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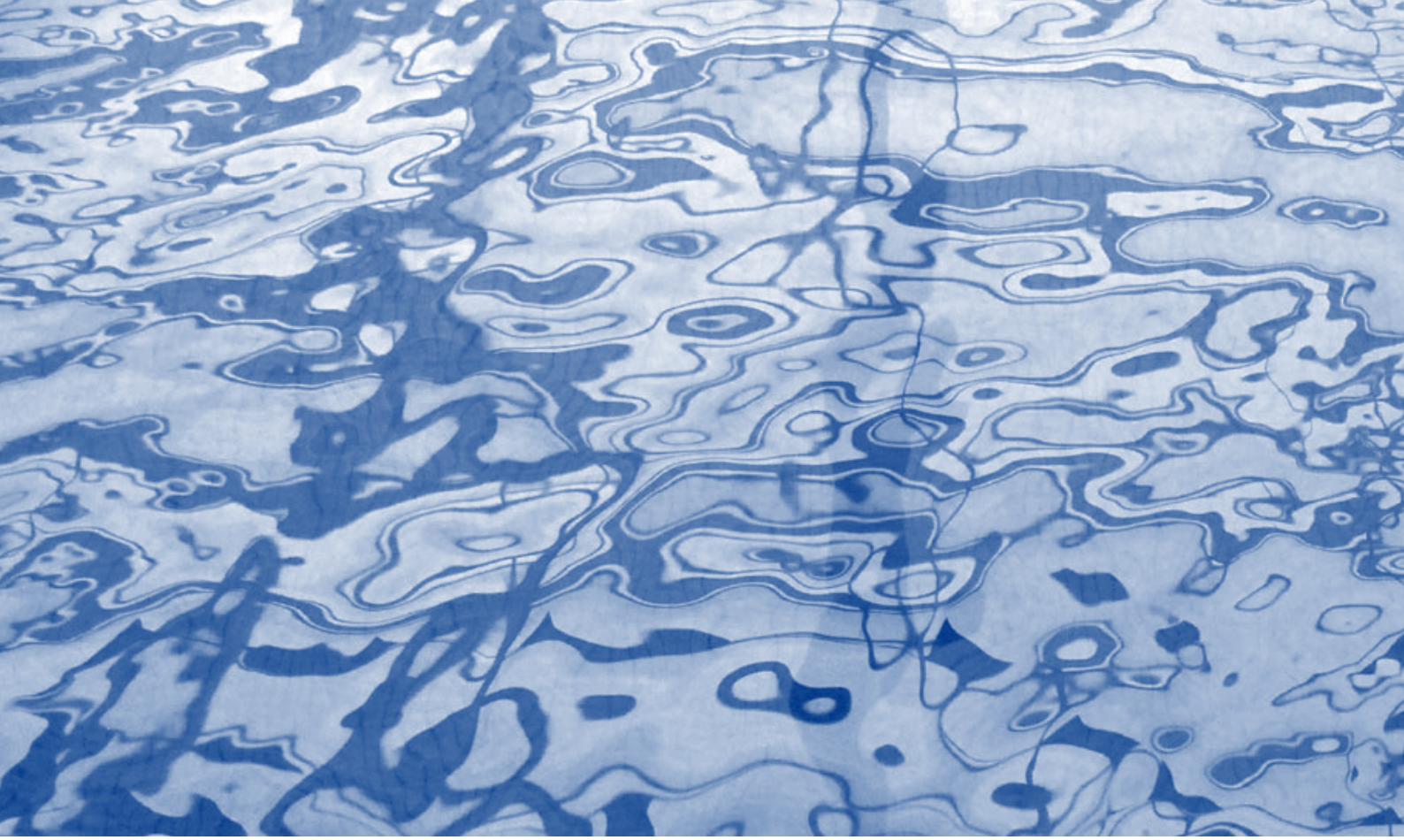

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Spatial allocation of coastal waters for aquaculture development – the Western Australian experience

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Abstract

The Department of Fisheries in Western Australia is responsible for the conservation, development and sharing of fish resources for the benefit of present and future generations. As part of these responsibilities, the department considers applications for the grant of aquaculture and pearling licences and leases in coastal waters. Often prospective sites for aquaculture and pearling activities are highly sought after for other uses including, for example, tourism development, commercial and recreational fishing, petroleum exploration, conservation and heritage. In the mid 1990s, the spatial competition for limited sites resulted in considerable concern from both the general community in relation to the processes used for granting applications and from the pearling and aquaculture sector in relation to time delays and uncertainties around decision making. This high level of concern and conflict resulted in a significant review of the department's consultation and assessment processes for licence and lease applications. As a result, in 1997, the Department developed a comprehensive Ministerial Policy Guideline on the grant of aquaculture and pearling licences and leases in coastal waters. The guideline sets out in detail the public consultation process to be used in considering and assessing applications, together with key matters to be considered as part of the decision-making process. This paper will describe the guideline process, issues that have been raised following implementation of the guideline and the future review process. Examples of user conflicts and solutions will also be provided, where relevant.

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Introduction

The Western Australian Department of Fisheries ("the department") is responsible for the management of the state's fish resources, commercial, pearling and aquaculture industries, recreational fishers and the pristine waters and habitats that surround the state's 12,000km coastline. Western Australia's aquatic environment, with its resources of fish, is one of the State's most valuable assets. This value lies not only in what can be harvested on a sustainable basis from the ocean, but in the physical environment of the sea itself that shapes the lifestyle and culture of the people of Western Australia and attracts the many tourists which visit the State each year.

Commercial fisheries production in Western Australia was valued at over A$300m in 2003/04, with a significant portion in exports. Additionally, an estimated 600,000 Western Australians contribute a further A$500 million in annual economic activity from recreational fishing and aquatic eco-tourism. In fact, in some regions in the north of the State, fisheries activity provides the main form of employment. The pearling and aquaculture industry (hereinafter referred to as "marine aquaculture") was valued in excess of $150m in 2004/05 with most of the activity located in many of the same regional centres.

The high ecological, social and economic value placed on Western Australia's aquatic environment creates a significant obligation for the department to develop and implement appropriate and sustainable resource management strategies for the state's fisheries and marine aquaculture sector and fish habitats. This results in the Department constantly reviewing existing strategies, and adopting new ones, to meet the challenges that arise from the increasing pressures on the estuarine and marine environment from a growing population and increasing demand for our fish and aquatic resources.

The purpose of this paper is to outline the department's experience in dealing with the spatial allocation of coastal waters for marine aquaculture development.

Marine aquaculture in Western Australia

The major sector of Western Australia's marine aquaculture industry is the production of pearls from the silver or gold lipped pearl oyster, Pinctada maxima. The industry is based on both wild stock and hatchery produced oysters. Industry management objectives are to sustain the pearl oyster wild stock fishery and optimise return to the community. Harvesting of wild stock pearl oysters is controlled by a Total Allowable Catch and by individual quotas. Production levels are also controlled through quotas on the number of hatchery oysters that can be seeded for round pearl production.

A key component of the industry is the use of pristine coastal waters as pearl farm lease sites where oysters are held and husbanded for the growth of high quality round pearls for the international market. Juvenile hatchery produced oysters are also grown out at these sites for subsequent pearl production. Farm sites vary in size in Western Australia from 0.0057nm-2 to 4nm-2. They are principally located in the northern region of Western Australia, although some extend as far south as Exmouth Gulf.

In addition to pearls, the department has continued to place emphasis on other less developed aquaculture industries. Major marine species under commercial production include Pacific blue mussels (Mytilus edulis), pearl oysters (other than P. maxima) and algae for beta-carotene extraction. Farm sites extend from the south to the north of the state (Figure 1).

Marine aquaculture and spatial allocation issues

One of the difficulties facing aquaculture and the fisheries sector generally in the marine environment is the common property nature of marine resources and poorly defined user rights. There is increasing pressure on the marine environment from a variety of other users, including marine conservation and tourism sectors, together with a growing community desire for unfettered access to the marine environment. For certain types of aquaculture there is a shortage of high quality marine sites as suitable sites tend to be in high use areas and close to major townsites. This can result in a level of conflict between aquaculturalists and other users and the general community. There is also no overall planning authority for the marine environment in Western Australia.

This conflict became a significant issue for government and the community in the mid 1990s sparked by a proposal to expand marine aquaculture activities in the Dampier Archipelago, off the Pilbara coast of Western Australia (Figure 1). The Dampier region is a significant recreational area for residents and visitors. There is also commercial and industrial activity including a port which is of major significance to the offshore oil and gas industry. Specific uses of the archipelago include recreational fishing and diving, recreational boating and sailing, commercial fishing, tourist activities, marine aquaculture, and port activities. The archipelago also has important Aboriginal heritage, conservation and environmental values. These activities, and more, compete for the finite resources and areas of the archipelago (Driscoll 1996).

As a result of the Dampier conflict, the then Minister for Fisheries required the department to develop comprehensive guidelines and processes to ensure that both aquaculture proponents and the general community were aware of the aquaculture licence assessment process and were able to have input on the decision making process.

One of the significant issues was the lack of planning for marine aquaculture development in Western Australia. A number of state agencies within Western

Australia undertake planning work in the marine environment. While these agencies and interest groups work together to integrate their activities there is no specific legislative framework for marine planning. In addition, existing land use planning processes for coastal lands often do not integrate the use of coastal land and the use of the adjoining marine environment. Since expectations for the use of the coastal and marine environment are diverse, this shortcoming has led to conflict between users as the development of the state intensifies.

The planning and application assessment procedures for marine aquaculture were reviewed (Everall 1997) together with procedures in other states to identify a suitable process for use in Western Australia. Issues identified as part of the review included:

- the need for a higher level of public consultation in the assessment process including feedback on decisions;
- the need for a more streamlined and transparent application process;
- equity, resource sharing, allocation and planning implications. Specific issues included spatial competition for coastal waters given multiple uses such as recreational fishing, commercial fishing and shipping, safety issues including access for navigation, heritage implications, visual amenity and conservation needs; and
- the need for public information and education including notification of the location of marine aquaculture sites and rights of passage.

Following the review report, a comprehensive Ministerial Policy Guideline ("the guideline") (Fisheries 1997) was issued in 1997 to guide the consultation and assessment process.

The guideline process

In Western Australia, the Chief Executive Officer of the Department of Fisheries and the Minister for Fisheries, as the case may be, determine applications for licences and leases over areas of the Western Australian marine environment to enable the operations of the marine aquaculture sector. Their powers are determined by the Fish Resources Management Act 1994 (and, as relevant, the Pearling Act 1990). Decisions are made after planning and consultation processes undertaken pursuant to the relevant legislation.

The legislation prescribes the key requirements for the granting of licences and leases. Under the legislation, the Minister may also issue guidelines to guide the CEO and others in the decision making process. Matters in guidelines are not intended to limit the statutory discretion exercised by the CEO in a particular case. The CEO will exercise discretion based on the merits of each individual case, and may take into account matters not set out in guidelines. The key elements of the guideline are:

Consultation

The assessment of all marine aquaculture applications includes:

- referral of applications to decision making authorities – the department consults with relevant decision making authorities whose approval is required for the activities to be conducted under the aquaculture licence/lease. An important component of this process is seeking relevant environmental approvals;
- consultation with involved agencies – aside from decision making authorities, there is a range of other agencies involved, or with an interest, in marine aquaculture developments. These include, for example, local government authorities and state government agencies such as those responsible for land planning and land administration;

- consultation with representative community and industry groups – the department consults with peak community and representative bodies which may have expertise in, or be directly affected by, or have an interest in, the proposed aquaculture activities. These groups include peak commercial and recreational fishing groups, holders of aquaculture licences/leases in close proximity to the proposed site, native title holders or aboriginal representative bodies, and peak conservation organisations; and
- opportunity for public comment on proposals – in addition to referral to identified groups, all applications are also advertised for public comment and/or notification. In most cases, a 60 day period is provided for public comment.

Provision of information in applications

Taking into account confidentiality requirements, the guideline sets out in some detail the information that must be provided to enable respondents to have a proper understanding of the likely effect or impact of the proposal on the social and biological environments, and on their area of interest. This aspect of the guideline has assisted greatly in the community's understanding of the nature and scope of individual proposals.

Revision of applications

The guideline sets out the process for revision or variation of applications based on whether the revision is "major" or "minor". The process ensures that interested groups and the public are aware of changes to proposals and have appropriate opportunity for input.

Timeframes for assessment and decision making

As a matter of general policy, it is not in the best interests of the marine aquaculture industry for applications to not be determined within appropriate timeframes. There is also a need to provide greater certainty for both proponents and members of the public in the processes and timeframes to be used in assessing applications. Accordingly, the guideline provides a 200 day "timeframe" for the assessment and decision making process. It is acknowledged however that that the department is unable to finalise decisions until relevant approvals have been obtained from other decision making authorities and this may extend the timeframes in some cases.

Determination of applications – principles and important matters

The guideline sets out the principles and important matters to be taken into account in the determination of applications. These include:

- relevant legislative provisions;
- submissions received from interest groups and the public;
- whether the proposal involves a limitation on access by other users to the proposed area;
- the possible impact on navigation;
- the possible impact on recreational fishing;
- the possible impact on commercial fishing and other commercial activities including tourism;
- the possible impact on other marine aquaculturalists;
- native title claims and the possible impact on native title rights and interest;
- the possible impact on marine reserves;
- the possible impact on visual amenity and potential noise pollution;
- the value to industry and the community from increased aquaculture activity from the proposed site; and
- the economic benefit to local communities from the presence of aquaculture in the area.

Statement and advice of decisions

As soon as a decision is made on an application, the decision maker must provide advice to the applicant including advice on the relevant appeals process. The decision must also be advertised and all those persons who provided a submission must be provided with a decision statement, or a summary thereof, setting out the basis for the decision. This feedback step has provided for greater transparency in the application process and an improved understanding of the reasons behind decisions.

The guideline also provides flexibility to deal with, for example, the need for sites to be trialled for a short term and for emergency re-location and usage of sites, if necessary.

Impact of the guidelines

Prior to publication of the guideline, applications were assessed through various processes with little opportunity for public input. For example, in the case of applications other than *P. maxima* farm sites, applications were referred to an Inter Departmental Committee for Aquaculture in which various government agencies were represented, but broader stakeholder groups were excluded.

Since its inception, around 180 applications have been assessed under the guideline. The major issues that have been identified through the consultation process have been potential impacts of proposals on recreational and commercial fishing and the charter boat industry, potential impact on native title rights and interests and community concerns about environmental impacts. Many of these issues have been addressed by encouraging applicants to identify and liaise closely with parties that may be impacted by a proposal, before submitting a formal application. In this way minor adjustments can be made to proposals to accommodate the needs or "rights" of other user groups and a level of communication can be built up so that other parties have a good understanding of what the proposal involves.

Since the introduction of the guideline there has been an enhanced level of transparency and certainty for both the public and the aquaculture industry on the processes that are followed by the department to arrive at a decision on applications. Consequently, the level of conflict between user groups has been significantly reduced and concerns raised by the general community have lessened in most cases, as issues raised in the consultation process are addressed in the statement of decisions/reasons.

Complementary strategies and solutions

Aside from the guideline process which provides for public input and greater certainty around the application process, a number of other complementary mechanisms are in place to assist in resolving spatial allocation issues in relation to marine aquaculture. These include:

- ensuring that licences and leases are not granted on an exclusive access basis. In Western Australia, this position is supported by legislation. It provides comfort to the community that areas of waters will not be entirely alienated should a marine aquaculture application be granted.
- adjustment to the boundaries of sites to accommodate practical access by other users, as necessary. For example, if a site has been identified as high use for other purposes, boundaries can be adjusted to either rationalise the farming area or accommodate adjacent uses.
- establishment of performance criteria to ensure sites are appropriately utilised and that expansion occurs in an orderly manner. It is not in the interest of the aquaculture industry for sites to be underutilised or to be expanded without a real need. Specific performance criteria are developed in liaison with applicants or the relevant industry sector taking into account issues such as any development or business plans, anticipated production levels and best industry practice.
- marking and lighting of site boundaries to facilitate safe passage. For example, in some instances, aside from perimeter marking, marked and lit navigation channels have been required through sites to assist safe passage by recreational and other vessels.
- policies on distances between aquaculture sites to minimise disease risk and security issues. In Western Australia, rules for the distance between pearl oyster farm sites were developed in liaison with industry and experts in fish health. The policy enables orderly development and expansion of sites while minimising impacts on neighbouring sites.
- the development of an accord (voluntary agreement) between the pearling and charter boat sectors in relation to the location and operation of sites. The accord has minimised potential conflict between the pearling and

charter sector and resulted in more certain planning outcomes for the respective industries.

- encouraging a pre-consultation process so that prospective applicants identify and liaise with relevant parties prior to finalising a formal application. In recent times, this has proved a useful tool for applicants in identifying potential issues, areas of conflict and possible solutions. Overall this can result in a better quality application with greater chance of success.

Future directions

A review of the guideline is due to commence shortly. All relevant stakeholders, including the aquaculture industry, other marine users and government agencies will be asked to provide input to the process. Parties will be asked about their view of the guideline and how it may be improved. Following the consultation process, a review report will be provided to the Minister for Fisheries for consideration which will include a listing of all the decisions made under the guideline, a discussion on usefulness of the guideline for decision making and recommendations, as relevant, for amendments or replacement of the guideline. It is anticipated the review process will be completed towards the end of 2006.

The broader issue of a whole-of-government approach to marine planning requires further work and development. At the Australian Government level, proposals are in place for the development of bioregional plans for waters outside state jurisdiction. Planning has commenced in relation to the South West Marine Region which will extend from Western Kangaroo Island in South Australia to the Kalbarri region on the south west coast of Western Australia. The Western Australian Government is proposing to develop, on a complementary basis, a comprehensive and integrated approach to the conservation and sustainable use of the marine environment through the development of regional marine plans. These national and state government processes will provide further information and a framework for future marine planning issues and resource use. It is not intended at this time to formally set aside or zone prospective sites for aquaculture development.

Conclusion

Aquaculture is an important component of the fisheries and marine sector in Western Australia. It competes with other marine uses of coastal sites including fishing, shipping and tourist activities and with more passive values such as conservation and heritage protection.

Prior to 1997, spatial allocation of marine aquaculture sites in Western Australia was undertaken on a relatively ad-hoc basis with little community input or established process. In response to community concerns, a formal process for assessing applications – via a ministerial guideline – was developed. The cornerstone of the guideline is a full public consultation process together with a feedback loop to interested parties and the establishment of more specific timeframes for assessment and decision-making. This has resulted in more transparent decision-making and greater certainty for both developers and the community.

While allocation issues still occur, the guideline process has minimised potential conflict. This coupled with other complementary strategies has greatly assisted in the orderly development of the marine aquaculture sector and improved relationships with the community and user groups. The key is to ensure that processes are reviewed and amended over time as industry and community expectations and requirements change. A more integrated and coordinated approach to the broader issue of marine planning will further assist this process.

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