

# **Adoption of environmental management systems by NSW commercial estuary fishers and oyster farmers.**

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**Australian Government**  

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**Fisheries Research and  
Development Corporation**

**Project 2003/063**

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Ocean Watch Australia Ltd is an environmental, non-profit organisation sponsored by the professional seafood industry in New South Wales, Australia. Ocean Watch represents the environmental interests of industry and provides advice to the industry and government and educates the public on aspects of fisheries sustainability including environmental best practice as it relates to fishing, habitat protection/rehabilitation and water quality.

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## **Background**

### **NSW Professional Estuary Fishing Industry**

In recent years there has been increasing scrutiny of the environmental performance of the seafood industry, in particular, those sectors most 'visible' to the community such as estuary fisheries. An increasing coastal population means greater demands on estuaries and a growing need for comprehensive estuary management on the part of all users. For the seafood industry and its management agency, this means ensuring operators adopt best practice and establish processes for continual improvement, and ensuring the community understands the nature of estuary fishing and its environmental management. There is a need to build community confidence and understanding in relation to the way that professional fisheries are managed in NSW.

Actions taken by the Department of Primary Industries - Fisheries (DPI) (responsible for managing fisheries in NSW) to work towards influencing community perceptions have included undertaking environmental impact assessments of the NSW Estuary General (EG) and Estuary Prawn Trawl (EPT) fisheries. From these assessments related Fishery Management Strategies (FMS) were subsequently released in February 2003. These strategies identify many, mainly agency-based ways to better understand, manage and improve the environmental performance of the fisheries. Each FMS also identifies development of a Code of Practice as a means to improve both the operations of fishers and community understanding.

In addition to DPI initiatives, there was clearly a need for industry participation in this process to improve management and public understanding – a situation ideally suited to the development of Environmental Management Systems (EMS). Ocean Watch saw that strong industry involvement in the development of comprehensive Codes of Practice could allow each code to act as a "surrogate" EMS, that is not strictly a formal EMS, but serving the same purpose. This project was thus proposed to support industry adopting a pro-active role in code development in regard to determining the ways professional fishers implement the relevant parts of the FMS's, how they behave more generally as waterway users, how the nature of professional fishing operations is communicated to the public and to illustrate that industry strives to operate beyond mandatory requirements. The Fisheries Research and Development Corporation (FRDC) shared this view and chose to support the project

The Codes, as set out by DPI in the FMS's, were expected to provide fishers with auditable, regionally specific guidelines regarding acceptable operating standards, mandatory requirements and voluntary best practice. Such Codes would not only promote the adoption of acceptable standards, but also provide a means to assess the level of their uptake. Furthermore, it was hoped that the regional nature of the Codes would encourage greater ownership of the Codes by regional fishing fleets and effectively address issues of local community concern specific to each region.

In the case of the EPT Fishery, the Codes aimed to build on the work undertaken by the fishers operating in the Hawkesbury River as part of the Green Chooser project (FRDC 2000/146). This work involved participation in a case study for the development of the Seafood Services Australia Seafood EMS Chooser (viz. Green Chooser). Facilitated by the NSW SeaNet Extension Officer this group of fishers formed the Hawkesbury Trawl Association Inc. (HTA) comprising 39 members representing approximately 80% of the active prawn trawl operators on the Hawkesbury River, and developed an Environmental Action Plan (currently under review). Development of a Code of Practice was an extension of this approach, and was supported by the management committee of the HTA.

Moreover, the development of the Marine Stewardship Council (MSC) eco-labelling and third party certification has provided a means of increasing community and consumer confidence in the sustainability of certified fisheries. There is much interest within the NSW fishing industry not only in MSC, but in independent certification generally. Accordingly, the project investigated the aspirations and needs of estuary fisheries in relation to MSC and 3rd party certification.

## **NSW Oyster Industry**

The NSW Oyster Industry recognises that improved practices based on the principles of Ecologically Sustainable Development (ESD) may advance the viability, profitability and environmental performance of the industry. Ensuring such practices are adopted by industry and demonstrated to the community is becoming critical as coastal populations grow and demands on estuaries increase dramatically.

Issues such as derelict and untidy farming infrastructure have lead to a negative image of the industry in some communities. Many initiatives are already underway to improve the industry's environmental performance, including derelict oyster lease clean-up programs and the development of new, environmentally friendly infrastructure.

As pressure on the industry grows from increased coastal development and recreational use of waterways there is a need to:

- establish a means to formally demonstrate the industry's resource management capability to regulatory agencies, oyster consumers, neighbours, and the general community;
- strengthen the industry's position to argue for the protection of the environmental conditions required in estuaries for oyster growing; and
- promote the industry's role as a legitimate user of public waterways.

Like many other sectors of the seafood industry, oyster farming is currently restructuring towards greater efficiency, and as part of this must ensure a more professional and environmentally responsible image. This need can be met through the adoption of EMS and/or Codes of Practice.

## **Need**

### **NSW Professional Estuary Fishing Industry**

There is a clear need to ensure that best practice management and operations, both mandatory and voluntary, are adopted by the seafood industry. There is an equal need to build community confidence and understanding in relation to the way that professional fisheries are operated and managed in NSW, in particular those fisheries most visible to the community such as estuary fisheries. Also, there is a need to provide the seafood industry with a means to demonstrate its environmental credentials to, and cooperate with, natural resource managers such as NSW Catchment Management Authorities. Overarching all of this is a need to provide some level of industry ownership to the management regime and tools that govern the way they operate and are perceived.

This project aimed to meet these needs for NSW estuary fishers via the development and adoption of Codes of Practice for the two NSW estuary fisheries, the EG fishery and the EPT fishery. In doing so, the project was designed to meet the requirement for a Code of Practice in the respective FMS for each fishery and contribute to the broader aims of sustainable and responsible fisheries outlined in each FMS and the general mandate of government and industry alike.

In addition, there was a need to investigate industry aspirations in relation to MSC or general 3rd party certification and if necessary, the associated costs and benefits and to develop an action plan.

### **NSW Oyster Industry**

The NSW Oyster Industry does not currently have any unified, industry-led environmental management planning. Industry leaders who see the need for improved environmental practice are aware that despite their best endeavors, individual initiatives do not receive widespread adoption due to a lack of effective communication, education and incentives.

In response to these needs, the Oyster Management Advisory Group established the ESD Working Group in August 2002. This joint industry and DPI group aims to seek the views and experiences of NSW oyster farmers on ESD issues and to lead the strategic adoption of ESD across the industry.

To meet the relevant needs of industry, the ESD Working Group developed a program of initiatives, the first of which was to prepare an industry Code of Conduct. This initiative aimed to create an opportunity to discuss ESD issues in industry forums and set uniform environmental performance indicators and benchmarks across industry. It was expected that subsequent and related initiatives would build on the Code of Conduct to prepare an Environmental Code of Practice and Environmental Management Systems.

## **Objectives**

The project funding application to FRDC outlined the following objectives:

1. To develop regionally specific, auditable Codes of Practice for the Estuary General Fishery and Estuary Prawn Trawl Fishery.
2. To provide advice and information in relation to the development of a Code of Conduct for the NSW Oyster Industry
3. To assist fishers and oyster farmers to access government funding programs applicable to EMS implementation (eg. the DAFF EMS Incentives Program and FarmBis).
4. To investigate options available to the professional fishing industry for achieving 3rd party certification and develop an action plan for doing so.
5. To provide training and development opportunities for fishers and oyster farmers to equip them the necessary skills for effective implementation of the Codes.

Unfortunately, issues stemming from the poor relations between DPI and industry at the time significantly limited progress against these objectives. Industry perception of an initiative that was ultimately controlled by DPI was, at best, indifferent, and at worst, highly sceptical and negative. Many fishers immediately considered the Codes to be some kind of subordinate regulations, or a means to introduce “questionable” regulations “through the back door”. Indeed, all or some of the Codes could be legally enforced via the incoming share management plans. As a result, very few fishers were prepared to contribute to the development of the Codes and those who were, wanted the Codes as simple and general as possible.

The outline for the Codes in the FMS’s included requirements for guidelines on:

- operating in sensitive habitat areas;
- operating near migratory bird habitat;
- operating in the vicinity of threatened species;
- encouraging the use of effective icing and value adding techniques; and
- minimising the levels of pollutants associated with fishing.

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Although initial drafts of the Codes included such guidelines, DPI directed amendments be made to make the Codes consistent with the Ocean Haul Fishery Code of Conduct which was much simpler.

With both parties disinclined towards comprehensive Codes and the fact that an alternative industry-based code would only lead to unnecessary duplication, the project objectives were restructured and approved by FRDC as follows:

1. To provide comprehensive industry consultation and representation on the development of Codes of Practice for the Estuary General Fishery and Estuary Prawn Trawl Fishery.
2. To provide NSW professional estuary fishers and oyster farmers information on the benefits of EMS and the process of EMS development.
3. To develop specific EMS's with up to four separate groups of estuary fishers and oyster farmers.
4. To assist estuary fishers and oyster farmers access government funding applicable to EMS implementation (eg. the DAFF EMS Incentives Program and Farmbis)
5. To assist estuary fishers and oyster farmers access training and development opportunities to equip them with the necessary skills to develop and/or operate an EMS.

## **Methods**

### **Steering Committee**

A Project Steering Committee was convened to oversee the project consisting of:

- Mr Mark Everson, Manager, Clarence River Fishermen's Cooperative;
- Ms Diana Watkins, Principal Manager, Fisheries Management DPI;
- Mr Tim Gippel, Aquaculture Manager, DPI; and
- Ms Christine Soul, Executive Officer, Ocean Watch.

The Project Steering Committee met only on two occasions, however, all members of the committee maintained a close association with the relevant parts of the project via direct communication with the Project Officer.

Mr Mark Everson, a champion of the project, left the cooperative three months into the project, to be replaced by Mr George Baker in a temporary capacity. Much of the work behind the development of the Code occurred at the Clarence River Fishermen's Cooperative, allowing close involvement from both managers.

Ms Diana Watkins directly oversaw the work of the EG and EPT fishery managers and either she, or a representative was present at all meetings between the Project Officer and DPI.



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Mr Tim Gippel provided a direct link to the Oyster Management Advisory Group (OMAG), however, OMAG's interest in the development of Codes was very low in light of the incoming Aquaculture Industry Development Program.

Ms Christine Soul was replaced by Ms Anissa Lawrence six months into the project. The Executive Officer and Project Officer worked closely throughout the project.

## **Professional Estuary Fishing Codes of Practice**

### *Information gathering/synthesis*

The first step in the development of Codes of Practice for the NSW EG and EPT fisheries was to confirm the needs of the two key stakeholder groups, namely DPI and professional estuary fishers.

The needs of DPI in relation to the Codes of Practice were clearly documented in the FMS for each of the fisheries and were very similar to one another.

The requirement in the EG FMS was as follows.

*1.2 (c) Develop a code of conduct for the fishery (with performance measures) with respect to:*

*(i) guidelines for operating on or near river banks, seagrass, saltmarsh or mangrove habitat and in any other area of environmental sensitivity in a manner that minimises environmental impacts in those areas;*

*(ii) operating in the vicinity of listed Ramsar wetlands or known JAMBA & CAMBA migratory bird habitat in a manner that minimises disturbance;*

*(iii) operating in the vicinity of threatened species, populations and ecological communities;*

*(iv) the use of gear and behaviour of fishers, enforceable by conditions on licences and endorsements or by use of other regulatory controls; and*

*(v) encouraging the use of effective icing and value-adding techniques to maximise the market price of product taken.*

*Background: A code of conduct which has the support of surrounding communities can go a long way to improving the relations between the commercial fishing industry and other stakeholders. A code of conduct will be developed for the Estuary General Fishery similar to that used in the Ocean Hauling Fishery, which sets standards for the manner in which fishers operate. The code of conduct for the Estuary General Fishery will be developed and periodically reviewed (and amended where necessary) by NSW Fisheries (now DPI) in consultation with the Estuary General MAC. Input from other natural resource agencies (e.g. National Parks and Wildlife Service) will be sought when developing relevant parts of the code. The code of conduct should provide for regional Codes and will be enforceable through the share management plan for the Estuary General Fishery [Page 63, NSW Estuary General FMS]*

Industry consultation began with Clarence River estuary fishers, as the Clarence River Fishermen's Cooperative was hosting the Project Officer during the early stages of the project. Consultation was soon spread throughout NSW via port meetings with MAC representatives to which fishers were widely invited, as well as meetings with a number of fishermen's cooperative boards. Although response to these meetings was generally poor, it was clear that industry shared the same needs and aspirations for the Codes as DPI. There was, however, a particular emphasis from industry regarding the need to develop tools to improve community perception of professional fishing. It was hoped that the Codes would go some way to meeting this need.

Despite the fact that aspirations for the Codes were shared closely between DPI and industry, there was significant concern amongst all fishers consulted that DPI had ultimate control over the content of the Codes, and could make the Codes legally enforceable should they wish. This led to widespread belief by fishers that the Codes were an attempt by DPI to introduce legislation without due process. As a result, fishers were hostile towards the Codes and the vast majority of industry input aimed to make the Codes as general as possible to avoid onerous requirements. No regionally specific requirements were requested by industry.

Although there were very clear requirements for the Codes to include various guidelines, DPI was also keen to limit the Codes to a very general nature. The project officer had worked with groups such as the Shorebirds Association and the Master Fish Merchants Association to develop the guidelines in initial drafts, however, in the interest of simplicity and conformity with the Ocean Haul Code of Conduct, DPI requested that these guidelines, and the majority of introductory material, be removed.

Final drafts of the Codes were presented to DPI in February 2004.

### **Oyster Farming Code of Practice**

In the initial stages of the project, the Project Steering Committee suggested that the Project Officer's role should be limited to providing advice on a Code of Practice for the NSW Oyster Industry through the OMAG. Despite a number of attempts by the Project Officer, OMAG did not seek any formal advice on the Code. In September 2003 a brief, informal presentation was provided to OMAG on the Code, however this was little more than an opportunity to introduce the project. Due to limited interest from OMAG no further progress was made.

Although disappointing, the lack of interest shown by OMAG is likely to be a result of the development of the Aquaculture Industry Development Plan that was occurring at the time. As a series of strategies, the Plan sets out the direction for all aspects of the NSW Aquaculture Industry, including environmental management. It would appear that an attempt to develop a Code for the industry before the finalisation of the Plan was premature.

## **Environmental Management Systems for Professional Estuary Fishing and Oyster Farming**

### *Information gathering/synthesis*

By early 2004, it was clear that the estuary fishing Codes were not going to deliver the benefits that professional fishers were seeking – namely a means to significantly improve community understanding of, and confidence in, the way that estuary fisheries are managed and provide a basis on which industry might work with natural resource managers.

The project was subsequently modified and an assessment made as to the potential to work with fishers and oyster farmers directly by ‘promoting’ the benefits and process underlying EMS in an opportunistic along the NSW coast. This also provided an opportunity to identify appropriate industry champions who were well placed both to develop an EMS and then promote it further through industry.

The *ISO 14001 Environmental Management Systems: Specification with guidance for use*, in conjunction with Green Chooser (FRDC Project No 2000/146) were used as the basis upon which tailored EMS’s for each group identified could be developed. Both follow a framework for continual improvement that requires:

- an environmental policy;
- planning (identification of environmental risks, legislative requirements, objectives, targets and actions);
- implementation and operation (identification of ownership and responsibilities, training requirements, communication, documentation needs, risk management measures and emergency preparedness and response);
- checking and corrective action (monitoring and measurement, nonconformance and corrective and preventative actions and auditing);
- management review; and
- continual improvement.

### *Extension*

To simplify the process for extension to fishers/oyster farmers, two simple, one-page introductions were developed that explained the benefits of EMS and the process by which an EMS is developed (refer Appendix 3). These were posted to all EG and EPT MAC representatives and used as a basis for both port meetings throughout NSW with fishers and oyster farmers and in presentations to Cooperative Boards at Taree, Wallis Lake and Newcastle. This exercise was relatively challenging as fishers in particular, often considered management and documentation of any kind as a threat, and combined with their previous experience with the Codes of Practice, were initially very wary. The key message used to dispel these concerns was that any EMS would be fully controlled by the proponents.

After a month of 'promotion', five groups were identified as keen to develop an EMS and likely to be in a good position to promote EMS more widely. These groups were:

- Manning River Estuary General Fishery,
- Wallis Lake Estuary General Fishery,
- Manning River Oysters (Sydney rock oysters, Manning River),
- Imlay Oysters (Sydney rock oysters, Pambula Lake), and
- Broken Bay Pearls (Akoya pearl oysters, Brisbane Waters).

It was important at this early stage to make the limitations of EMS clear to all groups, i.e. it was not a 'silver bullet', it would not guarantee resource access, and was not an end in itself, but rather a process for continual improvement.

Upon discussion, all groups suggested that the main guiding resource for the development of a seafood EMS, the Green Chooser was more detailed and involved than they believed necessary. They chose to simplify the process by considering only environmental risks (economic, social or Occupational Health & Safety risks were excluded).

Also differing to the Green Chooser process, early discussions tended to cover risks and operations, rather than visions and policies around which there was very little interest from the groups – these elements were often seen as 'window dressing'. A decision was made by each project team that the groups should drive the process, but the Project Officer would guide them towards points where key information could be obtained regarding the vision and environmental policy. From these early discussions, a vision and environmental policy were proposed and with some limited modification, adopted. This approach raised the issue of 'ownership' of the vision and policy, however, the project teams did not want to force the groups to discuss something that they did not see as important as risks and mitigating actions. Lack of ownership of these 'unimportant' elements, in the view of the groups, did not seem to limit the groups' engagement with the EMS process as a whole.

Having established a vision and policy, the groups were guided through a simple risk assessment. The risk assessment format presented in the Green Chooser was employed, and groups generally responded well to this. Most agreed that the risk ranking process (i.e. assigning values to the likelihood and consequence of risks and using the product to rank the overall risk) was contrived until it was explained that using a standardised ranking method (based on the Australian Risk Management Standard AS/NZ 4360) enabled other stakeholders to see their reasoning, regardless of whether they agreed with it or not. The concept of transparency of which this is a key example, was grasped well and pursued by all groups as their main objective was to develop a document that would help others to understand and respect their operations.

All groups except one chose to structure the risk assessment in terms of their operations as suggested in the Green Chooser (eg. pre-fishing, fishing, co-op, post-fishing, external). This allowed an assessment of their operations in a methodical way and helped ensure that all risks were considered. Imlay Oysters however preferred to

consider risks in four categories (internal and on the water, external and on the water, internal and off the water, and external and off the water). This was simply a personal preference among the group, and appeared to be effective.

The Manning River Oysters EMS was discontinued following the risk assessment phase as a result of time-constraints on the part of both the proponent and the Project Officer, and the fact that the proponent was also being assisted through the Broken Bay Pearls EMS.

The risk assessment was generally an iterative process, with a number of meetings required with each group to reach confirmation and consensus on the significance of risks and the nature of mitigating actions.

Following the risk assessment process the drafting of the EMS began. Each EMS framework included:

- an introduction on nature, history, location and scale of operations;
- background information on EMS development, aims, scope, contravention etc'
- an Environmental Policy, including vision;
- an EMS action plan; and
- an appendix of the risk assessment.

The introduction and EMS background information were relatively self-evident and were developed from information from the groups, literature, web-based research and through agreement with the groups where relevant.

The policy and vision were developed by the Project Officer through the risk assessment process and presented to the groups. As discussed above, this did not impinge on the level of ownership felt by the groups.

The essence of any EMS is, of course, the action plan. The bulk of information required for developing action plans came directly from the risk assessment process where the emphasis was on identifying mitigating actions for each risk identified. Development of the action plan was an iterative process, and numerous meetings were required, particularly for assigning responsibilities and timeframes for each action.

In the interest of transparency, the groups were encouraged to include the risk assessment as an appendix. Each group was keen to do so, as they understood the need for transparency in the EMS.

As each EMS was designed to be as much a public communication tool, as an internal environmental management document, public consultation on the draft EMS was undertaken by one group, the Manning River Estuary General Fishery as they considered it key to the success of the EMS. A meeting was held with a representative of DPI to review the EMS and the response from the agency was very positive, with very few changes requested. Copies of the draft EMS were sent to key stakeholders in the local Council and community, a PDF version of the EMS was made available on the

Ocean Watch website and a series of small advertisements were placed in a number of local papers inviting people to obtain a copy of the EMS (by mail or on-line). All stakeholders were asked to send any comments or questions to a dedicated e-mail address. While anecdotal evidence from members of the Manning River group indicated that there was some interest in the community regarding the EMS, no comments were received. Follow-up discussions with stakeholders were all positive.

### **Project assessment**

To date, the project has focused on EMS development. As a result of the delayed start due to the initial attempt at developing Codes, there has been insufficient time to concentrate on EMS implementation, i.e. accessing EMS-linked funding, introducing new mitigating actions, taking the EMS through a report and review cycle and establishing cooperative relationships with natural resource managers.

There has been insufficient time to make conclusions on the effectiveness of EMS in terms of assisting groups to influence natural resource managers and improve community perceptions. Much of this work will need to be done throughout 2005.

### **Results/Discussion**

Throughout the second half of 2003, discussions were held to identify industry needs and views regarding the development of Codes of Practice via port meetings with all EG and EPT MAC representatives. Invitations to the meetings were extended to all fishers through the relevant MAC representative, however the response to these meetings was generally very poor. A number of presentations were also made to the Boards of the Clarence River Fishermen's Cooperative, the Wallis Lake Fishermen's Co-operative, the Taree Fishermen's Co-operative, and the Commercial Fishermen's Co-operative (Newcastle). Presentations were also given to, and advice sought from the EGMAC and EPTMAC on two occasions respectively. Numerous meetings were also held with the relevant fisheries managers within DPI. Following requests for significant alterations from DPI, final drafts of the Codes were presented to DPI in February 2004.

From the very conception of the project, it was intended that the Codes would act as 'surrogate' EMS's, or at least an introduction to industry self-management in regard to the environment. Hence, the basis and benefits of EMS and industry-based environmental management more generally was a constant sub-text in all discussions on the Codes.

Once it became apparent that the Codes for estuary fishing would not deliver the benefits that were initially hoped and the OMAG ESD Working Group did not indicate interest in developing a Code of Practice for the oyster industry, the project was modified to promote EMS directly to estuary fishers and oyster farmers. Candidates that were willing to develop an EMS and in a good position to act as industry champions were identified. This process is outlined in the Communication Plan (refer Appendix 2)

Unfortunately, none of the members of the EPT fishery were in a good position to undertake an EMS at the time. The Hawkesbury River EPT fishery, already having developed an EMS, known as an Environmental Action Plan (EAP) however, requested assistance to update and redraft their EAP to become an EMS.

There has been widespread interest in the funding available to fishers and oyster farmers in relation to EMS, in particular the DAFF EMS Incentives Program. Discussions have been held and presentations made to Cooperative Boards, via port meetings and through telephone enquiries to explore the means by which industry might access this funding. As a result, a number of oyster farmers have successfully accessed the DAFF EMS Incentives Program Funding and propose to develop their own EMS plans.

As the project initially set out to produce Codes of Practice with disappointing results, there has been insufficient time to fully develop EMS's and then pursue funding. As yet, none of the groups directly involved in the development of EMS's have accessed the funding, however, with these EMS's now, or soon to be, in place, they are well positioned to do so.

The Manning River EMS has been through public consultation and is now in place. The other three EMS's are at a final draft stage, with some final comments from the proponents needing to be included and approved. Following this, the EMS's will go out for public comment, should the proponents feel it necessary.

To date, no specific training requirements have been identified by any of the EMS groups or the Project Officer, and it appears unlikely that any training will be needed. This is a result of the EMS's being developed very closely with the groups involved, and the ease with which groups have adopted the concept. Following completion of the EMS documents, continued support and advice will be provided to the groups in their adoption of EMS actions and assistance given for the first report-and-review cycle by the NSW SeaNet Extension Officer. Some assistance may also be required for establishing links with natural resource managers such as NSW Catchment Management Authorities.

The Project Officer encountered a wide variety of responses from professional estuary fishers in regard to EMS. At one extreme were fishers who "just want to go fishing" and believed the EMS was a simply bowing to green pressure. Although sympathetic to this common view, it was explained that public pressure demanded that if fishers wanted to continue to fish, it was critical that they demonstrate to the community what they had known for some time – that they are responsible stewards of estuarine resources and have a legitimate right to use estuaries (and by inference, had the right to be bought-out in a just manner, should the community wish them to stop fishing). It was made clear that an EMS could document their position and responsible practice in a formal, but accessible way and in a language and format that will be respected by the community and natural resource managers.

Other fishers were positive to the idea of an EMS, recognising the need for some kind of public communication tool, however, they were simply not in a position to spend time developing one either due to time constraints or lack of wider support within their fleet.

## Benefits

There is clearly a high level of enthusiasm for EMS amongst many in the 'support' sector of the seafood industry, with the FRDC and Seafood Services Australia clearly the lead groups in this regard. The scale and diversity of those who support EMS and the diversity of those groups involved with numerous EMS projects (EMS Pilot Project, Green Chooser, development of EMS training requirements etc.) would indicate that the benefits of EMS are expected to apply to many groups throughout the catching and possibly post-harvest sectors.

The immediate beneficiaries of this project were NSW professional fishers, in particular estuary fishers, and oyster farmers keen to consider how they can become pro-active in influencing the community perception of their industry and the ways in which the industry and their operations and the ways in which the natural resources on which they depend are managed. For some time, professional fishers and oyster farmers have been generally passive in the way their industries are viewed and affected by external groups. This may have been a result of past apathy, disunity, denial or some combination, however, many now realise that positive communication tools are needed to affect change in both industry's performance and the way it is perceived by others. Promoting EMS had the immediate benefit of demonstrating that there is a simple and effective framework for developing such communication and management tools.

While the more concrete benefits of developing and adopting an EMS are yet to be realised by the groups involved with this project, naturally it is expected that there will be some significant gains. To date, the project has focussed on EMS development, whereas most benefits will flow from EMS implementation. As a result of the delayed start due to the initial attempt at developing Codes, there has been insufficient time to concentrate on EMS implementation, i.e. accessing EMS-linked funding, introducing new mitigating actions, taking the EMS through a report and review cycle and establishing cooperative relationships with natural resource managers.

Altering entrenched negative community perceptions of the fishing industry, and to a lesser extent the oyster industry, will not happen in the short-term, however, an EMS will undoubtedly be a solid foundation on which to begin a change. EMS's may also provide a basis for arguments regarding defending or reclaiming resource access rights. Indeed, the development of an EMS has formed part of a campaign by the estuary fishers of the Manning River to reclaim a small section of the river that holds a number of significant haul shots. The Minister's office has expressed interest in the proposal and the EMS. The results of this campaign will be watched closely to gain an indication of the strength of an EMS in such a situation.

Developments of positive and cooperative relationships with natural resource organisations, such as local councils or Catchment Management Authorities using EMS's as a base are also a significant benefit expected. An EMS provides extensive information on the nature of each group's operations and the approach that each group takes regarding environmental management, and in doing so acts as a point of intersection between the environmental management plans of these external stakeholders and the groups concerned. Preliminary discussions with the NSW Southern Rivers Catchment Management Authority indicates that they see EMS as an ideal means to work with primary producers (some dairy farmers in the region have



already implemented EMS's) and develop synergies through environmental co-management.

Neither professional fishers nor oyster farmers saw EMS as being particularly beneficial in terms of improving the efficiency or sustainability of their operations. The groups recognised that there would be some minor efficiency gains inherent in a paper-based management tool and that it might help to identify a small number of environmental initiatives, however all consistently believed that their operations were already as efficient and sustainable as current technology, techniques and management controls would allow. Hence, it was seen that improvements in technology would be the key to increasing the sustainability of operations, however such technological changes were considered unlikely, especially in estuary fishing. The emphasis of the EMS for all groups was as a public communication tool.

The EMS's developed will benefit the catching sector as a whole by acting as templates to guide other fisheries or fleets on EMS development. The understanding of the benefits and processes underlying an EMS that have been generated amongst members of the groups involved in this project will help to drive these 'template' EMS's further and provide incentive and support for other groups considering adopting an EMS.

The project has also built capacity within Ocean Watch, the lead organisation for developing and implementing Seafood EMS's in NSW. A large base of knowledge and materials has been generated that will assist people in the NSW seafood industry to understand, develop and adopt EMS. Although the project has formally ended, the Project Officer will remain in close contact with the groups associated with the project and Ocean Watch. Lessons learnt will be passed on to the NSW SeaNet Officer who will continue to support the EMS process in NSW.

## **Further Development**

It was ambitious to expect to complete five EMS's in ten months (indeed one had to be discontinued). Although the project is formally over, work still needs to be done on some of the EMS's. This work will be undertaken outside of this project in the early part of 2005. Given the nature of the benefits coming out of the project and the needs of these groups to communicate with their stakeholders, Ocean Watch believe it is crucial that the groups are not left to feel deserted due to the project completing.

An EMS is not simply a document, but rather provides a process for continual improvement and a basis for ongoing cooperation with natural resource managers. A completed EMS document therefore, is the beginning of a process, not the end. Work by the NSW SeaNet Officer will continue with the current groups through 2005 to:

- promote the EMS's to stakeholders and the local community;
- assist with the implementation or maintenance of mitigating actions for improved environmental management;
- assist groups with the report and review cycle inherent in their EMS's;

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- build the capacity of groups to manage the EMS's into the future and possibly seek relevant training for key group members;
- assist groups to access funding associated with EMS's; and
- facilitate the development of cooperative relationships with natural resource managers, such as the Catchment Management Authorities using each EMS's as base.

Further 'promotion' of EMS throughout the NSW seafood industry will also need to be considered. Such work will be the responsibility of Ocean Watch and possibly Seafood Services Australia.

## **Planned Outcomes**

1. Reduced bio-physical impacts of fishing and oyster farming through the adoption of environmental best practice across the entire fishing fleet of the region/s and oyster industry.
2. The EMS's that have been developed through this project will ensure that their proponents will adopt environmental 'best practice', however, they do not apply to the entire fisheries or oyster industry. The Codes of Practice for the EG and EPT fisheries will go some way to ensuring environmental 'best practice' across the entire fisheries, however, the lack of details and guidelines will limit the influence of the Codes.
3. The EMS's that have been developed through this project have increased the capacity of the proponents to represent themselves, their estuary and/or region and/or fishery on key ESD and environmental management issues. The EMS's provide a basis on which the proponents can communicate with, and influence natural resource managers and the community.
4. Reduced resource-sharing conflict in estuaries in NSW.
5. The project has not reduced conflict, but it has provided the proponents with a management tool that will allow them to demonstrate their responsible and sustainable practices and defend their rights as legitimate resource users.
6. Unified set of environmental performance goals across the NSW Oyster Industry.
7. No formal advice was sought by the OMAG on the development of a Code of Practice for the NSW Oyster Industry. DPI is currently developing an Aquaculture Industry Development Plan which will go a long way to providing a universal set of performance goals for the NSW Oyster Industry.

## Conclusion

Although it appears that the situation is improving, the recent history and current relationship between DPI and professional estuary fishers means that cooperative projects such as the Codes of Practice are likely to flounder, just as they did in this project. While the proposal sought implicitly to improve the relationship between agency and industry, the depth of misunderstanding and lack of trust between the two was too great. There are now however, broader moves from both industry and agency to build more a more positive relationship well beyond the capacity of this project.

The mid-term re-structuring of the project left insufficient time to complete the development *and* implementation of the EMS's. Taking on five EMS's was ambitious, and although one was discontinued, it may have been more effective to take on only two EMS's and develop and implement them more fully within the project timeframe. More generally, the benefits of EMS will rarely become evident within the usual timeframe for project funding. A more long-term approach should be taken in future to ensure that EMS's are fully developed, implemented and supported.

When divorced from agency control, professional fishers and oyster farmers responded very positively to the opportunity to develop an environmental co-management tool such as an EMS's. Those who chose not to take up the offer of assistance from the Project Officer did so on the basis of time constraints or lack of support within the fleet or group, rather than any suspicion or negativity towards the concept of EMS.

Any initial scepticism of the EMS concept or development process, of which there was a certain degree amongst the groups, was generally quickly dispelled. All groups adopted the basis for EMS development easily and positively, particularly the concept of transparency.

Development of the EMS's appeared to be a very positive experience for the groups. Although very few entirely new initiatives were developed, the process of considering environmental management in a structured manner was in itself, beneficial.

## **APPENDIX 1: Project team**

### **Principal Investigator**

Anissa Lawrence, Executive Officer, Ocean Watch Australia Ltd

Christine Soul, Executive Officer, Ocean Watch Australia Ltd (until January 2004).

### **Project Officer**

Charlie Hewitt, Ocean Watch Australia Ltd.

### **Administrative Contact**

Emma Brunsdon, Ocean Watch Australia Ltd.

### **Co-Investigators**

Mark Everson, General Manager Clarence Valley Fishermen's Co-operative Ltd (until July 2003)

Mr George Baker, General Manager Clarence Valley Fishermen's Co-operative Ltd

Damian Ogburn, Principal Manager (Aquaculture), Department of Primary Industries – Fisheries.

Bill Pearce, Co-op Manager/Association Manager, NSW Fishermen's Co-operatives Association Ltd

## **APPENDIX 2: Dissemination, Extension and Communication Plan**

### **2003/063: Adoption of environmental management systems by NSW professional estuary fishers and oyster farmers**

#### **Objectives**

- To promote the benefits of EMS to NSW estuary fishers and oyster farmers.
- To use EMS as a basis for NSW estuary fishers and oyster farmers to communicate with stakeholders regarding their environmental performance.

#### **Target Audience/s**

- NSW estuary fishers and oyster farmers.
- Stakeholders will include the general public, recreational fishing groups, Estuary Management Committees (Local Government), and Catchment Management Authorities.

#### **Key Message/s**

##### *NSW estuary fishers and oyster farmers*

- An EMS is strictly industry-based – industry decides what is included, although outside consultation is important.
- Resource management is political these days – an EMS is about getting in the game and not letting misrepresentation and misunderstanding of professional estuary fishing or oyster farming continue.
- An EMS is a platform to develop and promote environmental initiatives – those that are already in place, and those identified in the EMS process that need to be introduced.
- An EMS can be formally recognised by other natural resource managers like Catchment Management Authorities and link operations with their management plans to demonstrate that industry is contributing to broader natural resource management goals.
- An EMS is a way of encouraging constructive consultation with the community.
- An EMS can put professional estuary fishing and oyster farming in perspective with other impacts on estuaries.
- An EMS does not try to replace existing regulations or management, but complements them with industry initiatives.

##### *Stakeholders (the general public, recreational fishing groups, Estuary Management Committees (Local Government), and NRM bodies such as Coastcare and Catchment Management Authorities)*

- Professional estuary fishing and oyster farming are responsible and sustainable uses of marine resources.
- Professional estuary fishers and oyster farmers use the best techniques and technology that society has been able to develop, and will continually improve as new techniques and technology are developed.
- Professional estuary fishers and oyster farmers encourage all stakeholders to

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work with them on managing the health of estuaries through their own operations and the operations of others.

- Professional estuary fishers and oyster farmers provide seafood for the vast majority of the community who are unable or disinclined to catch their own.

**Methods**

*NSW estuary fishers and oyster farmers*

During:

- Extensive port meetings. EMS is a relatively new and potentially threatening (i.e. management) process requiring close, immediate communication.
- Circulation of summary sheets (see attachments 1, 2 and 3)
- Consideration and discussion of “first generation” EMS’s (i.e. Bribie Island and Hawkesbury Trawl)

After:

- Investigate potential for “champion” from one of the current EMS groups to promote EMS to potential groups.
- Thorough briefing of in-coming NSW SeaNet Officer on completed EMS’s, “first generation” EMS’s, and EMS support material developed by EMS Officer and SSA.
- Ex-EMS Officer will be available for telephone support as necessary and port meetings, particularly for the first report-and-review cycle for current groups.

*Stakeholders*

During and after

- Media releases to local papers and radio.
- Make EMS’s available on Ocean Watch website.
- Call for public comment and establish postal and e-mail addresses for receiving comment.
- Contact key stakeholders such as Estuary Management Committees and Coastcare for comments directly.
- Make EMS’s available in retail outlets where possible.

**Action Plan**

During Project

<b>Method</b>	<b>Responsibility</b>	<b>Completion date</b>
Port meetings with estuary fishers and oyster farmers to promote and discuss EMS	EMS Officer	April 2004
Circulation of summary sheets through co-ops,	EMS Officer	April 2004

<b>Method</b>	<b>Responsibility</b>	<b>Completion date</b>
contacts and port meetings		
Consideration and discussion of "first generation" EMS's	EMS Officer	April 2004
Media releases	EMS Officer	To coincide with release of EMS's for public comment and release of final EMS's (late 2004)
Make EMS's available on website and establish postal and e-mail addresses for receiving comments	EMS Officer	To coincide with release of EMS's for public comment and release of final EMS's (late 2004)
Contact key stakeholders	EMS Officer	As part of public consultation (late 2004)
Make EMS's available in retail outlets	EMS proponents	Upon release of EMS

#### After Project

<b>Method</b>	<b>Responsibility</b>	<b>Completion date</b>
Investigate potential for champion	EMS Officer	late 2004
Briefing of incoming NSW SeaNet Officer	EMS Officer	late 2004

#### Evaluation

There is insufficient time and money available to the project to formally evaluate the communication program.

Evaluation of communication plan for industry could be crudely assessed by the number of groups who subsequently choose to develop EMS, however, there will be a large number of other factors influencing this process.

Evaluation of communication plan for stakeholders could be crudely assessed by the number and nature of responses received.

## APPENDIX 3: EMS summary sheets

### Environmental Management Systems (EMS) in Professional Fishing

Most people have no idea that environmental management is large part of professional fishing, both via regulations and via fishermen's own operations.

The community, as seafood consumers and/or part of your regional economy, should be your biggest supporter, but without information from your side, they only believe what they hear from those opposed to professional fishing.

An Environmental Management System (EMS) is a way of getting positive messages into the community and forming constructive relationships with natural resource managers and the community.

#### What is an EMS?

- An EMS is strictly industry-based – you decide what it includes, although outside consultation is important.
- Resource management is political these days – an EMS is about getting in the game and not letting misrepresentation and misunderstanding of professional fishing continue.
- An EMS is a platform to develop and promote your environmental initiatives – those that are already in place, and those you identify that need to be introduced.
- An EMS can be formally recognised by other natural resource managers like Catchment Management Authorities and link your fishery with their management plans to demonstrate that you are contributing to broader natural resource management goals.
- An EMS is a way of hearing the concerns of the community positively, not just finding out in the local media or at the pub. This way, you show you are willing to listen, the community has a say, and you can deal with issues without them festering in the background.
- An EMS puts professional fishing in perspective with all the other impacts on estuaries. This is not about blaming others, but saying “This is what we're doing. What about you?”
- An EMS does not try to replace existing regulations or management, but complements them with industry initiatives.

#### What does all this add up to?

While most professional fisheries operate above and beyond regulations, those with an EMS can **show** it. An EMS illustrates that your fishery is:

- producing seafood for the community using the best techniques available and continually improving as new innovations are developed;
- committed to public consultation and public reporting; and
- contributing to broader natural resource management goals.

With positive links to natural resource managers and support from the community, your operation will be in a stronger position when tough decisions are made on resource access.

#### Sounds like too much work?

Charlie Hewitt from Ocean Watch is currently working on EMS in NSW estuary fisheries and oyster farms under a grant from FRDC.

All you need to do is show some interest in improving the image of your fishery, attend a small number of meetings, and provide feedback on drafts of the EMS.

Please call Charlie on 0403 573 041 if you have any questions or comments.



## Environmental Management Systems (EMS) for oyster farms

*Most people have no idea that environmental management is large part of oyster farming, both via regulations and via your own operations.*

The community, as oyster consumers and/or part of your regional economy, should be your biggest supporter, but without information from your side, they only believe what they hear from those opposed to oyster farms.

An Environmental Management System (EMS) is a way of getting positive messages into the community and forming constructive relationships with those concerned about estuaries.

### What is an EMS?

- An EMS is strictly industry-based – you decide what it includes, although outside consultation is important.
- Resource management is political these days – an EMS is about getting in the game and not letting misrepresentation and misunderstanding of oyster farming continue.
- Most of an EMS is simply documenting what you already do – it is not a revolution.
- An EMS helps you develop, monitor and promote your environmental initiatives – those that are already in place, and new ones that you identify as necessary.
- An EMS can be formally recognised by other natural resource managers like Catchment Management Authorities and link you to their management plans to demonstrate that your operation is contributing to broader natural resource management goals.
- An EMS is a way of hearing the concerns of the community positively, not just finding out in the local media or at the pub. This way, you show you are willing to listen, the community has a say, and you can deal with issues without them festering in the background.
- An EMS puts oyster farming in perspective with all the other impacts on estuaries. This is not about blaming others, but saying “This is what we’re doing. What about you?”.
- An EMS does not try to replace existing regulations or management, but complements them with industry initiatives.

### What does all this add up to?

While most oyster farms operate above and beyond regulations, those with an EMS can **show** it.

An EMS illustrates that the operation is

- producing seafood for the community using the best techniques available and continually improving as new innovations are developed;
- committed to public consultation and public reporting; and
- contributing to broader natural resource management plans.

With positive links to natural resource managers and support from the community, your operation will be in a stronger position when tough decisions are made on resource access.

### Sounds like too much work?

Charlie Hewitt from Ocean Watch is currently working on EMS in NSW estuary fisheries and oyster farms under a grant from the FRDC.

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Call Charlie on 0403 573 041 if you have any questions or comments.

## Developing Environmental Management Systems

Environmental Management Systems are not complicated. They follow a relatively simple format of objectives and actions, much like any other management plan.

REMEMBER – this is just the EMS structure, YOU decide on all the details.

### First steps

Vision – a “warm and fuzzy” to start off but still important, where do you want to be in 5-10 years?

Scope – you decide exactly what the EMS will consider.

Environmental policy – often just tacked on to the front of an EMS, however, using each element of the policy as an objective (see action plan below) is a good way to make it more relevant.

### Risk assessment

*Firstly, do not think of a risk as a bad thing, but rather as an opportunity to show your commitment and capacity to deal with an issue.*

A risk assessment needs to consider ALL of the environmental aspects of your operations, those that you are responsible for (internal risks), and those that you are not responsible for but affect you (external risks).

Internal risks might include direct habitat impacts, interactions with threatened species, waste management, pollution from your boats, etc.

External risks might include runoff, recreational boating, vegetation loss, etc. (You won't be able to address all the external risks, but some you can, which will reflect well on you.)

Then you go through a process of assessing the risks according to their likelihood and consequence, with greater risks requiring a more comprehensive response in the EMS.

When you begin a RA, it may seem like management nonsense, but it is very important to show outsiders how the EMS was developed – a RA is the way to do this.

### Action plan

This stems straight from the risk assessment – it outlines what are you going to do about the risks you have identified. Most internal risks you already deal with, so this is simply documenting them.

You will need to group your actions under objectives – it might be an idea to make your policy relevant by using each element of the policy as an objective.

You will also need to decide on a “performance measure”, a “target” and a “timeframe” for each action to determine how your EMS is progressing (see reviews and reporting below)

### EMS Review

An EMS documents an ONGOING process of environmental management, so an annual review is not an extra, but an essential part of the EMS. With performance measures, targets and timeframes established, reviewing is actually quite easy.

A review should be accompanied by a public meeting, to ensure that the community is given the opportunity to hear about progress, comment, and raise any concerns. This is an opportunity to ensure you are aware of problems and deal with them before they worsen.

### EMS Reporting

Last, but definitely not least. Public reporting is essential to show you are open and proud of your environmental work. It is also an excellent way to maintain the profile of the EMS and your profile as environmental stewards.