

## SUSTAINABLE PLANNING FOR AQUACULTURE IN THE GREAT SANDY REGION

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### ABSTRACT

The Queensland Government has adopted a planning approach for aquaculture development that will ensure this priority industry is well managed for Queensland's future. It is now internationally accepted that the increasing demand for seafood will be met primarily through aquaculture, and the industry in Queensland will continue to expand in coming years to meet that demand. Planning will ensure that an appropriate balance is met between the needs of the aquaculture industry and existing users of marine resources, and will also protect the environment for a sustainable future.

The 'Great Sandy Regional Marine Aquaculture Plan' (*GSRMAP*) will guide future non-intensive aquaculture development within the Great Sandy Marine Park boundaries. The Marine Park stretches from Baffle Creek in the north to Double Island Point in the south. Under the Great Sandy Marine Park Zoning Plan, non-intensive aquaculture activities are allowed (under permit) in certain areas. However, up until now there has been no comprehensive strategic planning for aquaculture in the region, or in Queensland generally.

The Draft *GSRMAP*, released in July 2008, identifies proposed sites for bivalve culture methods including rack, surface and subsurface lines, and sea ranching sites for species such as sea cucumbers. The proposed sites were chosen so as to avoid adverse impacts to the environment and conflicts with other user groups, in accordance with planning principles that were endorsed by a state government Inter-Agency Working Group. The proposed sites are consistent with the entry and use provisions of the Marine Park.

Management controls that reduce risks associated with these aquaculture activities are detailed in the Draft *GSRMAP* and the associated *Implementation Guidelines*. Management controls for each proposed site include development boundaries, infrastructure design specifications, the requirement for an environmental bond, environmental monitoring program, reporting mechanisms for wildlife interactions and also address general biosecurity issues.

## INTRODUCTION

The draft 'Great Sandy Regional Marine Aquaculture Plan' (*GSRMAP*) was released for public consultation between July and October 2008. The *GSRMAP* was prepared by the Department of Primary Industries and Fisheries (DPI&F) with support from the Department of Tourism, Regional Development and Industry (DTRDI). The draft *GSRMAP* identifies proposed sites for rack culture (Figure 1), surface line culture (Figure 2) subsurface line culture (Figure 3), and sea ranching (Figure 4). The proposed sites were chosen so as to avoid adverse impacts to the environment and conflicts with other user groups, in accordance with planning principles that were endorsed by a state government Inter-Agency Working Group.

The draft *GSRMAP* is consistent with the entry and use provisions of the Great Sandy Marine Park. The Queensland Government has provided for rack, line and sea ranching types of aquaculture (but not sea cages) within the Great Sandy Marine Park, which is administered by the Environment Protection Agency (EPA). The purpose of the *GSRMAP* is to determine how best to undertake this future aquaculture development so that it is suitably located and managed.

The subject area for the *GSRMAP* includes all marine areas within the Great Sandy Marine Park boundaries — Rules Beach in the north to Double Island Point in the south, including 3 nautical miles around Fraser Island.

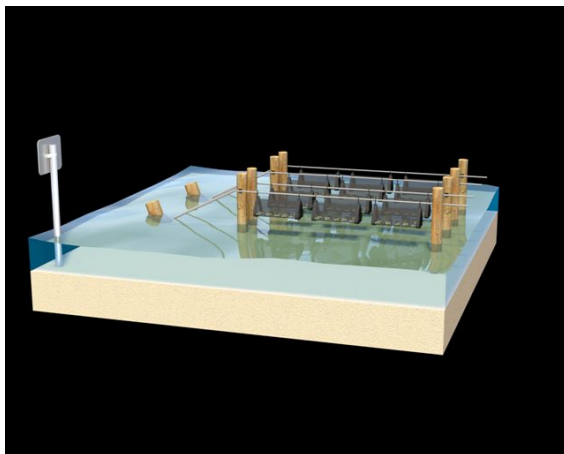


Figure 1 - rack aquaculture.

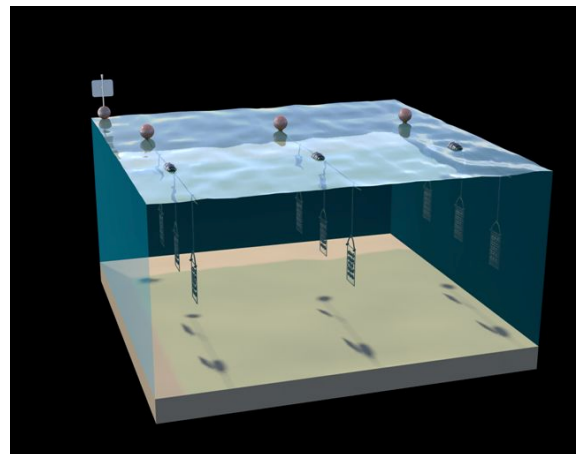


Figure 2 - surface line aquaculture

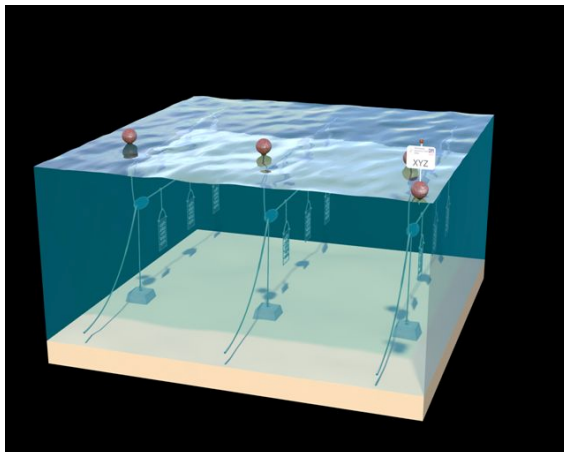


Figure 3 - subsurface line aquaculture

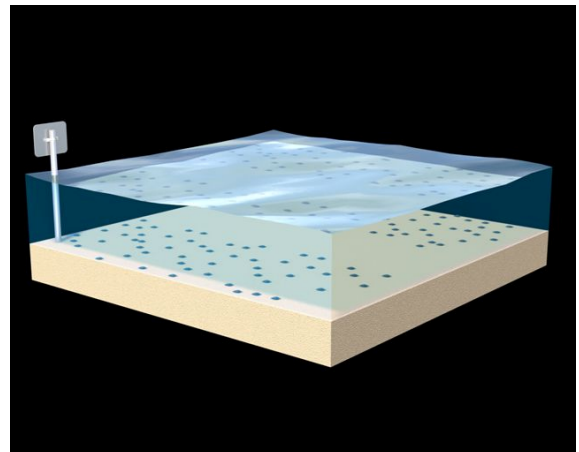


Figure 4 - sea ranching aquaculture

Management controls that are sufficient to reduce any residual risks associated with these aquaculture activities are detailed in the draft *GSRMAP* and the 'Implementation guidelines for the Great Sandy regional marine aquaculture plan' (*GSRMAP implementation guidelines*). Management controls for each proposed site include development boundaries, infrastructure design specifications, the requirement for an environmental bond, environmental monitoring program and reporting mechanisms for wildlife interactions, as well as general biosecurity issues.

## **BENEFITS OF PLANNING**

The *GSRMAP* will benefit the Great Sandy region by determining which sites are most suitable for aquaculture development and providing guidelines to ensure that only suitable development is approved. Key advantages of the planning process include:

- decisions will not be made on individual sites in isolation.
- regional needs can be considered for each site.
- stakeholders have input 'up-front' on aquaculture development in the region.
- consistent standards are set for selection of sites, assessment criteria, and management controls.
- the return to the Queensland Government for use of public resources may be maximised.

The *GSRMAP* will benefit industry by:

- identifying sites for aquaculture subject to meeting relevant conditions
- reducing red tape through streamlining of approvals processes
- providing a higher level of certainty to potential investors and the community regarding aquaculture development within the region.

## **SUPPORT FOR AQUACULTURE PLANNING IN THE GREAT SANDY REGION**

The Queensland Government is committed to the continued, ecologically sustainable development of aquaculture and has identified aquaculture as a priority sector for the state. It is internationally accepted that the increasing demand for seafood will be met primarily through aquaculture. Queensland aquaculture presently provides only a small proportion of the domestic fresh seafood market and this is globally insignificant. Opportunities exist for aquaculture to fulfil the predicted demand for seafood in the domestic market as well as providing significant potential to develop export markets for high value products.

The Great Sandy region has been identified as a region that, subject to appropriate environmental safeguards, may be highly suitable for marine aquaculture. It has a desirable combination of relatively sheltered — but deep — waters, close proximity to service ports and domestic and international transport centres, and a regional skills base in the marine and seafood processing industries.

In recognition of the value to be gained from aquaculture planning, and complementary to the declaration and zoning of the Great Sandy Marine Park, the Queensland Government decided to prioritise a marine aquaculture planning program for the Great Sandy region.

## IMPLEMENTATION

The Draft *GSRMAP*'s intent is to facilitate ecologically sustainable development of aquaculture in the context of existing legislation.

The Draft *GSRMAP* is non-statutory and will complement the existing legislative framework. Management outcomes of the *GSRMAP* are to be implemented through guiding the assessment and issue of statutory approvals under the *Integrated Planning Act 1997* and the *Fisheries Act 1994*. *GSRMAP* outcomes will be enforced through conditions of approval. The draft *GSRMAP implementation guidelines* has been developed to guide assessment of approvals and determination of approval conditions.

There are two key areas where changes to the current process of assessing development applications are proposed:

- Assessment of aquaculture development in Queensland is coordinated through the integrated development assessment system (IDAS). In order to ensure a whole-of-government position with respect to aquaculture in the Great Sandy region, a whole-of-government arrangement will be developed between the IDAS concurrence agencies formally agreeing that assessment of Development Approvals for aquaculture in the Great Sandy region will be assessed against the *GSRMAP* and the *GSRMAP* implementation guidelines.
- Accreditation of DPI&F assessment processes under marine parks and Commonwealth legislation will be sought to ensure a streamlined mechanism for the assessment of marine aquaculture under legislation that is not coordinated within the IDAS, such as marine parks legislation (refer to Appendix 2) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Discussions are continuing with the Australian Government and the EPA to seek accreditation and thus streamline assessment.

Note that, under the *GSRMAP*, there is no proposed change to management arrangements for existing aquaculture areas.

A draft *Policy for the allocation of marine aquaculture authorities* is also to be released for public consultation. The policy will establish a flexible and transparent mechanism and criteria for the allocation of marine aquaculture authorities and is an important component of the strategic planning for aquaculture development.

## CONSULTATION

DPI&F undertook consultation with regional focus groups at a preliminary stage to share information on marine aquaculture planning and to refine the draft map of investigation sites. More than 200 stakeholder organisations in the Great Sandy region were invited to participate. Interested stakeholders took part in a series of focus group workshops held in the Great Sandy region and Brisbane. Records of the focus group consultation are available on the DPI&F website. This draft plan provides further feedback to stakeholders by describing how the planning has been revised in response to the preliminary consultation stage. A communication strategy was developed to ensure stakeholders and members of the community could provide comment on the draft *GSRMAP*. The communication strategy involved public notification, access to information, contact points for further information, and a series of public meetings in the Great Sandy region over a 10-week period.

## PROCESS FOR PLAN DEVELOPMENT

Development of the draft *GSRMAP* involved the following five-stage process.

1. A desktop mapping study of the region identified key 'investigation sites' that:
  - satisfied physical and biological criteria for rack, line or sea ranching aquaculture activities (e.g. water depth, currents etc.)
  - were consistent with relevant management plans (e.g. Great Sandy Marine Park)
  - considered known areas of high environmental value
  - minimised impacts on high usage areas for commercial and recreational activities (e.g. whale watching, recreational fishing, trawling). Technical criteria used to help guide the planning process were based on a literature review and advice from the aquaculture industry, interested investors, and researchers with expertise in the marine aquaculture industry. The site selection criteria were developed through the Inter-Agency Working Group.
2. Potential aquaculture sites were endorsed for further consultation by the Inter-Agency Working Group.
3. Consultation was undertaken on endorsed sites with targeted stakeholder focus groups that had specific knowledge of the fisheries, aquaculture, environmental, and cultural issues in the local area. From these consultations, the investigation sites were either given support, refined, shifted, or eliminated. Additional sites for investigation were also proposed by the focus groups.
4. An environmental consultancy firm was commissioned to undertake more detailed environmental investigations of the sites identified through the above process. The purpose of the characterisation study was to:
  - provide detailed information about the nature of the proposed aquaculture sites
  - assess each site's suitability for the specified purpose by identifying any incompatible features (e.g. the presence of significant habitats, poor flushing)
  - provide baseline data to assist the development of appropriate planning and ongoing management controls.
5. A draft *GSRMAP* and consultation package was developed and released for public consultation on 30 July 2008 with a deadline for comments of 20 October 2008. The release of the draft *GSRMAP* was publicised by a media release from the DPI&F minister, press and radio advertisements, and a brochure mailed out to over 7,000 recipients, including all fishing licence holders and all local organisations contacted during the Focus Group consultation stage. A series of 8 public meetings were held to share information about the proposals and the likely impacts on local stakeholders. The consultation package included:
  - Draft *GSRMAP*
  - Draft *GSRMAP Implementation Guidelines*
  - Overlay maps showing the locations of proposed aquaculture sites in relation to various constraints (e.g. marine park zoning and designated areas, significant habitats, navigation routes, popular fishing spots, etc) identified from desktop mapping
  - *GSRMAP* Characterisation Studies undertaken by environmental consultant (CD-ROM)
  - Animated video showing scale models of aquaculture systems and proposed sites (DVD)
  - Draft *Policy for the Allocation of Marine Aquaculture Authorities*
  - Response Form
  - Brochure as posted in mailout.

This information package was available as a hard copy (on request) or downloadable from the DPI&F website (except the DVD video).

6. The next stage is to consider all the information gathered during the consultation period regarding each site and to determine whether or not the location is appropriate, or whether the site should be amended, removed, or relocated in order to meet planning objectives.

DPI&F will continue to work with the EPA and the Commonwealth Department of Environment, Water, Heritage and the Arts to progress endorsement of the plan and hence streamline the application approval process.

A final *GSRMAP* will be prepared following thorough inter-agency consultation. It is expected that the *GSRMAP* will be finalised in the later part of 2009.

## **TAKE HOME MESSAGES**

The development of the *GSRMAP* involved a number of unique features from a planning perspective that required a novel approach to process development and execution.

- Planning for aquaculture in Queensland requires considerable attention to awareness-raising and provision of quality information to help overcome negative perceptions and misinformation about aquaculture.
- Selection of aquaculture sites within a State Marine Park requires a multi-stage process to progressively refine the choice of sites, and this process must include substantial input from local stakeholders.
- Development of non-statutory guidelines that are implemented by way of statutory legislation requires an extensive review of the existing approvals framework and a robust, transparent and user-friendly method of linking the plan to that statutory framework.
- Since the *GSRMAP* is non-statutory, public understanding and acceptance of the proposals are essential for effective implementation. Complex proposals must be presented so as to make clear the intent and build public acceptance of the plan.

Finally, it is important that this plan is reviewed after a period of 5 years to assess its effectiveness, to identify any relevant changes to the region or the industry, and to revise the plan accordingly.