

In 2003 an EMS Officer was employed to facilitate and drive the development of the VBIFA EMS. The EMS Officer organized a range of meetings and workshops to work with fishers to develop components of the EMS such as the vision, scope, risk assessment and action

Source: Victoria Bay and Inlet Fisheries Association

plan. These workshops were held at ports in Port Phillip Bay and Western Port, Corner Inlet and Gippsland Lakes so that all fishers that were interested in the EMS could be involved without having to travel significant distances to meet as one group.

Positive recognition for the fisher's ongoing commitment to sustainable use of the marine environment was a major consideration in the development of this EMS. In 2004 the EMS was entered in the Victorian Coastal Awards for Excellence and recognised with a high commendation. A group of fishers also met with federal politicians for the launch of the overall National Seafood EMS Pilot Project to discuss their EMS. In 2005 the completed EMS document was launched by the Victorian State Government Minister for Primary Industries.

VBIFA fishers also took part in the Seafood Services Australia EMS mentoring program to share their knowledge and experience relating to EMS with a group of marine-based South Australian fishers.

Timeline

2003	Victoria Bay and Inlet Fisheries Association signed onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project. EMS facilitator employed with funding from the Fisheries Research and Development Corporation.
2004	Awarded a high commendation in the Victorian Coastal Awards for Excellence 2004.
2005	Completed EMS launched by the Victorian Minister for Primary Industries, Bob Cameron.

Motivation

Demonstrating Environmental Performance and Promoting Environmental Protection

Fishers have a personal interest in ensuring that their operations are not creating a significant impact on the environment. Given that the environment is directly linked to the fishers' livelihoods and their community, fishers have always focused on sustainable resource use. Developing an EMS gave the VBIFA fishers an opportunity to demonstrate to their critics their ongoing commitment to environmental management. The development of an EMS document also helped to demonstrate to the fishers involved and to others that read the document the other pressures on the marine environment that fishers can not address on their own.

Resource Access

One of the key motivations of the project was to provide an avenue for fishers to influence political processes. Opposition to the operation of the Victoria Bay and Inlets Fishery has been significant. Losing access to these resources has led fishers to identify options that would assist them in allaying community concerns about fishing practices. By improving community and government support fishers felt they would have greater security of access to the resources they require to operate.

Challenges and learnings

EMS concepts

Several challenges were encountered in understanding the EMS concepts. One of the challenges for the fishery was for fishers to differentiate between a risk and a problem. The perception by many was that if a problem was not occurring, then there was no risk.

Whilst a few individual 'leaders' within the industry could identify and articulate their vision and the path towards their vision using an EMS process, a constant challenge for these individuals was being patient enough to allow the others in the fishery to appreciate the same vision and EMS concepts.

Early in the EMS process the case study group found it challenging to appreciate the concept of ongoing assessment over time, rather than having a one-off project that had a start and end date. It became a continual challenge to keep fishers motivated and involved in the EMS process. The fishers needed to see a reward for their efforts in engaging in the project. The case study group actually lost members initially who were convinced that an EMS should be able to be developed instantly as a quick-fix solution to various issues confronting the fishery.

Source: Victoria Bay and Inlet Fisheries Association

The EMS process was owned and developed by the fishery representing a 'bottom-up' approach, rather than a Government agency developed document. This represents a major shift in thinking amongst the industry and stimulates the industry to take an alternative approach to issues by being proactive, constructive and optimistic. There is the need to educate the Government agencies on the use of an EMS as an ongoing working tool for the industry. Individuals within the department do not fully understand the intention and concept of EMS at this stage.

Timeframes for EMS Development

Often the timeframe provided from funding agencies to proceed through each of the EMS steps were underestimated. Developing an EMS required cultural change within the fishery, this took longer than initially expected. People in the fishery grasped new concepts such as 'risk' at different times and required time to understand new concepts before applying them. Reporting timeframes for the project became an issue because it suggested to industry that the speed of development was measured according to reporting milestones, rather than the uptake by individuals in the industry.

EMS Documentation Development

Although documents are available that provide information on the components of an EMS the development of an EMS requires many skills that are not always apparent at the beginning of the process. The development of the VBIFA EMS was an evolving process with modifications made throughout.

Flexibility in approach allowed this fishery to design the system relating to three geographical areas; Corner Inlet, Gippsland Lakes and Port Phillip and Western Port. This allows recognition of the different areas and practices whilst allows for the development of overarching objectives for the fishery as a whole.

The need for the EMS to take into account the range of issues raised at the different ports along the Victorian coastline was challenging as fishers in different areas had different expectations of the EMS and were working in different environmental conditions. This added a level of complexity to the EMS process not encountered by other fisheries that all operated in the same geographical location.

Building relationships and skills

The relationships developed between the Project Officer and the fishers were crucial for the development of the EMS. The development of effective working relationships gave confidence to the fishers that the EMS would be a positive and productive experience, which encouraged fishers to release information about their fishery for the EMS.

External Issues & Stakeholders

This EMS was developed independent of other key issues such as marine parks, and permanent fishing closures. It was considered important that the EMS approach did not allow these other issues to dominate the focus of the pilot group. However, the announcement of a voluntary buyback in the bays and inlets fishery shortly after the launch of the completed EMS document was a blow to the fishers there was no industry consultation and it was felt that the work of their group had largely been ignored. In the future it is likely that work relating to the EMS will consider external activities, such as a State election, to identify any potential issues.

The most appropriate timing of involving other stakeholder groups in the EMS process, such as environmental and recreational fishing groups, was an issue that needed to be addressed early on in the process. In this VBIFA felt they would be better placed to work with these groups once they had a clear EMS document to show them.

Benefits to date

Cultural Change

The EMS has been directly responsible for initiating cultural change within the industry group. This has benefited in individuals developing the knowledge and first-hand experience of the way in which interactions with other stakeholders and community groups can be a positive experience. The process has provided an opportunity for fishers to be proactive about activities in their fishery rather than reactive or silent which in turn has created a sense of empowerment and the acknowledgement that they can have some involvement in determining their future.

Source: Victoria Bay and Inlet Fisheries Association

There have been specific examples. The EMS has been directly responsible for providing evidence to support that the fishery was not responsible for death of wildlife. The EMS process encouraged a controversial issue to be handled with professionalism and objectivity by other stakeholder groups. Through the EMS, a follow-up of reported dead penguins showed that the commercial fishery was not responsible and that the cause of death was natural mortality as a result of bad weather. Hence the EMS provided a mechanism for consultation to take place and for the issue to be managed effectively. The EMS has given the industry an opportunity to prevent negative criticism and issues about the fishery gaining momentum, to the point where they are difficult to deal with in a positive way.

In addition, the EMS process has generated momentum by fishers to get involved in issues and activities of concern to the fishery which are not necessarily related to the EMS. This was seen as a positive outcome for the fishery as individuals became more involved in industry association issues.

It was clear that the outcomes from this case study were not being measured by the production of a document, but rather by the change in mindset of the industry in working with other stakeholders on a range of environmental issues.

Positive Recognition & Promotion

The EMS enabled the fishery to deliver positive messages to others outside the fishery. This meant that people were prepared to acknowledge the fishery in a constructive way and take steps to get involved with the industry. For example, fishers were approached by a conservation group and asked to involve themselves and contribute to a fundraiser for a research program on penguins at the St Kilda marina. Fishers also engaged further with the community as a result of this particular project. The pilot group considers that this outcome may have longer-term benefits for the industry.

The EMS instigated cultural and behavioural change in how the fishers positioned themselves in the wider community. The launch and endorsement of the EMS by the State Minister for Primary Industries allowed the fishers to consider the wider benefits of developing the EMS. The fishery received a Coastcare Award for Excellence from the Victorian Coastal Council for their EMS and attended the awards dinner. Again, this profiled and promoted the industry to stakeholders who may not have normally supported the fishery.

Building relationships

Building the relationship between the EMS project officer and the fishers was crucial to achieve the development of the EMS. The discussion of the EMS in the ports informally by industry developed a sense of ownership for the EMS process.

The EMS also allowed an opportunity to commence a dialogue with the State Government agency, Fisheries Victoria regarding the link between the EMS and Codes of Practice legislated under the Fisheries Act. VBIFA have also commenced dialogue with government about regulations relating to the reporting of interactions with wildlife to make them practical. At present although fishers would like to report wildlife interactions they are exposed to prosecution in doing so.

Industry Development Opportunities

The EMS process has created other developmental opportunities for the industry such as environmental training and has created opportunities in networking such as the invitation by the Victorian Co-Management Council to be involved in a research and development workshop.

Where to from here?

Following completion of funding for the project, VBIFA will be obtaining further input from other stakeholders as part of the review process for the EMS.

Recommendations from this experience

- An EMS is essentially about cultural and behavioural change and not about producing a written document.
- It is imperative that whoever is driving and documenting the EMS process, needs to have a good relationship with the industry and understand the culture within the fishery.
- An EMS is about an ongoing system and not a 'one-off 'system.
- Don't kid yourself, developing an EMS, if approached well, needs a significant amount of hard work, time and commitment in the long term.

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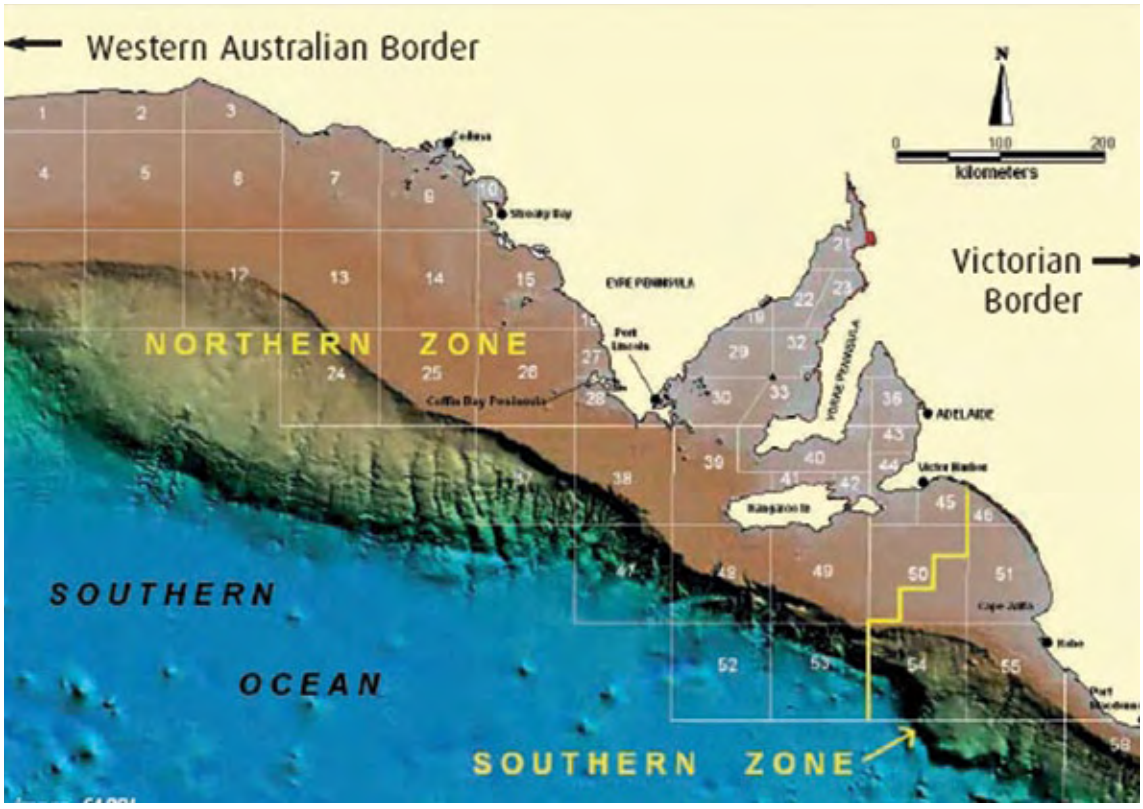
Case Study IV
South Australian Rocklobster Case Study

This case study investigated EMS with the Southern Zone Rocklobster Fishery, one of two Rocklobster fisheries in South Australia, it operates along the coastline from the mouth of the River Murray to the Victorian border. Rocklobster is captured using rocklobster pots and many of the licence holders also hold entitlement to capture marine finfish for bait and commercial sale. In 2003/04 the 181 commercial licence holders operated 11,923 pots and had a maximum pot entitlement of 100 pots per licence.



Source: South Australian Research & Development Institute

Management of the commercial sector is based on a quota system that places direct control on the annual commercial catch. A mix of input controls such as seasonal closures, gear restrictions and limited entry into the fishery also apply and a strategic research program is implemented each year. Long-term sustainability of the Rocklobster fishery has been achieved through this mix of initiatives. Historical fishery management has included effort reductions to the commercial fishing fleet over time and the introduction of a management system based on individually transferable quotas.

Recreational fishers are permitted to take lobster using pots, drop nets, hoop nets and by diving. The recreational catch is capped at 4.5% of the statewide Rocklobster catch and

two recreational Rocklobster pots can be registered by fishers each season. Maximum daily bag and boat limits apply for the recreational catch of Rocklobster. PIRSA undertakes recreational catch and effort surveys every three years to continue to refine estimates of total recreational catches.

The South Australian Rocklobster Advisory Council (SARLAC) is the peak body for fishers from both the Southern and Northern Zone Rocklobster Fisheries. SARLAC initiated the development of the "Clean Green" Rocklobster Program.

The vision for the case study group was to develop an ongoing system for adjusting the business practice of the Rocklobster industry to meet the community expectations and/or legislation. SARLAC commissioned independent research into tools/options e.g. Marine Stewardship Council and ISO that might meet the requirements and decided to build its own tailor-made system.

The key deciding factor was the desire of SARLAC to maintain control of the process, program costs and relationship with industry members. It was seen as critical at the time to avoid locking into a system/brand over which SARLAC had no influence over the "rules", "behaviour" and/or charges (pers. comm. R Edwards).

The EMS was to be used as a behaviour management tool and support cultural change in the industry. SARLAC held the view that the industry would respond and instigate behavioural change if these changes were driven and managed "in-house" by industry and not by external Government or non Government agencies (pers. comm. R Edwards). The research also stimulated the group to focus on an integrated system, thereby avoiding a series of codes of practice covering various elements of their businesses and levels in the supply chain.

Source: Southern Rocklobster Ltd

SARLAC secured the funding to develop the program and undertook the project "in-house" ensuring the direct control was maintained of the outcome against the original aspirations of the organisation.

An independent third party certified accreditation system of the Rocklobster supply chain from 'pot to plate' was developed and referred to as the Clean Green RockLobster Program. It was crucial that the program was relevant, practical and cost-effective. To date, the total number of boats that have been

third party audited under the Program across South Australia, Victoria and Tasmania is 178 boats.

Methodology

The EMS was designed to encourage strong ownership by industry and not be driven by a "top-down" approach. It allowed individuals to demonstrate best practice for the long term which has indirectly developed leaders of EMS within the Rocklobster sector. This approach also respected the individual Rocklobster business needs, as not all businesses were required to complete the training and become involved in the EMS process.

A suite of auditable best practice standards were developed for the fishers, rocklobster processors and at the whole of-fishery level. These standards became the 'backbone' of the program. For example, a standard was developed to provide whale and turtle protection which stated that *"the boat proprietor shall ensure that pot length rope correlates to water depth to minimize accidental entanglements of whales and turtles"*. The related auditing guideline developed was *"Simulation and demonstration as a means of auditing e.g. The auditor to ask the boat operator how he ensures that rope length correlates to water depth."* Essentially the standards have become a set of practical work practices to guide industry in conducting best practice for ecological stewardship, environmental management, crew safety, food safety, product quality and animal welfare.

To support the standards, the following were also developed:

- Training materials aligned to the National Seafood Industry Training package including powerpoint presentations for trainers, video and CD-Rom
- Training sessions for industry to discuss the program and the standards,
- Best Practice Manual containing associated reference material on the program,
- On-boat Induction Manual containing flipcards and forms designed to be kept in the wheelhouse for skippers and crew,
- Audit protocol explaining how the program is managed and audit checklists, and
- A pre-audit assessment process for each boat so that fishers had an opportunity to run through the standards and ask any questions prior to their full third party audit.

Farmbis funding assisted with the training component of the program and training was conducted by trainers from around Australia that specialised in the various areas relating to the standards.

Source: Southern Rocklobster Ltd

Program development utilised the existing SARLAC forums and networks providing a cost effective way of developing and progressing the EMS. However, assistance from the Seafood Council at the grass-roots level was a strong requirement for the industry throughout the developmental stage of the EMS. Each stage of the program was pilot-tested with industry. For example, the training was pilot tested at Robe and Pt MacDonnell in the South-East with a handful of fishers and the standards and audit guidelines were also pilot-tested with fishers at various ports. This gave useful feedback to the case study group.

The EMS deliberately aimed to complement the existing activities and processes already used for the fishery rather than re-inventing paperwork for the industry. Therefore, an approach of integration with the existing business management practices and activities, and linking with existing documents for the industry, such as existing fishery management plans, was used.

Communication on the program included:

- A series of articles in the industry newsletter over several years covering the ongoing development of the program leading up to the launch
- Flyers about the Program
- Close communication with Rocklobster Port Presidents
- Expressions of interest forms to send to fishers who were not involved in the first round of training
- Media releases

- Interviews with local radio and print media
- Relocation of the Clean Green Project Officer to the South East to ensure that resources were in place to deliver on the program in the regional ports
- Presentation at the National Rocklobster Congress for the Australian Rocklobster industry
- Presentations delivered at various local ports and interstate
- Meetings with government agencies on the Program
- Proposals prepared and submitted to government agencies

Branding materials were developed to support the program such as boat stickers which will provide a mark to create recognition for an industry that supplies sustainable, environmentally responsible, safe and premium quality Rocklobster.

Towards the end of the project, the case study group developed 'refresher training' for the industry on the standards which included an update on the certification process. The case study group has also developed a process for ongoing surveillance audits for the industry; these are all related to the continual improvement process of the EMS.

The Joint Accreditation Scheme for Australia and New Zealand (JAS-ANZ) was consulted in the development of the standards and the Audit Protocol. JAS-ANZ has audited the program by investigating the procedures and work carried out by the auditors of the Clean Green EMS Program. The program has been approved by JAS-ANZ as meeting ISO/IEC Guide 65: 1996 and JAS-ANZ Procedure 15. This is very important as it gives the program it's 3rd party status.

Given the success of the program in South Australia, it was expanded to both Tasmania and Victoria. This involved reviewing each of the standards in reference to the different legislation between the States. The Program has also been expanded to the Northern Zone Rocklobster fishery in South Australia.

Timeline

1998/ 1999	The EMS process was first initiated by SARLAC with a cash contribution of approximately $150,000 directly from the Northern and Southern Zone industry members.
2001	Research into systems/options completed and initial "Clean Green" program scope developed.
2002	Pilot program developed and trialed in the Southern Zone.
2003	FRDC EMS project guides finalisation of environmental components. Seafood Council South Australia signed onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project. Clean Green Rocklobster Program was at the stage of '*implementation*' in the eight step EMS cycle. DAFF project covers development of training materials.
2004	In June, Clean Green Rocklobster Program finalised ready to be launched. Training program offered to Southern Zone licence holders in August.
2005	Program offered to Tasmanian and Northern Zone licence holders. Clean Green Rocklobster Program awarded first place in the Business Enterprise Awards Section – Environmental Best Practice Program of the UN World Environment Day Awards
2006	Clean Green Rocklobster Program launched nationally by Australian Minister for Fisheries, Senator Eric Abetz and the Federal Member for Barker, Patrick Secker.

Motivation

Resource Access

The commencement of the Clean Green Rocklobster Program coincided with the establishment of the South Australian Rocklobster Advisory Council in 1998. The EMS initiative was considered as one of the tools to ensure secure future access and business certainty arrangements for the South Australian Rocklobster industry. The Clean Green Rocklobster Program was seen as a way for the industry to take a proactive approach to the many issues that were likely to be raised over the coming years relating to sustainability of the resource, environmental protection of the ecosystem, animal welfare concerns, as well as food safety of the product and occupational health and safety of workers in the seafood industry.

Community Perception

The publicity surrounding the Rocklobster fishery back in 1998 was often negative for the industry. Rocklobster fishers were a ready target for blame for any environmental impact and the perception by the local community was poor. It became evident that a program was needed to address this perception. There was also the concern that this poor public perception could widen and escalate for the fishery to the metropolitan centres in South Australia.

Product Quality

Raising the quality of Rocklobster in markets was another key opportunity identified in developing the Clean Green Rocklobster Program. The flow-on effects in attracting price premiums for the product was recognized as being unattainable in the short-term. However, some in the industry suggests that the Program may result in improving prices if the standard of product quality is lifted over time.

Challenges and learnings

Certification Development

One of the major challenges for the case study group has been the amount of work involved in developing the EMS program. It was not envisaged how many hours were needed at the start of the program, given that at the time there was no similar program to follow. As the project officer commented "*We have covered a lot of miles and a lot of fishers!*"

Given that this case study group had embarked on an ambitious certification process from 'pot to plate', time was needed for the group to better understand the process of certification. Ongoing documentation and paperwork was needed to ensure that the standards were being met in between the annual audits. The need to have the standards finalized early in the EMS process became apparent to avoid delays in other activities. Work is needed in developing documents and protocols to support the program such as codes of practice for people involved indirectly in the program such as retailer employees.

A positive outcome from the Program has been that the auditing takes a relatively short amount of time. One of the key factors which may have threatened the program would have been a lengthy complex audit system for the industry. The approach taken by audit companies has varied significantly in their willingness to provide proactive solutions to the issues encountered. In addition, there needs to be some degree of independence of JAS-ANZ from development of the EMS Program, if JAS-ANZ is asked to audit the program at a later date.

Source: Southern Rocklobster Ltd

The Clean Green Rocklobster Program has focused on the fishing and processing parts of the supply chain and the transport and consumers have not been involved in the EMS process at this stage. Ongoing work on the EMS provides an avenue for effective linkages to be realised across the industry supply chain. In the past, the links at the end of the seafood industry supply chain, such as freight transporters and airlines, have often been overlooked in the development of environmental policy and regulation in South Australia.

This Program aims to reduce the financial burden and complexity on individual operators and will encourage partnerships to be formed throughout the supply chain.

In May 2006, Clean Green branded lobster will trialed in niche USA markets following standards development and traceability through the entire chain involving the chef through to the boat.

Ongoing Management

The ongoing management requirements for the program continue to be a challenge in terms of the activities and associated costs to keep it going. A funding process needs to be developed early however the difficulty in determining costs ahead of the program development should be recognised. This would reduce the pressure from the case study group to continually ask the wider industry for funding.

Work will continue in the future on ensuring that the standards are maintained throughout the supply chain. Once fishers were reasonably comfortable with the Program it was critical to implement the Program in a timely manner and to ensure that the Program was efficient and stream-lined for industry.

Given that the Program was expanded to other states, there was the need for it to incorporate legislation from other States and to have some flexibility in the delivery of the program. For example, the disposal of waste oil in South Australia is achieved using the waste oil stations along the coastline. An alternative best practice standard must be considered for other states that do not have waste oil stations.

Stakeholder Involvement

Industry determined early in the EMS process that the involvement of other stakeholders in the program required careful planning. The industry decided not to involve any stakeholders outside of the fishery during the initial stages of development as it was perceived that this would provide opportunities for government agencies and other groups to take control of the EMS direction and outcome. This deliberate approach of not involving other stakeholders also allowed fishers involved in the EMS to approach the Program with honesty without the threat of penalties or negative consequences being directed towards the individual business or the fishery as a whole. The challenge for the case study group is to now engage stakeholders given the EMS program has been developed. A clear communication process with consumers and other stakeholders will be the key to achieving this.

Benefits to date

Cultural Change

The Program has demonstrated that influencing changes in behaviour is achievable. Fishers, as a result of the training and doing the pre-audit checks, have changed their behaviour and examples include modifications made to the boats and changes in the handling of lobsters. The Program has been shown to actually work and has achieved the objective of behavioural change with some members of the industry. Records have been documented for oil recycling which has demonstrated that industry is disposing of waste the correct way; hence, the EMS has demonstrated good industry practices.

The Program has been very much a 'hands-on' approach with the fishery. Fishers who were not involved in the initial training, pre-audit checks or full audits, approached the Project Officer asking how they could become part of the EMS Program. This created a demand to hold further training sessions and to expand the Program. Hence, there appears to be a positive attitude towards the Program and a proactive approach to dealing with the various industry issues.

Positive Recognition

One of the overwhelming benefits of the EMS has been the public recognition of the industry by the general community and government agencies. The South Australian government agency, Workplace Services, investigated the Occupational Health and Safety component of the Program and would encourage this type of EMS in the seafood industry. The system has provided compelling benefits to the industry by allowing them to own and respond to OHS issues and address them proactively.

The case study group also met with the Environmental Protection Authority (EPA) to discuss the potential gaps between the EMS program and the EPA's draft Code of Practice. The EPA have indicated that they would like to work with the industry to address environmental issues and that they would consider endorsing the program in the future. This is a significant milestone achieved from the Program.

As the program continues to build in terms of participants, the recognition of the program from people outside the seafood industry has continued to grow. The Clean Green Rocklobster Program was launched at Beachport by the Minister for Fisheries, Forestry and Conservation, Hon Senator Eric Abetz and the Federal Member for Barker, Patrick Secker, approximately 50 people in attended. This was considered valuable profiling and a good news story for the Rocklobster industry.

The Clean Green Rocklobster Program was awarded first place in the Business Enterprise Awards Section – Environmental Best Practice Program of the United Nations Association of Australia World Environment Day Awards. One of the Rocklobster licence holders who had been a key initiator and supporter of the Program accepted the award on the night. This was a tremendous recognition of the Rocklobster industry and a credit to their efforts in delivering a Program with real environmental outcomes.

The program was granted first place for the Occupational Health, Safety and Environment Award in the National Safety Council of Australia's Awards of Excellence. The program also received the prestigious accolade of the NSCA/Telstra award for excellence in Occupational Health and Safety 2005. In September 2005, the program was presented with a Certificate of Merit in the 2005-2006 South Australian Landcare Awards as a finalist under the Australian Government's Coastcare Community Award. A few months later in

December 2005, the program was judged in the KESAB Tidy Towns Award and received first place in the Eco-Sustainability Award under the Waste Management and Resource Recovery award category.

Winning these awards has allowed the awareness of the Program to be boosted within the wider community with the clear message that the industry takes it's environmental and workplace responsibilities seriously. This will provide leverage and credibility for the seafood industry in their future work in assisting the environment.

'One-Stop Shop' Industry Program

One of the key benefits for industry from the EMS, has been the incorporation of many industry issues within the same EMS framework. The key areas of sustainability, environmental protection, occupational health and safety, food safety, product quality and animal welfare and all addressed within the Clean Green Rocklobster Program. This enables training as well as any other activities relating to these topics to be addressed all at once. This has provided a cost effective way for industry to address a range of issues relating to their sector.

Where to from here?

Following completion of funding for the project, the Clean Green Rocklobster Program will continue to be developed further and managed for the industry across South Australia, Victoria and Tasmania.

Recommendations from this experience

- Do not underestimate the work required in developing a third party certified accreditation system for an industry.
- Think through the ongoing management requirements and costs once the program is up and running and how the Program will be delivered in the longer-term.
- Maintain strong industry ownership and direction throughout the Program through pilot-testing each stage.
- The timing of introducing stakeholders into the program needs up-front planning.

References

Southern Zone Annual Report 2003-2004 South Australian Southern Zone Rocklobster Fisheries Management Committee, May 2005

Case Study V
Queensland Seafood Industry Association

Moreton Bay Region Case Study

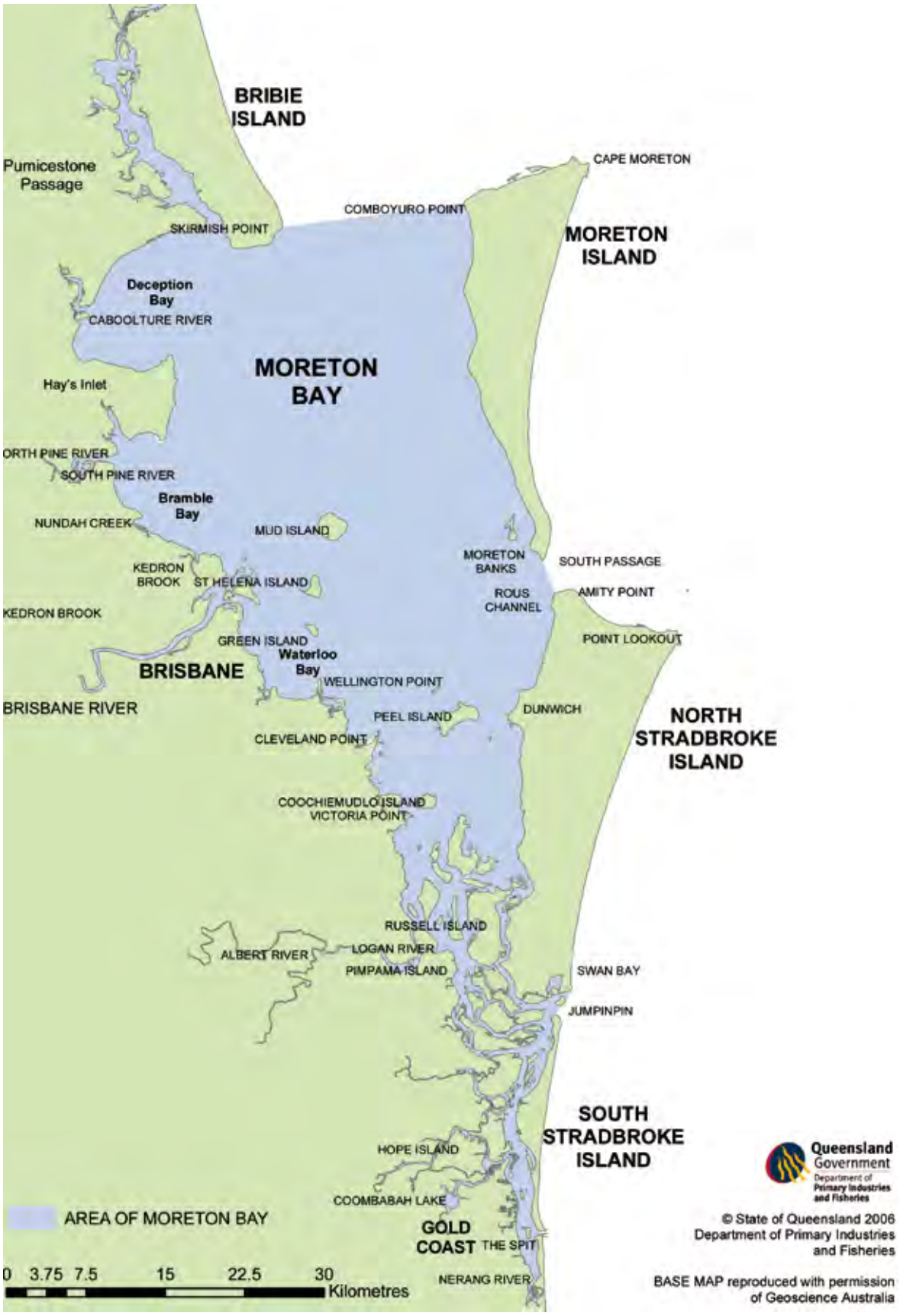
Moreton Bay is a highly productive marine region with fisheries generating approximately $33.2 million gross value of production annually (Fenton 2001 as cited in Williams 2006). About 360 primary fishing boats (representing trawl, net and crab) are licensed to operate in the Moreton Bay region (DPI&F Freedom of Information). Not all of these boats work exclusively within the Bay itself and only a proportion of these boats are currently operational.

Moreton Bay is located adjacent to Brisbane and surrounding suburban areas, the fishery is highly visible and in an area utilized by a range of stakeholders that have direct or indirect interests in the health of the marine environment of Moreton Bay. In addition, resources of the fishery are shared by a number of groups such as recreational and indigenous fishers and divers. A number of significant environmental sites also exist within the region.

All professional fishing activities are regulated through a number of means such as, limited entry arrangements, gear and boat size limitations, weekend and seasonal closures, permitted species and Total Allowable Catch limits. It is compulsory for otter trawl operators to have a turtle exclusion device (TED) fitted to each net. New master fishermen are also required to undertake an endangered and threatened species awareness course.

The Moreton Bay Seafood EMS is an initiative of the Moreton Bay Seafood Industry Association (MBSIA), developed with support from the Queensland Seafood Industry Association (QSIA). With the QSIA's help, MBSIA was established in 2001 to assist with management of regional issues affecting fishers in Moreton Bay. The EMS applies to all professional fishers who have signed onto to the MBSIA EMS Code of Industry Best Practice and EMS Action Plan and who hold a primary fishing vessel license endorsed with one of the following fishery symbols:

- Otter trawl – M1 or M2;
- Beam trawl – T5; and/or
- Net fisheries – N1 (East Coast No. 1, off-shore net fishery), N6 (Bait No. 1).


BRIBIE ISLAND
Pumicestone Passage
CAPE MORETON
COMBOYURO POINT
SKIRMISH POINT
MORETON ISLAND
Deception Bay
CABOOLTURE RIVER
MORETON BAY
Hay's Inlet
ORTH PINE RIVER
SOUTH PINE RIVER
Bramble Bay
NUNDAH CREEK
MUD ISLAND
MORETON BANKS
SOUTH PASSAGE
KEDRON BROOK
ST HELENA ISLAND
ROUS CHANNEL
AMITY POINT
KEDRON BROOK
GREEN ISLAND
POINT LOOKOUT
Waterloo Bay
BRISBANE
WELLINGTON POINT
BRISBANE RIVER
PEEL ISLAND
DUNWICH
NORTH STRADBROKE ISLAND
CLEVELAND POINT
COOCHIEMUDLO ISLAND
VICTORIA POINT
RUSSELL ISLAND
ALBERT RIVER
LOGAN RIVER
PIMPAMA ISLAND
SWAN BAY
JUMPINPIN
SOUTH STRADBROKE ISLAND
HOPE ISLAND
COOMBABAH LAKE
AREA OF MORETON BAY
GOLD COAST
THE SPIT
NERANG RIVER
0 3.75 7.5 15 22.5 30
Kilometres
Queensland Government
Department of Primary Industries and Fisheries
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Department of Primary Industries and Fisheries
BASE MAP reproduced with permission of Geoscience Australia

The fishers of Moreton Bay set out to develop a regional EMS, covering multiple fisheries and multiple species, providing a cooperative approach to environmental management across fisheries operating in the bay. In time the EMS will extend to the following fisheries:

- Specimen shell collection fishery – F;
- Crab fishery – C1 or C2;
- Line fishery – L1, L6 or L7; and
- Net fisheries – K2, K3, K4 or K5.

Methodology

The Moreton Bay regional EMS process was based on the steps set out in SSA's Seafood EMS 'Green Chooser' and related materials such as the Seafood EMS Self-Assessment and Training Manual. It also aimed to incorporate:

- the Marine Stewardship Council Principles and Criteria for Sustainable Fishing;
- the Department of Environment and Heritage "Guidelines for the Ecologically Sustainable Management of Fisheries";
- ISO 14001 EMS; and
- Components outlined in the National ESD Reporting Framework for Australian Fisheries: "How to" guide for wild capture fisheries

In addition to environmental issues, a driving theme behind the development of the Moreton Bay EMS was the inclusion of social issues. The EMS acts as an integrated management system identifying risks and addressing actions relating to environment, economics, food safety, public relations, occupational health and safety and social impacts.

The project was initially set up through the Queensland Seafood Industry Association. An application for a Fisheries Research and Development Corporation (FRDC) funded EMS Officer position was successful and in late 2003 an EMS Officer was employed. It should be noted that this application was originally for two EMS Officers, one to work on a Moreton Bay Regional EMS and another to work on a Far North Queensland regional EMS, the two positions were merged into one due to a lack of funding.

The EMS process began with an initial regional workshop on December 13 2003. All fishers operating in Moreton Bay were invited to attend. At this meeting a vision and scope for the EMS were determined and it was suggested that future meetings would be better in small working groups based around different fishing methods. The EMS Officer took up this suggestion throughout 2004 and 2005 progressing the EMS through four separate risk assessment and action planning processes, one for each of otter trawl, beam trawl, inshore net and shell specimen collection fisheries (although the specimen shell collection section is not included in the final EMS).

Source: K Williams
Moreton Bay Seafood Industry Association

As the small working groups completed each major step of the Green Chooser process, large regional workshops were held to ensure that all fishers in the Bay had the opportunity to join a small working group and/or to have input into the process. The small group workshops were held in both northern and southern areas within Moreton Bay to make it easier for a range of fishers to attend. A number of fishers participated in an EMS training course in December 2003 and some attended a national EMS Summit in 2005 to discuss the future of EMS in the fishing industry.

Once the draft EMS was formulated a further regional workshop was held so that fishers could have input into the draft. Following industry approval of the draft, the EMS was subject to a period of public review and consultation (from 20 March 2006 – 20 April 2006). Copies of the document were sent to a range of stakeholders including state and local government departments, environment and community groups, recreational fishing bodies and indigenous councils. Feedback was received from a number of stakeholders and incorporated into the EMS.

In addition to mail-outs, two community meetings were held in northern and southern areas of the Moreton Bay region, advertised in local newspapers. This gave fishers and local community members the opportunity to meet and openly discuss the progress of the plan and the work that fishers have been doing in relation to the environment.

Implementation of EMS actions had already commenced whilst the EMS was undergoing public consultation. It is expected that full implementation of the current EMS actions will take two – four years. The major challenge impeding implementation of the EMS is

Source: K Williams
Moreton Bay Seafood Industry Association

funding in order to keep the EMS officer employed and to undertake various research and community projects developed through the EMS process.

A major achievement of the EMS development process has been the reinvigoration of the Moreton Bay Seafood Industry Association (MBSIA). At the beginning of the EMS project the association was mostly inactive with activity based on a handful of key executive members with limited support from other fishers. The assistance of the EMS Officer has led to its transformation to a highly active organization with almost fifty members, a chair, vice-chair, board and Chief Executive Officer. Representatives of each fishery and area of Moreton Bay form the MBSIA board. It is through the board that goals and objectives for the region are established and management issues dealt with. The MBSIA board has regular contact with the QSIA and Department of Primary Industries and Fisheries (DPI&F) representatives to ensure consistency in fisheries management across the State.

Motivation

Resource Access and improved environmental performance

The initial motivation for QSIA to sign on to develop an EMS was to assist with demonstration and continual improvement of environmental performance. This is seen as the basis for resource and market access, therefore improving long term industry profitability. It was felt that developing an EMS would increase community and consumer confidence in the sustainability of Moreton Bay fisheries.

There is a growing recognition amongst the industry's grass roots that long-term profitability will require maintenance of existing resource and market access - access that is only possible with improved environmental performance and demonstrated triple bottom line sustainability.

Timeline

2003	Queensland Seafood Industry Association signed onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project. EMS facilitator employed with funding from the Fisheries Research and Development Corporation.
2004	Small working groups established Participated in the EMS pilot program national forum Risk assessment commenced Regional workshops held Production of brochure on Moreton Bay EMS EMS officer conducted a presentation for FAO in Rome
2005	Risk assessment completed Actions assigned to risks Regional workshops held Moreton bay fishers attend EMS Summit
2006	Public consultation on EMS, including mail-out & public meetings EMS documentation finalized and implementation of EMS actions commenced

Source: K Williams
Moreton Bay Seafood Industry Association

Making the most of the media

Communicating the good work that Moreton Bay fishers have been doing is also a key part of the EMS process.

A brochure was produced giving an introduction to the environmental initiatives of Moreton Bay fishers, including their EMS. The brochure was distributed to retail outlets throughout the Moreton Bay regions by fishers and the QSIA.

Arrangements have also been made with the Queensland Environmental Protection Agency for regular articles on the EMS plans to appear in their publication – Compass magazine.

Similarly, regular articles on EMS development and achievements are published in the Queensland Fisherman Magazine (published by the QSIA).

Moreton Bay fishers took part in the 2006 "Business Clean Up Australia Day". Media coverage was significant, including both local television, radio and print media.

In March 2006 the Moreton Bay EMS was recognized through the Moreton Bay Seafood Industry Association (MBSIA) receiving two prestigious awards as part of the 2006 Queensland Department of Primary Industry Achievement Awards - the "Sustainable Primary Production" award and the overall award for "Most Outstanding Contribution to Primary Industries".

Media coverage for these awards was achieved in print media (local newspapers and the Queensland Country Life).

Community Attitudes

Negative community attitudes towards the industry were the driving factor for fishers to be involved with EMS development. Fishers identified that developing an EMS for the Moreton Bay region would help provide them with the skills necessary to communicate more effectively with local community groups, government and with the media.

Integrating and improving on existing work

QSIA recognizes that a large amount of work has been occurring across a range of jurisdictions and levels. The project would assist to refine the Green Chooser EMS model developed by SSA. It also aims to address state, national and international guidelines relating to environmental management which should assist in streamlining, and coordinating parallel programs.

Challenges and learnings

Building relationships

The area covered by the Moreton Bay Region EMS is quite extensive; many of the fishers in the area have never worked together and felt they had nothing in common. Some of the fishers involved had hostile relationships when they initially became involved in the EMS development. A key requirement for the effective development of the EMS was that different fishers were able to put differences aside and realize their shared interest.

Building a relationship between the EMS facilitator and the fishers also took time but was an essential step in EMS development; fishers had reservations about working with a facilitator that was not a member of the seafood industry. To assist in addressing this challenge the EMS Officer made the effort to go out on boats. During the risk assessment and evaluation process several fishers were initially trying to be careful about providing information. Once fishers had some ownership of the process and understood the voluntary nature of the initiative they were more comfortable and ready to work with each other.

Understanding the seafood industry

It is important to have an EMS Officer who has some knowledge of the seafood industry and is willing to learn more by going out with fishers. This improves the relationships between fishers and the EMS Officer and also means that the EMS Officer has a better understanding of how the fishers operate.

The environment that fishers work in changes constantly. The industry is highly political, affected significantly by the natural environment it operates in as well as facing financial and economic issues like any other business. The EMS must be dynamic enough to allow for these factors and still achieve desired outcomes.

Time and Resources

This case study group was initially part of a project that included the development of an EMS for the Moreton Bay Region and Cairns based fishers in Far North Queensland. The project was initially set up for two project officers but because of a lack of funding only one officer was employed. This meant that the project officer had a larger workload than expected and a lot of travel became part of the project. There was also some trouble with the administration of the project – the timeframe for the project was extended; however, some of funding committed at the beginning of the project was never made available. The project officer was temporarily without a workplace which meant time had to be spent addressing this issue rather than working on the EMS.

The risk assessment took a long time to complete in this project. It was difficult to schedule meetings when an acceptable number of fishers and the EMS Officer were available. It also became necessary to give a lot of notice about meeting times and dates and to alternate meetings between northern and southern areas of the Bay so that different fishers could be involved in the process.

Given the scale of the project it became clear within the early parts of the project that the timeline for its completion was not realistic. Funding providers require evidence of progress however the EMS Officer needed to negotiate to change milestones several times within the life of this project, which took up time and detracted from the project.

Incentives to be involved

As a pilot project it was sometimes difficult for the EMS Officer to provide fishers with an incentive to get involved with EMS development. When the project started there weren't many other groups that had developed EMS so it was difficult to tell fishers "what was in it for them". Expected benefits such as resource security and improved community perceptions were promoted to the fishers.

When a draft was completed it became a lot easier for fishers to see what the EMS was all about and this generated a large amount of interest. To maintain the interest of fishers and keep them involved, the EMS officer sent out updates and drafts to all interested parties, making the process inclusive rather than exclusive.

Communication and Engagement

The EMS Officer believes that there is a need to report good news stories to improve public perception and also give acknowledgement to the efforts that fishers have put into the process. The Moreton Bay EMS is now a regular feature in the Queensland Environmental Protection Agency's quarterly magazine, *Compass*.

Source: K Williams
Moreton Bay Seafood Industry Association

It was found that the best way to communicate with fishers was to send out information with industry publications. Fishermen were invited to contact the EMS Officer if they wanted to be involved or just wanted more information. The EMS Officer was also considering setting up a website so that people who were interested could find out more about the EMS. The idea was that it would enable the EMS officer to be more time-efficient by reducing the amount of hours spent responding to requests for information.

Industry ownership

It was hoped that the fishers would be integral in carrying out actions relating to the development of the plan. For this to occur it was essential to have motivated leaders that have skills relevant to EMS development. In particular, leaders comfortable facilitating groups and communicating with other fishers. Many fishers were involved or interested in being involved in the EMS process, but it was difficult to get fishers to take the lead on decision-making and organisational issues. A lack of spare time to address issues other than those associated with day-to-day fishing operations and skills were the main reason behind these difficulties.

A small number of committed fishers assisted the progress of the EMS. But it wasn't until the EMS had been drafted and fishers could see the progress made that large numbers became interested in having an active role in the implementation of the EMS. There are still some concerns that the EMS is dependent on the EMS Officer position that is currently only funded until the end of June 2006.

The EMS is based on the Moreton Bay Seafood Industry Association. Without a strong regional Association it will be difficult to progress the EMS forward and implement it. The EMS Officer led a membership drive for the MBSIA and is now employed as their Executive Officer. The MBSIA is now a well supported organization with almost fifty financial members, and a strong executive.

Benefits to date

Cultural Change

The EMS has provided for the development of a 'continual improvement' culture amongst participants. The EMS has presented an opportunity for fishers to be proactive about activities in their fishery where they may have felt there were no avenues for action previously; this has created a sense of empowerment. Individuals are now seeing the importance of working together and demonstrating environmentally sustainable practices to external stakeholders.

Building Relationships

The EMS has strengthened relationships between various groups of fishers who have traditionally been in conflict. With a common vision and goals, the seafood industry groups involved are equipped to negotiate with other stakeholders on a range of key issues. This unified approach will also assist the State Government (and other stakeholders) as they will only have to work with one group, instead of a disparate range of industry groups and individuals.

Industry development

The EMS has increased social capacity within seafood industry groups and fishing communities. By being involved with the project, industry members have gained skills and knowledge that will assist them in maintaining viable businesses. In addition, by communicating environmental achievements to local communities, industry groups have improved community perceptions of professional fishers. This has strengthened relationships between fishers and other members of coastal communities.

Source: K Williams
Moreton Bay Seafood Industry Association

A template for others embarking on EMS development

The challenges and critical success factors associated with developing a regional, multi-fishery EMS have been identified through this project. This provides a template for other fishing groups in Australia or elsewhere as they attempt similar projects.

Where to from here?

The MBSIA will look to secure funding to assist with the implementation of the actions developed under the EMS. Assuming funding is available the EMS will also start to be expanded to incorporate further fishing methods in the Bay.

Further research and review is required to establish what the key challenges are for EMS implementation at a regional, multi-fishery, multi-species scale over a large geographic area and including hundreds of fishermen. This research should include review in the short and long term.

Recommendations from this experience

- An EMS needs flexible a timeframe for development, you can't pressurefishermen to work within a set time frame when it may impact upon their business. EMS development has to be a positive process taking time to evolve.
- Wives/partners can be useful for support.
- Build up in industry's mind that what they are doing is important and it's all voluntary, they don't have to be there if they don't think it is important!
- Facilitators need to get to know the fishers and fishery
- Communicate, communicate, communicate.
- Industry leaders need to be identified and provided with training (formal or informal) to effectively drive their EMS projects
- Think about how accessible meetings are, try to pick a location that is neutral and give lots of notice for meetings, and remind fishers at every opportunity.

References

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Case Study V
Far North Queensland Region

The far north Queensland EMS project was initiated by the Queensland Seafood Industry Association as part of the Queensland EMS Pilot Project. Two separate EMSs were commenced for the otter trawl fishery and the reef line fishery. These fisheries were chosen based on significant industry interest from these sectors.

The fishers set the overall scope for these EMSs, which for each sector EMS included fishers endorsed to operate in the regional area from Klump Point (just north of Townsville) to Cape York (the tip of Queensland). Uniquely, this area includes the Great Barrier Reef Marine Park, a World Heritage listed area. There are multiple values attributed to these fisheries including high conservation and tourism values and indigenous values.

Professional fishing activities in this area are highly regulated through a number of means such as, limited entry arrangements, gear and boat size limitations, closures and size limits.

Due to dramatic social impacts resulting from closures to areas of the Great Barrier Reef Marine Park detailed information on the background for these fisheries are not available.

Methodology

The Far North Queensland Region EMS process was approached in the same way as the Moreton Bay Region case study. Its progress followed the steps set out in SSA's Seafood EMS 'Green Chooser' and related materials.

The project was initially set up through the Queensland Seafood Industry Association. An application for a Fisheries Research and Development Corporation funded EMS Officer position was successful and in late 2003 an EMS Officer was employed. It should be noted that this application was originally for two EMS Officers, one to work on a Moreton Bay Regional EMS and another to work on a FNQ regional EMS. The two positions were merged into one due to a lack of funding.

The EMS process began with an initial regional workshop on January 27, 2004 all fishers operating from Cairns were invited to attend. This meeting helped to establish small working groups relating to trawl and line fishers. The small working groups went on to establish a vision, scope and completed drafting a risk assessment for the different fishing methods. The tropical rock lobster fishery also expressed an interest in being involved, but due to a lack of time and resources wasn't picked up in the project. A whole of region workshop was held in May 2004 to go through the work already completed, a number of

fishers and fisher's wives that hadn't previously been involved attended and decided to become involved in the process.

Communicating the work that was to be undertaken was seen as a key part of the EMS development. The EMS was publicly launched at the Port Douglas Seafood Extravaganza on May 23, 2004. In addition articles were published in the Cairns Post and the EMS Officer and a trawl spokesperson had a number of interviews on local radio, as well as regional television. Further to this, separate media coverage was achieved prior to the launch in the Cairns Post newspaper.

In July 2004 the Representative Area Program was implemented by the Great Barrier Reef Marine Park Authority. This closed a vast number of productive fishing areas within the Great Barrier Reef Catchment to commercial fishing. The Queensland State Government also took steps to mirror these closures in inshore areas. The impact of these closures meant that many of the fishers that were involved in developing EMS were not in a position to continue their involvement. Given the social and economic impact of the closures a decision was made to suspend work on the Far North Queensland Region EMS to focus on the Moreton Bay Region EMS until a later date. A number of fishers expressed interest in being involved at a later date.

Source: K Williams

A thorough risk assessment for each of these fisheries was completed. However the action plan has not yet commenced. Due to a shortage in funding for the Queensland EMS Officer position and the fact that the Moreton Bay Regional EMS took longer to complete than expected the FNQ EMSs were not picked up again by the EMS Officer. Before the project is finished the EMS officer will meet with the small working groups of Far North Queensland to discuss options for continuing their EMS development.

Timeline

2003	Queensland Seafood Industry Association signed onto Natural Heritage Trust EMS Pilot Program – Seafood EMS Project. EMS facilitator employed with funding from the Fisheries Research and Development Corporation.
2004	Regional workshop held to initiate EMS process Far North Queensland Region EMS launched at Port Douglas Seafood Extravaganza Risk assessment completed Regional workshop to provide information on risk assessment

Motivation

Resource Access

The initial motivation for QSIA to sign on to develop an EMS was to assist with demonstration and continual improvement of environmental performance. This is seen as the basis for resource and market access, therefore improving long term industry profitability. It was felt that developing an EMS would increase community and consumer confidence in the sustainability of the FNQ region fishers.

Integrating and improving on existing work

QSIA recognizes that a large amount of work has been occurring across a range of jurisdictions and levels. The project would assist to refine the Green Chooser EMS model developed by SSA. It also aims to address state, national and international guidelines relating to environmental management which should assist in streamlining, and coordinating parallel programs.

Challenges and learnings

Dealing with a stormy political environment

The Commonwealth Government's Representative Area Program (RAP) consultation process was already underway when EMS development began, therefore, fishers were in a position where it was likely that their resource access would be reduced. This was a challenging circumstance to start with.

Source: K Williams

When the areas closed to fishing under the RAP were determined many that were part of the group interested in progressing the EMS were negatively affected. Many fishers have exited the seafood industry and this has severely challenged the progress of EMS within these fisheries.

The EMS Officer decided that taking a break from EMS development was the best option for the group. Thus the progress of EMS plans in this region was stalled approximately six months into EMS development. Despite this, there are sufficient numbers of interested fishers remaining in both the line and trawl fisheries in far north Queensland to continue with EMS development beyond the life of this project. The line and trawl groups are almost up to the drafting stage of the EMS process, this will take several months and will require a facilitator to assist with this process.

Communication and Engagement

Many of the Far North Queensland based fishers involved in EMS development spend extended periods of time at sea as part of their day to day work. The intermittent availability of fishers provided a challenge for EMS development progress. Some ideas for dealing with this problem included sending updates to motherships and communicating with fisher's wives who are generally directly involved in managing the business. An effort was made to meet with fishers in small groups or one on one at their boats to help develop trust and understanding between the facilitator and the fishers.

It was clear that fishers were interested in becoming involved in the EMS process. This was reflected in attendance at the first regional meeting, with approximately 25 fishers present on the day, with some travelling from Townsville, Lucinda and Innisfail. Due to seasonal fishery closures at the time, the majority of fishers were trawl fishermen. It also suggested that fishers of far north Queensland are generally more open to travelling long distances to attend relevant meetings.

Time and Resources

The nature of trawl fisheries along with the variable weather in Far North Queensland meant that it was often difficult to find times to progress the EMS that suited fishers. This was increased because the EMS Officer was working on the Moreton Bay project and wasn't always available when fishers were!

Support from related organisations

The Far North Queensland EMS project was championed by Ecofish (the peak regional industry body for the far north Queensland region). Ecofish provided in-kind support including office space and related infrastructure throughout the life of the project. Support from this organization greatly assisted the development of the project as communication about EMS was facilitated through Ecofish newsletters and meetings.

Benefits to date

Given that the EMS was not fully developed under this project there is not sufficient information to determine benefits.

Where to from here?

The EMS Officer will discuss options for progress with the Far North Queensland fishers and other stakeholders such as the SeaNet Officer based in Cairns.

Recommendations from this experience

Given that the EMS was not fully developed under this project there is not sufficient information to provide recommendations from the experience.

References

Williams, K.A. & D.P. McPhee. (2006), *Final report for FRDC. Driving Innovation in Environmental Performance for the Queensland Fishing Industry.* FRDC. Australia.

Case Study VI
Tasmanian Little Swanport Estuary

Little Swanport Estuary is situated on the East Coast of Tasmania. Three oyster farming companies - Oyster Bay Oysters Pty Ltd, Shellfish Culture Ltd and Southern Cross Marine Culture Pty Ltd , have their lease areas within the waters of the estuary. Oyster production in the Little Swanport Estuary is based on intertidal racking of Pacific oysters *(Crassostrea gigas)*, an introduced species. Infrastructure currently used for oyster production includes wooden racks suspending plastic mesh baskets to hold the oysters. The oyster production in Little Swanport Estuary has been assessed formally and found to have low environmental impacts. The initiative of developing an EMS for the Estuary was driven by these companies that rely on a healthy estuary to supply premium oyster products.

Source: Oyster Bay Oysters

Methodology

The development of this EMS was directly and deliberately linked to the wider principles and guidelines of Ecological Sustainable Development (ESD) and Natural Resource Management (NRM). At every opportunity this group emphasized the direct connection to these Government policies which meant that the scope and corresponding influence of their EMS was broad and wide-ranging across many different stakeholder groups, including those outside the seafood industry.

Source: Oyster Bay Oysters

At the time of the project, the Australian aquaculture industry was not required under the Environment Protection and Biodiversity Conservation Act 1999 to report against the ESD guidelines. However, the case study group considered that the ESD framework was an important structure on which to base their EMS. Hence, there was a conscious and deliberate approach for the EMS to address the ESD guidelines. This important link was a theme that continued and guided the EMS activities over the three year project. There were benefits in linking NRM and sustainability processes to the EMS as they provide better understanding of the rationale behind the EMS.

The case study group was successful in progressing a funding opportunity to appoint an EMS Officer for Tasmania to develop State-based EMS's for the oyster, finfish and cultured abalone seafood sectors. The aim was to develop a State-level EMS for oysters in the first instance which would be used as a template for other seafood sectors in Tasmania. The State-wide EMS provided important information to the EMS being developed for the Little Swanport Estuary. In turn, the lessons learnt and experiences gained under the localized oyster EMS were incorporated and applied across the State for the benefit of the other sectors.

Source: Oyster Bay Oysters

Background information was gathered on issues identified under the Little Swanport Estuary EMS. A risk assessment process was worked through at a two-day workshop held with over 20 industry people. The risks were assessed and prioritized. Every issue was addressed and background information was documented on the rationale for each risk. This process highlighted key issues that required ongoing adaptive management and reporting by the industry. Cost effective and practical solutions to the higher risk areas for the industry were developed. The risk assessment was also validated against the ESD component tree and an environmental policy was drafted for the EMS.

An EMS Advisory Group was established with the aim of engaging other stakeholder groups in the EMS process and seeking their advice and input on the work being conducted by industry. This group included representatives from Local Government, research institutes, community groups, the Tasmanian Conservation Trust and from the local agriculture farming sector. The case study group also engaged with the indigenous community to seek their input and consultation on the EMS.

A significant number of projects were initiated as part of the EMS process and below is a brief explanation of just some of the initiatives undertaken.

Rice Grass Survey

The EMS Group took on the responsibility for an annual survey and treatment of rice grass. In 1997, over ten hectares of introduced rice grass existed at Little Swanport Estuary with the potential to severely impact upon the ecosystem balance of the estuary. By 2006 only seventy five plants remained.

Rubbish Survey

An annual survey was conducted on the amount and origin of rubbish found in the estuary. In 2004 the survey showed that only 6.3% of rubbish collected originated from marine farming operations. At the start of 2006 the percentage of rubbish originating from the oyster leases was significantly reduced.

Recycling Project

The case study group also trialed chippers and baling machines to practically dispose of plastic material used in oyster operations with the idea of introducing recycling of plastic for the farms. Options for recycling or reuse of plastics on leases continue to be investigated.

Cat Trapping Project

A winter trapping program targeting feral cats around the estuary was established to protect the endangered 'Little Tern'. Information was sought from Western Australia on how to successfully trap the cats and this illustrates an example of how the case study group sourced information to minimize the amount of work necessary in achieving good environmental outcomes.

Saline Grazing Trial

One of the EMS Group members provided their property for saline grazing trials over the last two years. This enabled land-based farmers, oyster farmers and scientists to come together to discuss environmental issues and sustainable agriculture initiatives. This activity attracted media interest and provided an opportunity for the pilot group to influence stakeholder's perceptions of the oyster industry as well as networking with other groups in the catchment area.

Fish Research

The case study group hosted an honours student from the University of Queensland to investigate fish abundance around oyster leases and to improve the understanding of fish species and their benefit to the environment.

Invasive Marine Species

The pilot group was involved in the formation of a focus group on invasive marine species with the National Aquaculture Council. The pilot group raised the profile of the marine pest issue as a threat to industry and has had input into the risk assessment process for addressing introduced marine pests at the national level. The risks associated with marine pests was highlighted as part of the risk assessment process and the group has been involved in developing 'How To' best practice management guidelines for introduced marine pests.

Environmental Monitoring Project

Baseline data on estuary condition is being collected as part of a long-term monitoring program using three automatic monitoring stations. This will provide a greater level of understanding in the estuary that can be used by the oyster companies and the government agencies. A base station, computer and weather station were all set up as part of the automatic monitoring stations.

Employee Induction Project

An interactive CD was developed to become part of the induction process for new employees on issues relating to Occupational Health and Safety, food safety and environmental issues. The need for a tool was identified through the EMS process. A draft format was developed and trialed with the oyster companies.

The case study group deliberately engaged in a public consultation process from day one and the result has been that the EMS has generated substantial broader interest from people outside of the seafood industry.

The following illustrates the enormous amount of work undertaken by the group in representation at public forums. Presentations relating to the EMS have been given for:

- The National Oceans Office in Hobart
- The Australasian Aquaculture Conference in Sydney in September 2004
- The Tasmanian Shellfish industry
- The University of Tasmania
- SSA EMS workshops in Geelong and Darwin
- The International Association of Food Inspectors Sixth World Congress
- 150 Year 11 and 12 students in Hobart
- The Australian Maritime College
- A group of Clyde River Oyster Growers
- Dairy farmers at Smithton in northern Tasmania

In addition the case study group has become involved in range of broader issues relating to their EMS and has participated in a range of other public forums such as:

- A forum at Launceston to debate issues associated with water quality facilitated by the Tasmanian Conservation Trust, with occurred three months into the EMS process and created good press coverage that highlighted EMS and ESD issues.
- A Coast Care public forum as one of the panelists to stimulate discussion in relation to coastal management.
- A feral pests public forum in Hobart, the case study group was a keynote speaker, over 70 people attended.

Source: Oyster Bay Oysters

The case study group also provided tours of Little Swanport Estuary with key stakeholder groups and Ministers. Tasmanian Minister Steve Kons MP toured the Little Swanport Estuary to observe the implementation of EMS activities. The State conference for Women in Agriculture provided an opportunity for 87 women to tour Little Swanport Estuary oyster farming operations and the EMS initiatives.

The case study group also actively approached State and Federal Ministers. A meeting was held with Members of Parliament discussing Women in Agriculture and the link with EMS. The response from people wanting more information on the EMS was overwhelming. The pilot group met with the Minister for Fisheries and Agriculture in Tasmania, his advisors and officers from the Department of Primary Industries, Water and Energy on water catchment management issues. The Minister's proactive approach to engage with the pilot group was very positive and opened up pathways for meaningful discussion on how to resolve the difficulties with water management.

Media opportunities in print, radio and television were either taken up or sought by the EMS Group. These included interviews on the EMS with the ABC news and radio, ABC Landline, ABC 7:30 Report on introduced marine pests and their potential impact on seafood producers and ABC Statewide program on water management issues. Local news television coverage occurred on the EMS in relation to the endangered species, Little Tern, as there are only 10 breeding pairs in Tasmania. The EMS was profiled in the magazine, 'Fishing Today'. Overall, a positive response from the general public was generated from this media exposure.

The EMS project also initiated training for the industry. A training workshop was organized for oyster employees to develop skills in identifying algal numbers and species. This was to allow the industry to interpret data as part of their environmental monitoring program which links to the automatic buoys that collect the data. Training days were also organized for both the upper and lower catchment areas to provide training in using water quality monitoring equipment for the catchment and estuary. This involved farmers, fishing representatives, government representatives and community members. The training was held on local farming properties and was extremely beneficial in that the regulators received a greater level of understanding about how water quality affected the different groups of people that attended.

Timeline

2003	EMS commenced corresponding with the start of the Natural Heritage Trust EMS Pilot Program – Seafood EMS Project.
2004	EMS officer employed with funding from the Fisheries Research and Development Corporation Various presentations at public forums by case study group Risk assessment completed EMS advisory group establishe
2005	Employee interactive induction CD developed with funding from the Australian Flexible Learning framework, Department of Education Science & Training Continued presentations at various public forums by case study group Baseline data on estuary condition being collected

Motivation

Environmental Protection

The EMS was seen as a key strategy in which the oyster industry in Little Swanport Estuary could have some influence on external factors affecting the estuary. The case study group was able to challenge the land-based activities potentially impacting upon the estuarine and near-coastal habitats. The risk assessment process in particular, was a way of identifying high risk areas for their industry and enabled the group to identify ways they could encourage practices and policies that would have a positive effect on the environment. The need to ensure that the oyster businesses would have the ability to maintain viable businesses in the future was a major driver for EMS development. An example was that the risk assessment process relating to land-based activities highlighted the need for future audits of chemical use in the catchment area, so that areas of high chemical use in the catchment could be identified and a strategy developed to mitigate the effects of these chemicals.

Challenges and learnings

EMS Development

The issues that arose from developing an EMS process were varied and consumed more and more resources over time. The time commitments needed for the project were significant. One of the key learnings was that an EMS is about creating attitudinal and behavioural change. The outcomes and the EMS journey are the most important part of the EMS process and it is not simply about preparing a document. If an EMS is to be developed properly it will not be a fast process, there is a need to allow industry members to pace themselves in the process otherwise the attitudes and behaviour will not change. The EMS actually created a pathway for the future of the industry by empowering them to tackle their high-risk issues and develop solutions for them through adaptive management.

EMS Terminology

It has become apparent throughout this case study that different terminologies and language about EMS are used throughout the primary production sector. For example, land-based management refers to 'property management plans' whilst the aquaculture sector refers to similar approaches as 'environmental management plans'. A future challenge is to align this terminology so that water-based primary producers such as oyster farmers are recognized as achieving similar natural resource management targets to private property owners (land-based farmers).

Benefits to date

Positive Recognition

In addition to the extensive media coverage and opportunities taken in presenting the EMS to a broad range of stakeholders, the Chair of the Little Swanport Estuary EMS Group was nominated for The Bulletin's Smart 100 in Australia as one of the 10 people nominated for the Environment and Agriculture category. This was a tremendous honour for the case study group. These combined profiling activities over the project have had an enormous impact in achieving position recognition and promotion of the oyster industry as well as the wider seafood industry in Tasmania.

Building relationships

The involvement of government regulators and conservation groups in the EMS process resulted in a change of attitude towards the aquaculture industry. Partnerships were developed between the industry and conservation groups. For example, an initiative

to construct signage as part of a public education campaign to inform people of the conservation value of particular areas in Little Swanport Estuary has meant that the industry and groups have shared the costs involved in the project and have both achieved a significant outcome together. The case study group also made contact with scientists with specific expertise to assist with resolving issues arising from the risk assessment.

Two of the case study members were appointed to the new regional government Municipal Council NRM Committee. The members on the Committee are highly respected and early indications suggest that the Committee will act in a positive and influential way. The appointment of the case study members was a step in building relationships with other groups and thereby influencing future activities which may affect the Little Swanport Estuary. The case study group is now finding that government agencies are seeking their input on natural resource management and the strategies needed for the future.

Influencing policy development

As part of the EMS risk assessment, a significant external hazard was identified as being water quality and quantity and chemical use in the forestry and agricultural industry. It was considered that the impact could be substantial if they were not managed properly. Media coverage occurred over the issue of chemical use in the water catchment area. The case study group found that they could influence external activities that potentially impacted upon the industry by participation in activities, forums and planning processes. They were able to demonstrate that they could not only influence internal factors but factors normally thought to be outside their control.

The case study group significantly influenced the content of the draft water management plan that was released for public comment so that it considered water quality issues and not simply management of the allocation of water. This was the first time in Tasmania that such a plan had addressed water quality issues and was a major step forward for the EMS Group. In addition, the case study group led the seafood industry submission at the time of the review of the Water Management Act in Tasmania.

The case study group also provided professional and scientific-based input regarding the potential impact of a newly approved dam for the catchment. The pilot group focused their activities on appealing the dam. The result was that the application to develop a large 680 megalitre dam to irrigate 800 hectares of river flats was withdrawn. The EMS focused the efforts of the EMS group to address the potential threats to the estuary and the withdrawal was a clear outcome from this work. Work was also done in relation to ensuring that a mediation process was instigated in the Appeal process regarding another four approved water licences that are associated with another four newly approved dams in the catchment area. This also resulted in the withdrawal of the four developments.

The EMS has also been responsible for initiating funding for research in Little Swanport Estuary to determine the water quantity needs of estuarine ecosystems with regard to water allocation. This research will also examine an economic evaluation of the use of water in various parts of the catchment needed for irrigation, stock, oyster growing and fish nurseries.

The EMS process also encouraged comments to be prepared on the state-wide Code of Practice for Aerial Spraying during the review. It was thought that aerial spraying could have a detrimental impact on the estuary. This clearly demonstrated that the skills acquired throughout the EMS development in forming partnerships with other stakeholder groups meant that the EMS Pilot Group initiated and gave direction to the rest of the seafood industry in Tasmania to become involved.

The EMS process highlighted that the existing management controls and licence conditions for the aquaculture industry did not correlate with the outcomes of the risk assessment process. This suggested that management controls that were introduced were not based on scientific evidence but rather perception and provided a more rigorous framework on which to base future management controls.

Where to from here?

Following completion of funding for the project, the three oyster farming businesses have committed themselves to continue with the EMS as a group in some capacity. There will be continued work done to roll out the EMS but the extent of this will depend on whether government funding can be linked to the EMS process.

Recommendations from this experience

- The EMS journey has the ability to influence policy and external factors that directly impact on the seafood industry.
- It takes years to change attitudes and behaviour about natural resource management and sustainability. Achieving real change means accepting that it will take a long time. One-on-one contact over that time is the best way of achieving change.

References

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