

Aquaculture in the Greater Wellington Region – a discussion document

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Aquaculture - have your say

The laws that govern aquaculture are about to change. The Greater Wellington Regional Council (Greater Wellington) will soon become responsible for identifying aquaculture management areas (AMAs) on the coast. These are areas where the aquaculture industry will be able to carry out its activities. There will be no aquaculture in areas that are not identified as AMAs.

It's important for people and communities to have a say on what areas are set aside as AMAs. We want your comments on issues and concerns relating to aquaculture and AMAs. Your feedback will help us identify where aquaculture should be located and how it should be managed.

This discussion document is the beginning of a process that could lead to changes to our Regional Coastal Plan to include AMAs. It sets out:

- Information about our coastline;
- Information about aquaculture;
- Changes to the way aquaculture will be managed in the future, including AMAs; and
- Impacts of aquaculture.

To help prompt your ideas, we have identified some options, and included some questions for you to consider. There is a map of the Greater Wellington Region that you can use to indicate specific areas where AMAs should be located or excluded. You can remove the questions and map from the document and send them back to us, or you can comment on the discussion document by:

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Some options for aquaculture management in the Greater Wellington Region

For the purpose of discussion, we are suggesting three options for aquaculture management in the Greater Wellington Region. These are listed below. You may want to suggest other options.

Option 1: Do nothing

We could choose not to include any AMAs in the Regional Coastal Plan. Such an approach would have the following implications:

- 1 Future changes to legislation will prohibit aquaculture unless we provide for it in the Regional Coastal Plan by identifying AMAs. No further aquaculture would be possible (some already exists) and we would lose the potential economic benefits of more aquaculture.
- 2 Marine farmers could apply for a private plan change to establish an AMA. The cost of the plan change and any research and information collection would fall to that person.

Advantages of this option are that:

- there is no cost to ratepayers
- there is no loss of access to parts of the coast that would be occupied by aquaculture
- there are no associated adverse effects on the environment.

Disadvantages of this option are that:

- strategic planning of aquaculture developments is limited
- the potential for jobs and economic growth would be reduced.

Option 2: Create AMAs in areas where marine farmers have shown an interest in developing marine farms.

This option could involve placing AMAs around existing marine farms, so that they can continue when their current consents expire. It would also allow us to identify AMAs where the aquaculture industry has indicated that there are plans for marine farms. Such an approach would have the following implications:

- 1 Aquaculture could progress in those areas where planning by the aquaculture industry is already underway.
- 2 Existing marine farmers would be able to continue their operations once their current consents expire.
- 3 Further plan changes could be made as the need arises or when the Regional Coastal Plan is reviewed.

This option could be chosen if there are already sufficiently developed proposals for aquaculture that will not impact unduly on commercial, recreational and customary fishing, or on the marine environment.

Advantages of this option are that:

- it will provide for planned development of aquaculture
- economic growth, jobs, and flow-on effects for other businesses will be provided for.

Disadvantages of this option are that:

- there will be some adverse effects on access, visual landscape, natural character, and the marine environment, but it will be confined.

Option 3: Create AMAs over large areas where aquaculture is a possibility in future although there are no firm plans at the present time.

We could include AMAs in the Regional Coastal Plan where aquaculture could be a possibility in the future. Such an approach would have the following implications:

- 1 Aquaculture could progress in areas where planning by the aquaculture industry is already underway.
- 2 Aquaculture could progress in areas where there are no plans at the present time without any need for further plan changes.
- 3 Research into the suitability of larger areas for aquaculture, and the impacts of aquaculture, would have to be undertaken.

This option could be chosen if there is sufficient certainty that aquaculture over large areas of the coast will not impact unduly on commercial, recreational and customary fishing, or on the marine environment.

Advantages of this option are that:

- it will provide for aquaculture
- economic growth, jobs, and flow-on effect for other businesses will be provided for.

Disadvantages of this option are that:

- information will need to be collected for areas where there is little likelihood of aquaculture occurring in the near future
- there will be some adverse effects on access, visual landscape, natural character, and ecology.

Some questions for you to consider

For the purpose of discussion, we have suggested some questions for you to consider. These are listed below.

- 1 What areas do you think we should set aside as AMAs in the Greater Wellington Region? You can mark them on the map and send it to us, or describe the areas.
- 2 What areas do you think we should not be consider as potential AMAs in the Greater Wellington Region? You can mark them on the map and send it to us, or describe the areas.
- 3 Should aquaculture activities in AMAs be discretionary or controlled activities? Section 4 of the discussion document describes discretionary and controlled activities under the heading **“What is the status of aquaculture activities in an AMA”**.
- 4 Should AMAs cover large areas of the coast or should they be confined to areas where aquaculture is planned within the 10 year life of the current Regional Coastal Plan (ie. until a review in 2010).
- 5 What approach do you think we should use to allocate space within AMAs? Some options are listed in the table in section 5 of the discussion document.

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Claim of customary title to the foreshore and seabed

In October 1997, the Maori Land Court considered an application seeking a declaration that the foreshore and seabed of the Marlborough sounds are customary land. The Court made an interim decision in December 1997, finding that the customary title to the foreshore remains unless the land had been sold or title extinguished by legislation. This decision was by several parties including the Crown. The Court of Appeal made a decision in May 2003 that supports the Maori Land Court jurisdiction to investigate and determine the existence of customary title of foreshore and seabed.

The Government considers that this decision has revealed significant gaps in the law. It is working on establishing a statutory framework that will ensure private exclusive title is not created over what has always been regarded as public domain. Greater Wellington recognises that the Government response to the recent Court of Appeal decision will have a bearing on how aquaculture is managed in the future.

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1. Greater Wellington's coast

Greater Wellington manages the coastline of the Region for people and communities. It extends from just north of Otaki in the west of the Region to the Mataikona River, which is north of Castlepoint on the Wairarapa Coast. Our responsibility is from the high water mark to 12 nautical miles out to sea.

The sea and the coast are important elements in the lifestyle of many people living in the Region. Our coastline varies from the rough and rocky features of the Wairarapa coast to the eroding sandy beaches along the Kapiti coast. There are many estuaries and river mouths. In some places, such as the Wellington and Porirua Harbours, the environment is significantly altered. In others, a high degree of natural character remains.

The coast is highly valued and is enjoyed by people in many ways. It is the source of kaimoana (seafood), a place for active recreation such as surfing, walking and swimming, for passive recreation and contemplation, and for boating and fishing. Inappropriate use and development of the coastal marine area should not be allowed to compromise these values and uses.

The coast also has a significant economic value. The fishing and tourism industries provide many jobs, and ports are a vital transport link to national and international markets. There is great potential for further economic growth if the resources of the marine area are sustainably developed.

2. Aquaculture

2.1 Nation-wide

Aquaculture currently contributes over \$300 million to the New Zealand economy annually. Most of this revenue is from the export of green-lip mussels to overseas markets. It is a fast growing industry - the Aquaculture Council have predicted that export earnings will exceed \$1 billion by 2020. This level of production will require about 17,000ha of inshore mussel farms, as compared to the current 4,500ha. Offshore marine farming is less intensive and is likely to require approximately 10 times the space of an inshore farm to produce similar quantities of product.

As inshore coastal space is allocated and aquaculture technology and methods develop, aquaculture is moving offshore. The offshore operations are less intensive, larger, and will be submerged. The space required for inshore mussel aquaculture activity ranges from 3ha to 50ha. The space for an offshore operation can be up to 10,000ha. There are several proposals for offshore aquaculture in New Zealand ranging between 3000ha and 5000ha (30 to 50 square kilometres).

By the end of 2001, when the moratorium discussed in section 3 of this document was initiated, there were over 200 applications nation-wide for marine farming operations for a total of nearly 50,000ha. The increase in demand for marine farms is placing pressure on parts of New Zealand's coast and highlights conflicts between the aquaculture industry and other coastal users about the way resources on the coast should be managed in the future.

2.2 Greater Wellington

There has been very little demand for aquaculture on Greater Wellington's coast. At the present time there are three aquaculture operations in the Region. Resource consents have been granted for these. One of them is for a marine farm in Mahanga Bay in Wellington Harbour. It covers an area of 2.9 hectares. The other two consents are in the Wairarapa, one for an area of 0.16 hectares and the other for 4 hectares.

Our Regional Coastal Plan does not address aquaculture as a specific activity. Instead, it addresses associated activities like occupying the seabed, building structures, and disturbing the seabed, which are an integral part of marine farming.

3. Aquaculture management

3.1 Before the moritorium

At the present time aquaculture is managed by regional councils under the Resource Management Act 1991 (RMA) and by the Ministry of Fisheries under the Fisheries Act 1996. Greater Wellington is responsible for the occupation of coastal space, the erection of structures, disturbance of the seabed and any discharges to the coastal marine area. The Ministry of Fisheries is responsible for issuing marine farming permits.

In practice, resource consents are obtained from regional councils before the Minister of Fisheries considers the application for a marine farming permit. The adverse effects of activities on the coastal marine area are considered when resource consents are sought except for the impacts on fishers and fisheries resources, which are considered as part of the marine farming permit application.

This dual permit system creates difficulties for regional councils, the Ministry of Fisheries, communities, and the industry. The RMA process is an open, public process that is subject to appeals to the Environment Court. However, the Fisheries Act process does not provide for public input and are no rights of appeal other than a judicial review. Often community concerns revolves around the impacts of a marine farm on recreational, customary or commercial fishing. These issues are often raised at resource consent hearings, but regional councils cannot consider them as they are issues that are addressed by the Ministry of Fisheries as part of the marine farming permit.

3.2 The moratorium

The Resource Management (Aquaculture Moratorium) Amendment Bill 2002 was developed in response to the large number and scale of aquaculture applications being received by regional councils, and need to improve the way aquaculture is managed.

The moratorium imposed a ban on new aquaculture activities in the coastal marine area, including the receipt of new aquaculture applications, applications for extensions to existing farms, and consideration of existing applications for new coastal permits and extensions. Existing aquaculture operations and those for which a hearing had started were not affected. The moratorium applied retrospectively from 28 November 2001, and applications lodged prior to 28 November 2001, but for which a hearing had not yet started (as at that date) were also subject to the moratorium.

The moratorium gives central government time to prepare new legislation for aquaculture management. It also allows time for regional councils to prepare for implementation of the new legislation when it is passed. This discussion document is a part of our preparation for the new legislation – we would like to know where there is demand for aquaculture in the Region, and encourage discussion about where aquaculture should and should not be located.

3.2 After the moratorium

Central government is working on new legislation for the management of aquaculture. While the legislation has not yet been introduced to Parliament, it is likely to include:

- Streamlining the application process for new marine farms by providing a single-permit process. This will require changes to both the Resource Management Act 1991 and the Fisheries Act 1996 so that regional councils can consider all aspects of the application. Previously, a permit was also required from the Ministry of Fisheries under the Fisheries Act 1996.
- Providing regional councils with greater powers to manage and control the development of aquaculture by requiring marine farming to take place within clearly defined Aquaculture Management Areas (AMAs). These areas will be included in councils' regional coastal plans.
- Allowing regional councils to call for tenders for the right to apply for coastal permits, including tenders for individual marine farm sites within each AMA.
- Retaining the existing requirement that aquaculture should not have an undue adverse effect on customary, recreational and commercial fishing. This requirement will be removed from the Fisheries Act 1983 and instead the Ministry of Fisheries will have to participate in the coastal permit application process by providing regional councils with an assessment of any undue effects that aquaculture development may have on fishing. The legislation will also provide for negotiation between aquaculture interests and commercial fishing rights holders in circumstances where aquaculture development would have an undue adverse effect on commercial fishing rights.
- Moving all existing marine farming leases, licences, and permits into the new regime.

4. Aquaculture management areas

4.1 What are they?

Aquaculture management areas (AMAs) are areas that have been set aside for marine farming. Aquaculture will be prohibited outside AMAs. Different types of aquaculture have different requirements and some of them are incompatible with each other. Decisions about activities and types of marine farming that will be managed within AMAs will be made through the resource consent process.

Mussel farming is the most common type of aquaculture. Other types of marine farming include salmon in nets, oysters on racks in inter-tidal areas. There is little information on whether or not there are suitable areas for these in the Greater Wellington Region, or if anyone is considering such developments.

AMAs are established by including them in a regional coastal plan. In the Greater Wellington Region, this means that we will have to make changes to our Regional Coastal Plan once AMAs are identified. This is a formal process that requires publicly notifying the proposed changes, requesting and receiving submissions and further submissions and holding hearings. The changes can only be included in the operative Plan if there are no appeals to the Environment Court, or when any appeals have been resolved.

4.2 What is the status of aquaculture activities in an AMA?

Aquaculture activities within an AMA must be either controlled or discretionary activities in the Regional Coastal Plan. This means that a resource consent will be required. If aquaculture activities in an AMA are controlled, any application for a resource consent must be granted and conditions can be placed on the consent. A marine farmer would be sure that the resource consent would be granted. For discretionary activities in an AMA, there is less certainty that a resource consent will be granted because a resource consent application for a discretionary activity can be declined.

Deciding whether aquaculture activities in an AMA should be controlled or discretionary activities will depend on the information that is available on the fishery, the natural resources in the AMA and the effects of the type of aquaculture that is proposed.

4.3 Where can't AMAs be established?

AMAs cannot be established unless the adverse effects on the environment, fishing activities, and other uses of the coastal marine area can be avoided, remedied, or mitigated. If an AMA is positioned in such a way that it has undue adverse effects on customary or recreational fishing, the Ministry of Fisheries will have the power to decline the establishment of the AMA.

If an AMA is placed in a location where it has an undue adverse effect on commercial fishing then it cannot be used unless the marine farmer can reach an agreement with the affected fisher.

4.4 How will space be allocated within an AMA?

There must be a way of allocating that space, or deciding who has the right to carry out aquaculture activities within an AMA. The table below, identifies some possible options for allocating the space within an AMA.

Tendering	Applicants would tender for space within the AMA. A successful tender would give that person or company the right to apply for a resource consent for aquaculture activities in the area defined. Tendering can be effective when there is high demand for space. If there is low or no demand, then tendering may not be the best method for allocating space.
First-come, first served	The current method of resource allocation is first-come, first-served. This method tends to work well in areas where there is little demand for a resource. High demand for space in an AMA could lead to a ‘gold rush’ situation, with a number of applications being received for the same area.
Ballot	Balloting is a lottery in which a name is drawn at random from a list of interested parties.
Fitness of applicant	The ‘fitness of applicant’ approach requires judgements to be made about the technical and economic ability of the applicants to undertake the proposed activity. This method is only as good as the information supplied.
Allocation by share	Apportionment by share would be an attempt to fairly and equally divide up the available space amongst all the applicants. Issues arise when there are high numbers of applicants, and the space is decreased to a size where it is not useful. Equal space does not always mean equal quality or usefulness.

5. What are the potential effects of aquaculture activities on the environment?

The effect of aquaculture activities on the environment can be both positive and adverse. Current growth in the industry is occurring because of the potential economic benefits that are mentioned in section 2. However, there is also the potential for adverse effects, which must be considered when we are establishing AMAs.

The potential effects of aquaculture are listed below, and are explained further in Appendix 1 of this report.

- Loss of public access
- Loss of or reduction in visual amenity and natural character
- Requirements for land based facilities and infrastructure
- Damage to ecosystems
- Navigational safety concerns
- Impacts on fishing (commercial, recreational and customary).

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Appendix 1: Potential adverse effects of Aquaculture Management Areas

Facilities on Land

Most aquaculture operations require land based facilities that may include offices, processing and packaging facilities, coolstores, hatcheries, stock pools, laboratories, equipment storage areas, jetties and boat ramps. These facilities may also require power and water supply, waste disposal and roading infrastructure. The requirements for land based facilities and infrastructure should be taken into account during the establishment and development of AMAs to avoid conflict later on.

Public access

Marine farms do not necessarily exclude the public. They often have access ways through them that can be navigated. However, members of the public may avoid these areas because of navigation difficulties, safety concerns and the reduced aesthetics of the area. There is a degree of exclusion even if it is not complete exclusion.

Natural character and visual amenity

Natural character relates to the 'naturalness' of the environment. The degree of natural character ranges from a pristine environment to a completely developed one. All environments, even highly modified ones, will have some natural character. Natural character is subjective and many people will consider the same environment in different ways. Many of us value the natural character of wilderness areas that we have never seen.

Coastal environments also have visual amenity. People value area that are uncluttered by structures. Aquaculture changes the natural character and visual appearance of seascapes in ways that people can find undesirable. The marker buoys and linear nature of marine farm structures and layout will have a visual impact.

Ecosystems

Inshore aquaculture in shallow and sheltered waters can have adverse effects on ecosystems. These are identified below. In some cases the effects in the immediate area have been severe, although there is little sign of any off-site effects. Currently there are no large offshore aquaculture ventures operating on which to assess the nature of environmental effects.

Operational waste material and debris. Rope, buoy ties and anchors from marine farm operations can accumulate on the seabed underneath and the adjacent foreshore. Service barges and boats can have effects that include sewage discharges and bilge water discharges that can contain fuel and oil.

Plankton depletion. Mussels are filter-feeders - they eat the microscopic plankton that drifts past. Dense farms can consume the supply of plankton within the water column. It is thought that the concentration of plankton recovers very quickly beyond the aquaculture area.

Mussel wastes. They are deposited on the seabed and have a mud-like texture. If these are dropped on to a reef or stony bottom they can alter the composition of the seafloor and impact on the organisms living there.

Mussel shell debris. Some live mussels and shells are dislodged from the crop lines and settle on to the seafloor. In calm conditions these accumulate directly under the lines creating rows of miniature shell reefs. If a current flows through the farm the deposits are scattered over a larger area. It is expected that the deposition effects will be reduced in the large offshore farms as they are less dense and sea currents will be stronger.

Predator fish. Young mussels are preyed upon by many fish such as leatherjackets, snapper and kingfish. There is uncertainty as to whether this actually boosts the population of fish or merely lures them in from surrounding areas.

Cage or net fish farms (e.g. salmon). The effects of these operations are much greater than mussel farms. As caged fish require feeding, there is a substantial build-up of organic matter on the seabed. In extreme cases the anaerobic conditions destroy all organisms living under the farm.

Navigational Safety

Aquaculture activities and operations need to be well marked with marker buoys, radar reflectors and navigation lighting buoys. The Maritime Safety Authority has a legislative responsibility to assess and require the above safety measures. The maintenance and design of structures over the lifetime of the operations will need to ensure that the structures will not break away and become floating or sunken obstacles. The navigational lighting of structures also needs to be maintained and operational in order provide appropriate demarcation of the structures at night.

Fishing Activities

Commercial, recreational and customary fishing. AMA's must not have an "undue adverse effect" on fishing activities. The Ministry of Fisheries are currently developing the criteria for an "undue adverse effect". An undue adverse effect may include location of AMA over or close to fishing grounds.

Taiapure. A coastal area that has customary significance to iwi as a source of food or for spiritual or cultural reasons, Taiapure are established under the Fisheries Act 1996. Under that Act, a management committee is established to give advice and recommendations to the Minister of Fisheries about regulations to provide for management of the fisheries within Taiapure. The establishment of taiapure will have an effect on the establishment of AMA and vice versa.

Mataitai. An area of customary importance for food gathering that are managed by tangata whenua, Mataitai are established under the Customary Fisheries Regulations 1998. Tangata kaitiaki (guardians) are appointed by tangata whenua to manage the area, issue permits and to monitor.