

# Top of the South Island Marine Biosecurity Strategic Plan

Prepared for the Ministry of Agriculture and Forestry and on behalf of the Top of the South Marine Biosecurity Partnership by Peter Lawless

Contributors:



*Tasman District Council*



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# Top of the South Marine Biosecurity Strategic Plan 2009 to 2020

## Principles

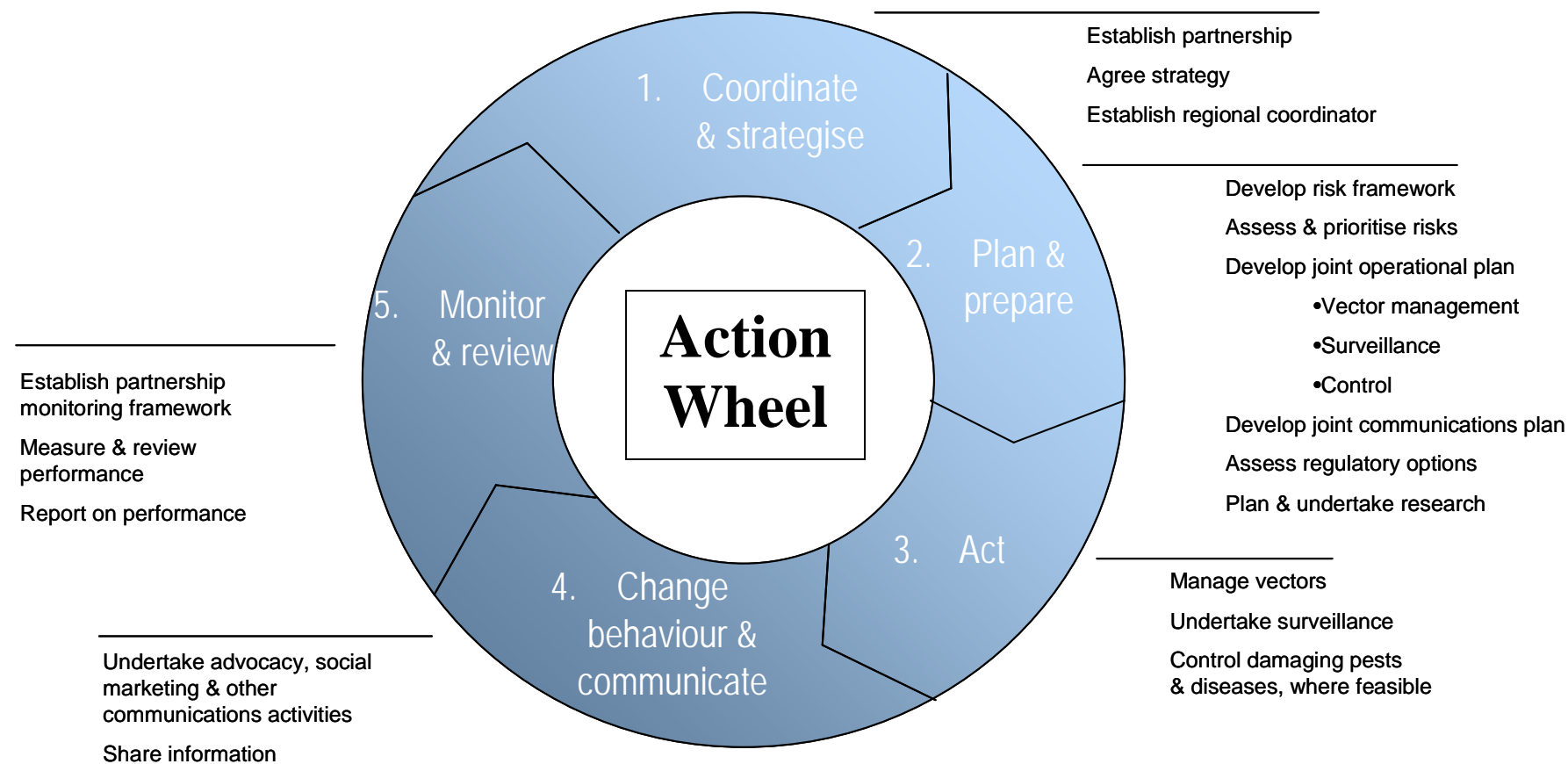
1. Acting constructively and promptly in the face of uncertainty.
2. Taking a cautionary approach in making decisions to allow for the limits to our understanding of environmental complexity.
3. Taking action by those best placed to act with the resources that are available.
4. Acknowledging the kaitiakitanga of tangata whenua iwi and Crown commitments under the Treaty of Waitangi relevant to this strategic plan in so far as these commitments are consistent with partner's obligations under their relevant legislation.
5. Rigorously assessing costs, benefits and risks, including social, economic, cultural and environmental effects to enable best use of limited resources.
6. Apportioning costs equitably taking into consideration legal obligations, roles and responsibilities, contribution to risk, and benefit received.
7. Encouraging community involvement, individual responsibility and full participation.

## Our vision for 2020

*A marine environment where the Top of the South Island is protected from damaging marine pests and diseases. The mauri of our marine environment has been sustained and enhanced. We have rich, healthy ecosystems where opportunities abound to sustain the needs of present and future generations. The whole community is cooperating to minimise new introductions and control the spread of damaging marine organisms. All parties have confidence in the marine biosecurity system in the Top of the South Island. Partnerships between agencies, industry and other stakeholders are effective in dealing with the issues. Demonstrated successes of the marine biosecurity system are celebrated by an informed community and the reputation of the top of the South for a clean and protected marine environment has been enhanced. Over-regulation has been avoided, while agencies have acted effectively and efficiently to preserve all valued social, cultural, economic and natural aspects of the marine environment.*

## The Top of the South Partnership

- Undertakes coordinated marine biosecurity education and advocacy activities.
- Works with central government agencies - MAFBNZ, DOC, MFish - to coordinate regional marine biosecurity activities.
- Provides integration of regional with national marine biosecurity systems.
- Provides partners with access to regional intelligence, resources and organisational structures.
- Provides operational resources for nationally-led activities (e.g. personnel, boats, etc).
- Coordinates local surveillance programmes including stakeholder involvement.
- Uses regional powers of regulation under the Resource Management Act, Biosecurity Act and Local Government Act to support regional marine biosecurity.
- Uses asset management authorities of partners as owners and managers of local ports, marinas and other areas of intense marine activity to enhance marine biosecurity.
- Provides funding according to legal responsibility, capacity to pay and agreed priorities.
- Uses such other powers and resources (e.g. Harbour Master roles) as appropriate to support regional marine biosecurity.



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The MFish Operations, Policy and Science groups all to a greater or lesser degree have an involvement in marine biosecurity issues:	27
<ul style="list-style-type: none"> <li>● The Science group (among other things) reviews pest and disease test reports submitted with applications requesting authorisation from MFish to transfer fish from hatcheries for release into the marine environment (excluding release onto marine farms); advises MFish operations on potential risks associated with applications requesting authorisation from MFish to transfer fish from hatcheries for release into the marine environment; and liaises with Biosecurity NZ and MFish personnel on various biosecurity issues that could affect the sustainability of the fisheries. <span style="float: right;">27</span></li> <li>● The Operations group participates in strategic biosecurity initiatives; and coordinates responses to BNZ on specific biosecurity risks, such as <i>Undaria</i> harvest applications and import risk assessments; and represents MFish at biosecurity consultative forums. <span style="float: right;">27</span></li> <li>● The Policy group is coordinating the project to revoke the Freshwater Fish Farming Regulations as required under the 2004 aquaculture legislation. MAF BNZ is participating in this review, which includes clarifying who is responsible for biosecurity relating to freshwater fish farms and developing new regulations under the Biosecurity Act to manage the risks associated with the farms to replace the provisions in the Freshwater Fish Farming Regulations. <span style="float: right;">27</span></li> </ul>	
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## *1. Purpose*

The purpose of this strategic plan is to prevent the introduction, and minimise the spread, of damaging marine species throughout the Top of the South region by coordinating action of all partners to the strategic plan.

## *2. About this strategic plan*

This is a regional strategic plan prepared within the framework of national biosecurity led by MAF Biosecurity NZ (MAFBNZ). This strategic plan has been initiated and developed by the members of the Top of the South Marine Biosecurity Partnership coordinated by MAFBNZ. It includes representation from Tasman District Council, Nelson City Council, Marlborough District Council, Ministry of Fisheries, Department of Conservation, the aquaculture industry, port companies, tangata whenua and other stakeholders.

This strategic plan provides guidance and principles for better coordination of marine biosecurity actions in the region. It identifies priority actions and provides a framework for determining who is best placed to undertake each of those actions.

While this strategic plan does not directly address border control, which is the responsibility of MAFBNZ, actions taken under the plan will make a significant contribution to preventing the introduction of new damaging organisms to New Zealand. The area of action for the plan is restricted to the Territorial Sea due to current limitations on legal powers of the partners. However, in practical terms actions beyond this area may have significant effects on the marine biosecurity of the Top of the South region.

The geographic area of interest for the strategic plan is that portion of the New Zealand coast administered by the Tasman, Nelson and Marlborough Councils. It includes all of the associated marine area below the limit of high spring tides within the Territorial Sea and contiguous areas that affect the biosecurity of this area of interest. The area spans from Kahurangi Point on the west coast to Willawa Point on the east coast (see figure 1 and Appendix 6). The strategic plan deals with management of all damaging marine organisms from viruses to plants and animals. This strategic plan takes into account management at and beyond the New Zealand national border but provides only for coordinated action within the Top of the South Island region.

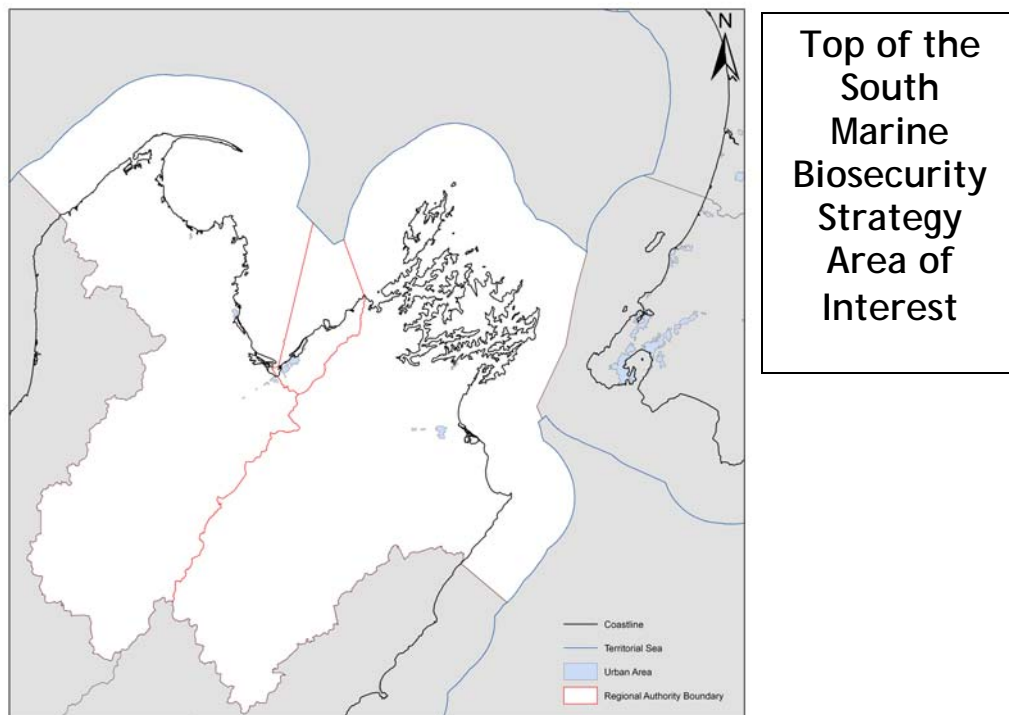
Appendix 1 to this strategic plan provides greater detail on context in which the strategy is formed. A review of technical information on marine biosecurity issues in the Top of the South region can be found in the NIWA report (Morrisey and Miller, 2008) commissioned as a stand-alone document for this project.

### *3. About the Top of the South region*

The top of the South Island, Te Tau Ihu o Te Waka a Maui, is a place of great environmental diversity and of immense cultural and economic value.

This marine area shares ecological characteristics of both northern and southern New Zealand. It spans the exposed West Coast, the sheltered waters of Golden and Tasman Bays and the Marlborough Sounds, and the narrows of Cook Strait to the open waters of the Pacific on the east coast. This area also has its own unique environments and species.

With two regional ports and some of the best recreational boating areas in New Zealand, the area experiences significant vessel traffic. It also has the largest concentration of marine farming in New Zealand and in Nelson has New Zealand's busiest commercial fishing port.



*Figure 1*

#### *4. Vision for 2020*

*A marine environment where the Top of the South Island is protected from damaging marine pests and diseases. The mauri of our marine environment has been sustained and enhanced. We have rich, healthy ecosystems where opportunities abound to sustain the needs of present and future generations. The whole community is cooperating to minimise new introductions and control the spread of damaging marine organisms. All parties have confidence in the marine biosecurity system in the Top of the South Island. Partnerships between agencies, industry and other stakeholders are effective in dealing with the issues. Demonstrated successes of the marine biosecurity system are celebrated by an informed community and the reputation of the top of the South for a clean and protected marine environment has been enhanced. Over-regulation has been avoided, while agencies have acted effectively and efficiently to preserve all valued social, cultural, economic and natural aspects of the marine environment.*

#### *5. How this strategic plan works*

This strategic plan works by recording the commitment of responsible organisations to agreed operating principles and aligned action to improve marine biosecurity in the top of the South Island. In signing up to the strategic plan organisations agree to participate in preparing detailed plans and undertaking actions to implement the vision of this strategic plan.

#### *6. Principles*

The seven principles for action by the parties to this strategic plan are:

1. Acting constructively and promptly in the face of uncertainty.
2. Taking a cautionary approach in making decisions to allow for the limits to our understanding of environmental complexity.
3. Taking action by those best placed to act with the resources that are available.
4. Acknowledging the kaitiakitanga of tangata whenua iwi and Crown commitments under the Treaty of Waitangi relevant to this strategic

plan in so far as these commitments are consistent with partner's obligations under their relevant legislation.

5. Rigorously assessing costs, benefits and risks, including social, economic, cultural and environmental effects to enable best use of limited resources.
6. Apportioning costs equitably taking into consideration legal obligations, roles and responsibilities, contribution to risk, and benefit received<sup>1</sup>.
7. Encouraging community involvement, individual responsibility and full participation.

### *7. The Top of the South Biosecurity Partnership*

The goals of the Partnership are to enable the integrated management of marine biosecurity through:

1. Clear leadership and role clarity.
2. Consistent and coordinated operations.
3. Efficient, effective and sustained action
4. Wide public support and community engagement.

The partnership relies on, but is not part of the national border control regime.

The brief of the Top of the South Partnership is to:

- Undertake coordinated marine biosecurity education and advocacy activities.
- Provide integration of regional with national marine biosecurity systems.
- Provide partners with access to regional intelligence, resources and organisational structures.
- Provide operational resources for nationally-led activities (e.g. personnel and boats).
- Coordinate local surveillance programmes including stakeholder involvement.

The relevant regional partners will:

- Use regional powers of regulation under the Resource Management Act, Biosecurity Act and Local Government Act to support regional marine biosecurity.
- Use role of partners as owners and managers of local ports, marinas and other areas of intense marine activity to enhance marine biosecurity.
- Provide funding according to legal responsibility, capacity to pay and agreed priorities.

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<sup>1</sup> See decision framework in Appendix 3.



- Use such other powers and resources (e.g. Harbour Master roles) as appropriate to support regional marine biosecurity.

## 8. Priority actions



**Action  
Wheel**


The regional partnership is committed to the following actions to implement this strategic plan. Wherever possible these aim to enhance and develop existing assets and programmes and strengthen existing institutions and systems rather than replace them. The following table lists possible timeframes for the key priority actions within the strategy. This is not intended as a static timeline of events. As indicated in the action wheel above the partnership process is a continuous cycle where partners evaluate and act adaptively according to current needs.

Goal 1 - Coordinate and strategise 		
Priority actions		Possible timing
1	Agree the strategy amongst partner organisations and agree to support the priority actions proposed.	December 2008
2	Collectively create an ongoing coordinating body <i>Top of the South Marine Biosecurity Partnership</i> that is open to any organisation that has signed up to this strategic plan. Engage lwi through a body mandated to act for lwi on marine biosecurity issues.	March 2009
3	Establish a regional marine biosecurity coordinator, whose responsibilities would include: <ul style="list-style-type: none"> <li>• Coordinating the partnership.</li> <li>• Developing and implementing advocacy programmes.</li> <li>• Developing and promoting surveillance programmes.</li> <li>• Developing standard procedures.</li> <li>• Engaging with marine users and other stakeholders.</li> </ul>	April 2009
Goal 2 - Plan and prepare 		
Priority actions		Possible timing
4	Develop a risk management framework to target high risk marine biosecurity pathways, vectors and species. This would include: <ul style="list-style-type: none"> <li>• Identifying priority sites for protection within the region, and site-specific vectors and pathways.</li> </ul>	2009 (subject to resource allocation by partners)

	<ul style="list-style-type: none"> <li>Developing a tool to quickly assess risks and manage events, including further developing and piloting systems to “manage” NZ internal traffic.</li> <li>Developing a process to enable rapid decisions on marine biosecurity actions where these are required.</li> </ul>	
5	Assess and prioritise risks and actions for the region.	
6	Develop joint operational plans for: <ul style="list-style-type: none"> <li>Vector management plans for recreational vessels (on moorings and in marinas), barges, marine farms, fishing vessels and merchant vessels (including oil rigs).</li> <li>Surveillance of vectors (organisms and vessels).</li> <li>Control of damaging organisms.</li> </ul>	
7	Develop joint communications and information management plan.	
8	Assess regulatory options.	
9	Plan and undertake research.	

**Goal 3 - Act** 

	Priority actions	Possible timing
10	Implement the operational plans.	Interim actions 2009 with full implementation of plans in 2010 (subject to resource allocation by partners).

**Goal 4 Change behaviour and communicate** 

	Priority actions	Possible timing
11	Implement the communications and information management plan.	Interim actions 2009 with full implementation of plans in 2010 (subject to resource allocation by partners).

**Goal 5 Monitor and review** 

	Priority actions	Possible timing
12	Establish a monitoring framework to include the following indicators: <ul style="list-style-type: none"> <li>Number of vectors with reduced risk profile regionally due to improved management regimes.</li> <li>Increase in knowledge of, and support for,</li> </ul>	Interim actions 2009 with full implementation of plans in 2010 (subject to resource)

	marine biosecurity in the community. <ul style="list-style-type: none"> <li>• Incorporation of effective marine biosecurity measures in industry and other stakeholder practices.</li> <li>• Area and number of species under effective surveillance.</li> <li>• Number of recently arrived damaging organisms as an indicator.</li> <li>• Number of groups and organisations involved in the strategy.</li> <li>• Number of response plans prepared.</li> </ul>	allocation by partners).
13	Measure and review the progress of this strategic plan every year in September.	
14	Report on performance.	

## 9. Roles and Participation in Marine Biosecurity

New Zealand's pest management system is well advanced compared to many overseas countries. This is illustrated by case studies from the United States and Australia in a recent report by the Law and Economics Consulting Group. However, a key issue highlighted in this same report is that overall roles and responsibilities in the pest management system are not clear. The lack of clarity around roles and responsibilities is an issue across the entire pest management sector, not just within marine biosecurity.

### MAF Biosecurity's "Future of pest management" work programme












MAF Biosecurity is leading a consultation process, involving other central government agencies, iwi, Regional Councils and other pest management stakeholders, to discuss issues and solutions in the pest management sector. These discussions, the LECG report referred to above, and a separately produced Regional Council review (Hellstrom *et al* 2008) will all help to inform development of a national strategy to guide pest management activity in New Zealand.

The LECG and Regional Council reports consider issues with the current system and options for improvement. They call for more clarification of roles and responsibilities, and suggest prescribing these in legislation. Both reports can be accessed through the MAF Biosecurity New Zealand website at <http://www.biosecurity.govt.nz/pests/surv-mgmt/mgmt>.

### Where can partners participate in the biosecurity system?

The following diagram provides an overview of activities in the biosecurity system and the interaction between MAF Biosecurity, regional partners and individual stakeholders across six marine biosecurity management scenarios. It is not

intended to represent the policies of MAFBNZ or any other agency, and does not reflect every situation or scenario.

	Border control	New to NZ incursion		Domestic pathway or established pest		
		Significant public benefit nationally in acting & requires MAFBNZ lead	Significant benefit to a region or sector	Pest or pathway is national priority	Pest or pathway is regional priority	Incentive to act for some
<b>MAF Biosecurity</b> 						
<b>Regional partners</b> 						
<b>Individual stakeholders</b> 						
<b>Supporting documents / tools</b>	MAFBNZ Border standards	MAFBNZ Response model & decisions framework	MAFBNZ Response model & decisions framework or own framework	National Pest Management Strategy MAFBNZ decisions framework	Regional Pest Management Strategy Cost-benefit analysis	



This symbol represents the cycle of decision-making, action and review, within any particular scenario. The positioning of the symbols indicates where effort is likely to be focused, for example border control is a MAFBNZ activity whereas management of a national priority pest includes effort from both MAFBNZ and regional partners.

Regional partners may include other central government agencies, regional councils, iwi and industry.

The term “established pests” is used here to describe any pest which is already found in New Zealand, i.e. not new to New Zealand.

Examples of supporting documents and decision-making tools are shown. The diagram does not include industry guidelines, hygiene protocols or communications material which are used across the system.

Regional partners and individual stakeholders are expected to support the system by reporting and notifying biosecurity risks or new finds. Partners are also expected to assist in dissemination of information and local education.

MAF Biosecurity will undertake a response where it determines the response will have significant public benefit. In some cases it may be more appropriate for

another agency or for industry to lead. In some cases BNZ may decide not to act, and instead industry or other agencies lead and act themselves.

MAFBNZ will lead where the organism is subject to a national pest programme otherwise other partners may choose to lead (see Appendix 4 on national pest programmes).

## *10. Next steps*

This draft strategic plan will be formally considered by decision makers in the partner organisations for ratification. The partnership will be open to stakeholders prepared to sign up as active supporters of the strategic plan's implementation.

## *11. List of possible strategic plan partners*

MAF Biosecurity NZ  
Marlborough District Council  
Nelson City Council  
Tasman District Council  
Ngati Tama  
Ngati Koata  
Te Atiawa  
Ngati Rarua  
Ngati Apa  
Rangitane  
Ngati Kuia  
Ngati Toa Rangatira  
Ngai Tahu  
Marine Farming Association Inc  
Department of Conservation  
Ministry of Fisheries  
Port Nelson Limited  
Port Marlborough Limited  
Cawthron  
NIWA

## *12. Glossary*

Biosecurity is not defined in legislation, but the NZ Biosecurity Strategy defines it as the exclusion, eradication or effective management of the risks posed by pests and diseases to the economy, the environment and human health.

Central government refers to the legislature, executive and public service on the New Zealand national government.

Coastal marine environment is defined in the Resource Management Act 1991 as the foreshore, sea bed, and coastal water, and the air above the water:

(a) of which the seaward boundary is the outer limits of the territorial sea

- (b) of which the landward boundary is the line of mean high-water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of -
- (i) one kilometre upstream from the mouth of the river; or
  - (ii) the point upstream that is calculated by multiplying the width of the river mouth by 5.

CIMS is a set of management rules that is common to all emergency service providers. Basic principles in CIMS include:

- Common terminology
- Modular organisation
- Integrated communications
- Consolidated Incident Action Plans
- Designated incident facilities.

*Didemnum vexillum* is a leathery or spongy textured, light mustard coloured sea squirt which often presents like a yellowish wax dripping over a structure such as a rope or mussel line.

DOC is the Department of Conservation, the government agency charged with protecting and preserving native species, managing wild animals, and administering public conservation lands.

Ecosystem is a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

EEZ is the Exclusive Economic Zone of New Zealand. It lies between 12 and 200 nautical miles from the coast. (see also Territorial Sea).

Environment as defined in the Resource Management Act 1991 includes—(a) Ecosystems and their constituent parts, including people and communities; and  
(b) All natural and physical resources; and  
(c) Amenity values; and  
(d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.

Exotic species are those that have evolved elsewhere and been brought by people to this place or by natural spread from another location.

Iwi form the largest everyday social units in Maori populations and in the context of this strategic plan refer to the tangata whenua of Te Tau Ihu: Ngati Tama, Ngati Rarua, Te Atiawa, Ngati Toa Rangatira, Ngati Koata, Ngati Kuia, Rangitane and Ngati Apa.

Kaitiakitanga is an inherited responsibility of tangata whenua to look after the mauri (life force) of nga taonga tuku iho. It includes protecting biodiversity and the maintenance of resources for present and future generations.

Local government in New Zealand comprises regional, district and city councils but in the area of this strategic plan all three councils are unitary authorities with all the functions of both regional and territorial local authorities that apply within the limits of the Territorial Sea.

MAFBNZ is Biosecurity New Zealand a business group of the Ministry of Agriculture and Forestry responsible for leading a fully integrated, transparent and efficient biosecurity system for the country.

Mauri is the life force of places and natural things.

MFish is the Ministry of Fisheries, the government agency responsible for all aspects of fisheries management.

National Pest Management Strategy is a legally binding plan established at a national level for managing a pest and identifies (among other things) the powers to be used and how the strategy will be funded.

Nga taonga tuku iho are the treasured resources (particularly natural) of this area.

Regional Pest Management Strategy is a legally binding plan established at a regional level by a regional council for managing pests.

Residual Risk is the risk that remains after specified risk reduction management actions have been taken.

Stakeholder is a person or group with an interest in the issue under consideration.

Surveillance in biosecurity is the process of systematically collecting and analysing information about the presence (and distribution) or absence of pests and diseases. In plain language, biosecurity surveillance means looking for pests, diseases, animals, plants and other living things (which either don't belong in New Zealand or can cause problems for animals, plants or the environment) - to find out whether they're already here - if they are, where exactly they are - and if they're not, to pick them up early should they arrive.

Territorial Sea of New Zealand is the area of sea within 12 nautical miles of the baseline, where the baseline is mean low-water mark except where it takes a straight line across the mouth of bays less than 24 nautical miles across.

Te Tau Ihu Te Tau Ihu o te Waka a Maui, literally the prow of Maui's canoe.

Vector in biosecurity management refers to things that can transport damaging organisms into and within our environment.

Vision is an image of the ideal future we would like to reach.

Wairua means spirit.

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### 14. *Acknowledgements*

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## *Appendix 1*

### *Issues and Opportunities*

To establish a basis for effective action over the next ten years, current strengths, weaknesses, opportunities and threats in regional marine biosecurity were reviewed.

#### *Strengths*

The partners have recognised the following regional strengths in 2008 that can contribute to realising the vision of this strategic plan in the top of the South Island:

1. Overall there is a strong base of community and organisational support for effective biosecurity action in the region. Local people interact strongly with the sea and recognise the marine environment as important. There is national recognition of the importance of the regional marine environment and its unique features. Iwi are becoming more formally organised and active in the protection of their treasured resources in the seas of Te Tau Ihu o Te Waka a Maui. The marine farming and fishing industries have a limited number of players to work with in key sectors for marine biosecurity.
2. Local agencies and industries are willing and motivated to act and have a good knowledge of the marine environment of the region. They have a history of partnering in biosecurity action built up through the *Didemnum vexillum* Working Group. There is an effective operational presence on the water and collective skills in action under the Coordinated Incident Management System (CIMS). This is matched by a track record in communal funding of biosecurity responses and the availability of marine farming vessels and divers for field work. Local industry has developed voluntary codes of practice in the marine farming sector to encourage behaviours which reduce the risks posed by marine pests.
3. There is a developing knowledge base for marine biosecurity action in the region. There is marine science capacity available locally at NIWA, Cawthron, DOC, and MFish. There is growing marine biosecurity expertise both nationally in MAFBNZ and regionally amongst agencies and industry. There is a local history of marine biosecurity tool development, e.g. pile wrapping for control of *Didemnum vexillum*. MAFBNZ and partners have raised awareness and encouraged boat-cleaning in the region via marine biosecurity communications programmes.

## *Weaknesses*

The partners have recognised the following regional weaknesses in 2008 that need to be corrected for effective marine biosecurity action in the top of the South Island:

1. A lack of awareness in both the recreational and commercial sectors about the consequences of hull fouling and a lack of bio-secure de-fouling facilities that reduces people's motivation to act responsibly. This is compounded by informal structure of the recreational fishing sector that makes it hard for agencies to communicate effectively with recreational users.
2. Uncertainty about future funding due to: a regionally small rating base, recognised national and local funding limitations (including the use of local bodies revenue sourced from land-based rates), and a history where there was no immediate funding to deal with past incursions.
3. The large geographical area involved, including more than a fifth of the NZ coastline and the largest areas of sheltered water in the country. The consequent ecological diversity creates problems as the range of habitats increases the risk of exposure to new organisms. The region has a number of large high value sites including the Abel Tasman National Park coast, the Marlborough Sounds, Farewell Spit, four marine reserves and nationally important geo-preservation features. The large area of sheltered water creates an "accessible remoteness" where vessels can enter the area in poorly controlled conditions and be present for some time before authorities are aware of their presence and action
4. Present organisational responsibilities hamper effective marine biosecurity responses in the region. There is no formal structure involving MAFBNZ, local authorities, industry and the community, and the roles and responsibilities in the marine environment lack clarity. There are several iwi authorities to deal with and these have overlapping areas of authority.
5. Regional agencies lack confidence in national border security and this undermines motivation to act locally. There is divided jurisdiction between the Territorial Sea and the Exclusive Economic Zone with the latter lacking effective national legal control for management of biosecurity. There are technical and legal difficulties in controlling national and international vectors and a lack of effective international biosecurity agreements in relation to ship management.
6. The lack of enforceable rules, and delays in creating new ones, hinders regional ability to engage effectively in marine biosecurity vector control. There is little regulation or licensing of recreational marine users and no legislation/rules regarding hull cleaning. The Resource Management Act and Regional and National Pest Management Strategy planning processes in the Biosecurity Act are too slow to deal with emerging biosecurity issues. There is limited monitoring of permitted baseline conditions under the Resource Management Act and difficulty in achieving pest status regionally

without active MAFBNZ support. Experience in the top of the South region has shown that biosecurity operational models derived from terrestrial models don't work in the marine environment.

7. Limitations in knowledge hinder effective marine biosecurity responses due to: limited taxonomy capacity to identify damaging organisms, limited tools to deal with incursions, and a lack of knowledge of existing species and likely pest species.

## *Opportunities*

The partners have recognised the following regional opportunities in 2008 that need to be taken up to realise the vision of this strategic plan in the top of the South Island:

1. Actively fostering more effective local organisation by:
  - Supporting Iwi to become better resourced.
  - Taking advantage of the rapidly developing aquaculture industry - (especially Golden and Tasman bays) by building on the increasing awareness of risks (primarily to aquaculture) while utilising the additional eyes on the water and the increasing expertise in national bodies (e.g. Aquaculture NZ), and stakeholder groups and organisations.
  - Supporting an enhanced local skill base for development of control tools (e.g. Cawthron, NZ Dive Services, NIWA).
2. Developing more effective use of regulation and voluntary codes of practice. This might include: marine bylaws to control hull fouling, conditions within occupancy agreements in marinas to require hull cleaning, use of Resource Management Act policies and plans - coastal permits (structures, moorings, aquaculture), creating simplified process to establish legal pest status, extending and enforcing industry Codes of Practice and early and active implementation of international agreements on hull fouling and ballast water.
3. Becoming more effective in surveillance, and control of established pests. This might build on use of CIMS methodology, actively increasing our knowledge of vectors and organisms, extending surveillance, early identification of possible pests and threats that exist elsewhere and using decision making and detection tools already developed.
4. Proposed changes in the NZCPS - although these are subject to an ongoing process. The two key policies are Policy 9 (Biosecurity) and policy 24 (coastal occupation charging). The latter may provide opportunities for improved funding of council's marine activities.

## *Threats*

The partners have recognised the following regional threats in 2008 that need to be countered to realise the vision of this strategic plan in the top of the South Island:

1. Increasing presence of vectors due to the rapidly developing marine farming industry and lots of other vessel movement - fishing, coastal, recreational, international including oil rigs. Added to this there is a history of old vessels and structures being brought into the region and being abandoned.
2. At present there is a lack of funding for local authorities to undertake marine biosecurity activities and there is no established mechanism for partners to provide long term funding for regional partnership activities. Changes to the level of economic activity at a national and regional level may affect the level of risk and behaviours, for example reduced economic activity may result in less regular cleaning of vessels, structures and equipment. Conversely increased economic activity may result in increased activity into and within the region and therefore increased risk of pest introduction or spread.
3. In the period before agencies agree to something like this strategic plan, there is no effective regional structure to react to any new incursion.
4. Environmental instability including climate change with warmer water could increase the biosecurity risk profile for the region.

## *Appendix 2*

### *Context*

#### *Marine environment*

Straddling the Top of the South Island and including western Cook Strait, the Marlborough, Nelson and Tasman regions have a diverse array of marine ecosystems. Broad interacting environmental gradients traverse the wider Top-of-the-South region, notably: wave exposure (inner bays and sounds to outer exposed coasts), depth, sea temperature (generally increasing from east to west), tidal influence (currents, tidal height and water exchange), turbidity, sedimentation and salinity. These, along with variable geology and substrates, combine to create a highly variable marine environment.

Key highlights within the wider top-of-the-south region include:

- Very exposed coasts flanking the western and eastern sides of the upper South Island, with rocky reefs and mobile sand and/or gravel.
- The semi-sheltered and sediment-dominated expanses of Tasman and Golden Bays.
- Tidal flats and numerous estuaries including: Waimea Inlet and Whanganui Inlet (the two largest estuaries in the South Island); Vernon Lagoons; Kaituna/Pelorus Estuary; and Farewell Spit (a RAMSAR site of international significance for wading birds).
- Sheltered granite shores of the Abel Tasman National Park.
- Separation Point “coral beds”.
- Nelson Boulder Bank habitats.
- The convoluted network of waterways of the Marlborough Sounds, ranging from the sheltered inner Sounds to the more exposed outer reaches; including numerous bays, channels, headlands, high and low current areas, and various islands and offshore rocks and stacks.
- The comparatively deep and strongly tidally influenced waters of Cook Strait.
- Four marine reserves (Westhaven, Tonga Island, Horoirangi and Long Island - Kokomohua).
- One taiapure.

#### *Ports, marinas and shipping*

There are two major ports at Nelson and Picton, minor ports at Tarakohe, Motueka and Havelock and many, many small wharfs and jetties in the top of the south, particularly in the sheltered waters of the Marlborough Sounds. The ports at Nelson and Picton are operated by port companies owned by the local councils.

There are large marinas at Nelson and at Waikawa Bay and smaller marinas at Port Tarakohe, Motueka, and Havelock together with many swing moorings in sheltered areas. There are plans for extending facilities at many of the ports and marinas.

## *Marine Farming*

There are two predominant marine farming areas in the top of the South. By far the largest area is the Marlborough Sounds which produces around 75% of New Zealand's aquaculture products. The industry in the Sounds comprises some 565 marine farms (around 478 of which are mussel farms). The area occupied by marine farms is approximately 2,800ha (total Sounds area 150,000ha). The principal species farmed are green lipped mussels and king salmon. Other species include scallops, pacific oysters and paua. Some algae farming also takes place along with a small harvest of seaweed to feed farmed paua.

In Golden Bay, long line mussel farming is the only permitted aquaculture activity. At present some 80ha are occupied by mussel farms and for seasonal scallop and mussel spat catching. It is anticipated that the area of marine farming in Golden Bay and Tasman Bay will grow steadily over the coming decade.

Export sales resulting from marine farming efforts in the Top of the South exceed \$230m with a further \$50m of national sales. Marine farmers are aware that, in most cases, their farming structures make for ideal settlement structures for damaging marine organisms and the industry has been keen to see the development of a coherent biosecurity strategy for the region.

## *High-value areas*

High value areas are defined on ecological, commercial or cultural criteria, or a mixture of all three. Obvious areas of conservation or ecological value in the region include the Westhaven (Te Tai Tapu) Marine Reserve and Westhaven (Whanganui Inlet) Wildlife Management Reserve in Whanganui Inlet, Tonga Island Marine Reserve, Horoirangi Marine Reserve, Long Island - Kokomohua Marine Reserve and other features such as the Separation Point bryozoan beds. Areas of commercial value include fishing grounds in Golden and Tasman Bays and the Marlborough Sounds, the marine farming areas in Golden and Tasman Bays, the Marlborough Sounds and Port Underwood, areas of recreational and tourism importance, and shipping channels and facilities.

Definition of high value areas can serve as a focus for characterising human-mediated pathways for the spread of non-indigenous species, helping to make definition of such pathways more manageable at a regional or larger scale. It also allows priorities to be identified for the allocation of resources in identifying and managing pathways. In this respect, identification of high value areas is complementary to programmes for the management of incursions of introduced species.

At present, however, there is no formal list of high value areas based on conservation/ecological or other criteria for New Zealand nor is there any agreement on what areas should be included (informal lists have been developed for some regions in relation, for example, to the development of regional coastal plans).

## *High-risk areas*

High risk areas within ports and marinas include berths for the introduction and spread on non-indigenous species include high-volume commercial ports and marinas that are first-entry points for international vessels and domestic shipping hubs. In the top of the South Island these include the ports of Tarakohe, Motueka, Nelson, Havelock and Picton, the marinas at Tarakohe, Motueka, Nelson, Havelock, Picton and Waikawa, and the mussel-farming facility at Elaine Bay. In 2005, a proposal was put forward for a coal-transfer facility in Golden Bay. This would consist of a moored structure carrying equipment for transferring coal brought up by barge from the west coast of the South Island on to international bulk carriers. A preliminary assessment of potential environmental effects from this operation identified the risk from introduced marine species carried in ballast water or as hull fouling to marine farms in Golden Bay and to local natural habitats. At the time of writing, the proposal appears to be on hold. Golden Bay and Tasman have also provided shelter for international vessels including oil rigs and servicing vessels for short periods of time. Tasman Bay was recently used (inappropriately) for removal of biofouling organisms from an oil rig before being moved to Australia.

Within ports and marinas, high-risk areas include berths, slipways and areas where hull cleaning occurs. Organisms attached to the hull may be dislodged during berthing or slipping, or may discharge larvae while the vessel is berthed (perhaps in response to changes in light regime, salinity or temperature) or thrown overboard. Areas where hull cleaning occurs pose an obvious risk of release of non-indigenous organisms but may be managed to minimise release of material (both biological material and dislodged antifouling paint) to the environment. For example, boats taken out of the water on the travel-hoist at Dickson Marine Ltd in Nelson Marina are cleaned over an area draining to a holding tank.

## *High-risk species*

Non-indigenous marine species can have a range of adverse impacts through interactions with native organisms. These include competition with native species, predator-prey interactions, hybridisation, parasitism or toxicity and modification of the physical environment. Assessing the impact of a non-indigenous species in a given location ideally requires information on a range of factors, including the mechanism of their impact and their local abundance and distribution. To predict or quantify their impacts over larger areas or longer time scales requires additional information on the species' seasonality, population size and mechanisms of dispersal.

A number of non-indigenous species with known adverse ecological and/or economic effects already occur in the coastal marine area of the top of the South Island. These include the saltmarsh cordgrass *Spartina anglica* the Pacific oyster *Crassostrea gigas* (both of which were deliberately introduced), the kelp *Undaria pinnatifida*, and the

ascidians *Didemnum vexillum* and *Styela clava* (at present the adverse effects of *S. clava* on marine farms are inferred from their effects in Canada<sup>2</sup>).

The Ministry of Fisheries identified six additional species not yet present in New Zealand but considered to be of relatively high risk of introduction and adverse effects on New Zealand core values (responsibility for their management was transferred to the Ministry of Agriculture and Forestry Biosecurity New Zealand (MAF BNZ) in 2004). These species (the seastar *Asterias amurensis*, the macro alga *Caulerpa taxifolia*, the crabs *Carcinus maenas* and *Eriocheir sinensis*, the bivalve *Potamocorbula amurensis* and the polychaete worm *Sabella spallanzanii*) were declared “Notifiable Organisms” under the Biosecurity Act Notifiable Organisms Order 2002 and, together with *Undaria* and *Styela*, were declared “Unwanted Organisms” under the Biosecurity Act 1993 in 2000. Each of the unwanted species has a prior history of invasion outside New Zealand, is known to have significant impacts on native ecosystems or economic values in the regions it has invaded, and is capable of surviving in New Zealand coastal waters.

### Relevant Legislation

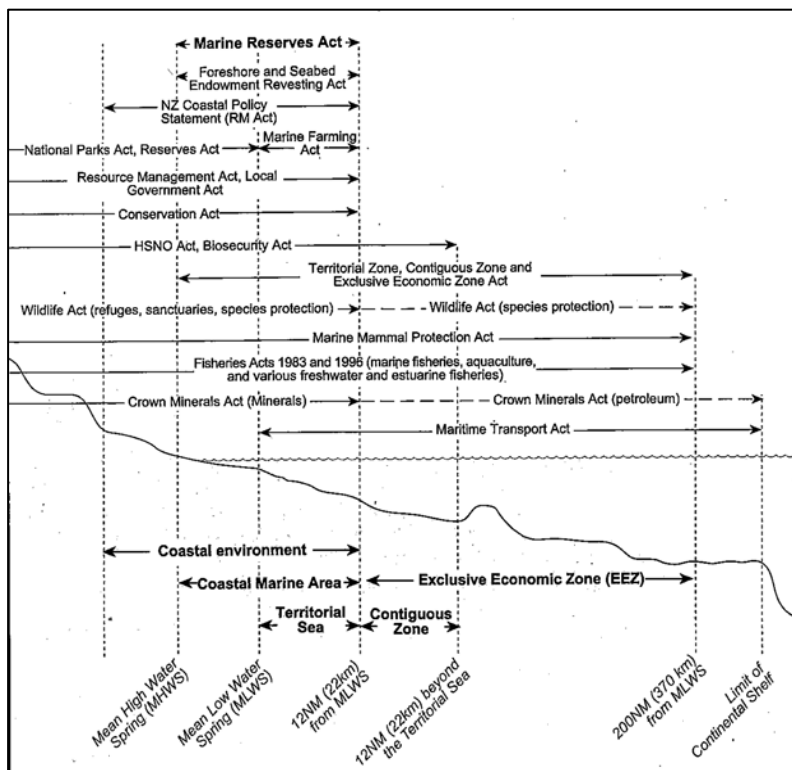


Figure 3: The jurisdiction of various marine management Acts. From a Department of Conservation publication *Tapui Taimoana: Reviewing the Marine Reserves Act 1971*. Note that the *Foreshore and Seabed Endowment Revesting Act* is now the *Foreshore and Seabed Act 2004*.

<sup>2</sup> See <http://www.biosecurity.govt.nz/files/pests/seasquirt/styela-clava-oia.pdf>

## *Organisational Context*

### *Councils' Roles in Marine Biosecurity*

Local Government is a creature of statute. Its very existence and the activities it engages in are defined by a raft of legislation. Environmental policy alone is covered by more than 26 individual pieces of legislation.

With regard to marine biosecurity principal amongst these Acts are:-

- The Local Government Act 1974 and 2002
- The Resource Management Act 1991
- The Biosecurity Act 1993
- The Health Act 1956.

The Local Government Act 1974 and 2002 provides for local authorities to undertake a wide range of functions for the good of their constituents. For example, activities undertaken by Councils with particular relevance to marine biosecurity include:-

- Operation of marinas that provides pontoon and pile moorings for pleasure boats and small commercial vessels
- Provision of boat launching ramps
- Employment of harbour masters to oversee navigation and safety (Section 650B 1974).

The Resource Management Act 1991 provides for local authorities to manage the adverse effects of activities through preparation of Policy Statements and plans including rules and consents. Activities undertaken by Councils with particular relevance to marine biosecurity include:-

- Preparation of Regional Coastal Plans to control adverse effects in the coastal marine area.
- Consenting to activities and structures in the CMA including private moorings and aquaculture structures.
- Control of discharges from land and vessels (under Marine Pollution Regulations 1998).
- Monitoring of the state of the environment including water quality, sediment movement and contamination, distribution of indigenous and exotic biota, and the effects of fishing.
- Working with other agencies, for example Port Nelson Limited to promote sustainable management of the coastal marine area, for example through the Port Nelson Environment Committee.

The Biosecurity Act 1993 provides for Regional Councils to declare and manage animal and plant pest species. Activities undertaken by Councils with particular relevance to marine biosecurity include:-

- Preparation of Regional Pest Management Strategies (RPMS) which currently include the exotic kelp *Undaria pinnatifida* as a surveillance species.
- Response to biosecurity breaches including surveillance and clearance work for *Undaria* and *Didemnum vexillum*.
- Promotion of a Marine Biosecurity strategic plan for the Top of the South.

The Health Act 1956 requires local authorities to manage health risks to the community. Activities undertaken by Councils with particular relevance to marine biosecurity include:-

- Monitoring of water quality for contact recreation purposes and for shellfish gathering purposes.
- Notification of accidental discharges from sewer lines and the like.

Regional councils have experience and expertise in terrestrial biosecurity and are generally well-supported in this work by councillors and ratepayers. However, regional councils have little or no expertise in marine biosecurity and apart from Cook Strait there are few barriers to the spread of marine organisms. Rates derived from land are not considered to be the appropriate method for funding marine biosecurity.

Central government has the primary responsibility for management of new incursions, and for the management of pests where significant public benefit is identified. Regional government has been involved in ongoing discussions with central government over the long-term management of existing marine pests, such as *Undaria*, *Styela* and *Didemnum*.

Legislative responsibilities for the councils have not been well defined; the Resource Management Act outlines some general principles, but it is unclear what it means, particularly in regard to the Biosecurity Act.

The regional councils (Vaughan, 2004) have identified the following requirements for their effective participation in marine biosecurity:

- Clarification of legal responsibilities
- Adequate resourcing
- Access to marine biosecurity expertise
- Access to key staff members in central government agencies
- A strong commitment to cooperation from central government agencies
- A mandate from ratepayers.

### *MAFBNZ role in Marine Biosecurity*

MAF Biosecurity New Zealand (MAFBNZ) is a business group of the Ministry of Agriculture and Forestry. It has responsibility for leading a fully integrated, transparent and efficient biosecurity system, including implementing Tiakina Aotearoa, the Biosecurity Strategy for New Zealand.

### Marine Pest Management

Roles and responsibilities between the different government agencies, industry and other groups regarding the management of marine pests are not yet clear. The Chief Executives of government's biosecurity agencies (the Biosecurity Central Regional Government Forum) have considered this gap, and agreed to take a pragmatic route - in the medium term at least - through a partnership approach to building marine pest management capability.

MAFBNZ has developed a partnership framework to build New Zealand's marine pest capability. See Figure 2. MAFBNZ coordinates the national and regional partnerships.

A partnership brings together those who are prepared to pragmatically pool resources to take some small steps that grow capability and demonstrate marine biosecurity in practice through pilot or demonstration projects. This requires setting aside discussion over roles, responsibilities and funding. Instead, for each initiative, partners agree what each will contribute.

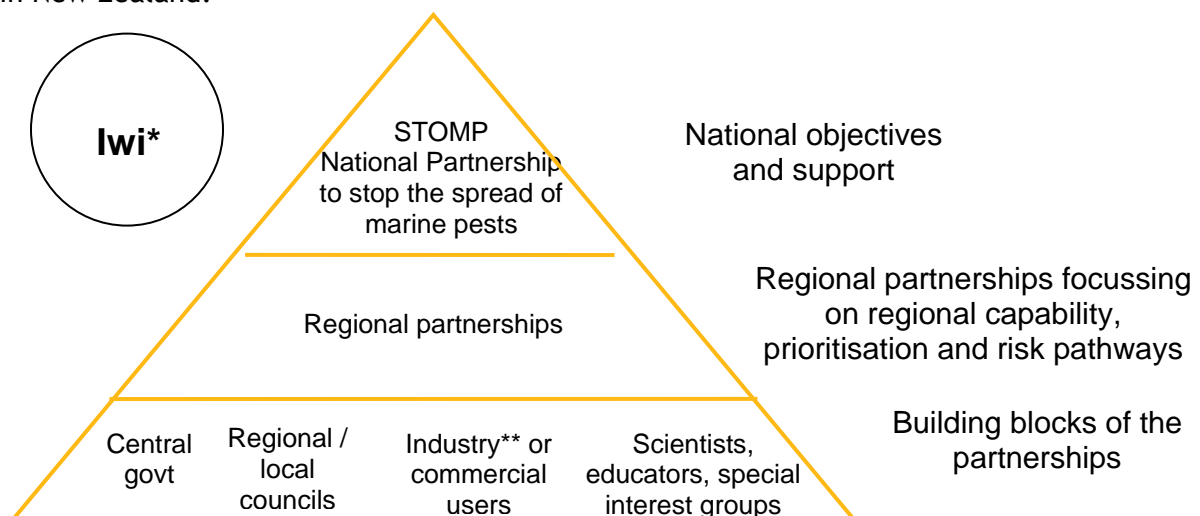
MAFBNZ's role in these partnerships is to coordinate and to provide marine biosecurity expertise in:

- risk assessment methodologies
- surveillance methodologies
- control tools and techniques
- advocacy strategies and materials.

MAFBNZ has taken a strategic approach to its funding of marine pest management activities. Funding for marine pests is directed towards initiatives which build local marine capability, raise awareness of marine pests and help control the vectors which spread marine pests. MAFBNZ does not currently (as at October 2008) fund control of particular marine pest species, instead the strategic and more cost-effective approach is to tackle the vectors which spread marine pests.

MAFBNZ will consider contributing funding towards management of individual pest species if it can be shown that such a control programme is feasible, is supported by those impacted and that the benefits to New Zealand outweigh the costs.

Figure 2. The diagram below presents a framework for marine biosecurity partnerships in New Zealand.



\* Iwi are recognised as Crown partners in addition to their membership

\*\* Industry includes aquaculture companies, tourism operators, marina operators and port companies.

MAFBNZ also has a role in raising awareness of marine pests nationally, and encouraging behaviour change to reduce the risk of marine pest spread. The current campaign focuses on a group which is a high-risk for the domestic spread of marine pests: recreational boaties. The campaign encourages cleaning behaviour through it's "Clean and anti-foul" messages.

### Marine Responses (beyond the scope of this strategic plan but included for information)

MAFBNZ leads or co-ordinates responses to organisms where there is significant public benefit in doing so. MAFBNZ's responsibilities in the event of new incursions to New Zealand are defined in the Policy for MAF's Responses to Risk Organisms.

As of September 2008 the following marine biosecurity responses have been led by central government:

- the sea squirt *Styela clava*
- *Perna perna* (the Ocean Patriot oil rig defouling incident)
- *Sabella spallenzanii* (Mediterranean fanworm)
- *Undaria pinnatifida* - undertaken by the Ministry of Fisheries prior to the formation of MAF Biosecurity in 2003.

MAFBNZ also provided support to the industry-led control programme for the sea squirt *Didemnum vexillum* during the period 2006-2008.

### *Iwi Role in Marine Biosecurity*

The iwi with interests in the area covered by the strategic plan are:

- Ngati Tama
- Ngati Koata
- Te Atiawa
- Ngati Kuia
- Ngati Apa
- Ngati Rarua
- Rangitane
- Ngai Tahu
- Ngati Toa Rangatira

Iwi have two separate but distinct roles in the strategy. The first role relates to their desire to exercise their customary rights over the strategy area through fulfilling their kaitiakitanga responsibilities. This role brings with it particular knowledge and experience about many aspects of the sustainable use of marine resources within the area.

The second role is in respect of their interests in marine farming, aquaculture, fishing and other marine industries in the strategy area. In this respect the iwi interests and that of other marine farmers are very closely aligned with the exception that iwi

interests tend to have a wider constituency in that their operations are tribally owned and operate for the benefit of many.

In combination, both these roles give iwi a unique perspective on marine resources in the strategy area as well as a practical working knowledge of the local marine environment.

It needs to be strongly emphasised however that the iwi position is that the presence of marine pests is a direct result of commercial activities and therefore efforts to combat marine pests should be funded from the commercial sector. Furthermore, because of involvement of local and central government, the iwi see those authorities having significant roles to play in terms of resourcing the strategy.

The iwi customary role needs to be kept entirely separate but without losing sight of the fact that iwi nevertheless will have an interest in any measures or programmes aimed at marine pests that impact on customary fisheries, as well as commercial fisheries.

Not surprisingly, iwi see their role as being advisory in nature making membership of any working parties or groups established to oversee the planning and implementation of the marine biodiversity strategy mandatory.

Iwi are also keen on the use of legislation to bring some certainty to how biosecurity issues will be addressed and seek involvement in the formulation of relevant policy/policies that might lead to the drafting of appropriate regulations/legislation.

Because of the lack of iwi resources in terms of funding and personnel, iwi participation requires arrangement that take these aspects into account.

### *Department of Conservation Role in Marine Biosecurity*

The Department of Conservation's diverse interests in the coastal and marine environment are centred on the protection and conservation of natural heritage values and on sustainable coastal management. Work programmes revolve around three general but overlapping areas of work:

- Resource Management Act (RMA) consent and planning processes; including supporting the Minister of Conservation's sustainable coastal management responsibilities relating to the New Zealand Coastal Policy Statement, Regional Coastal Plans and Restricted Coastal Activity applications.
- Marine mammal and wildlife management; e.g. strandings, tourism and fisheries interactions.
- Marine Protected Areas; e.g. marine reserve implementation, management and monitoring; progressing (with the Ministry of Fisheries) the Marine Protected Area Policy and Implementation Plan.

Under the Foreshore and Seabed Act 2004 (s 28(1)), the Minister of Conservation has the functions, duties and powers of the Crown as owner of the public foreshore and seabed. The Minister of Conservation also has specific functions, powers and duties

under the RMA to recognise the Crown's interests in land of the Crown in the coastal marine area.,

The Department of Conservation has little funding allotted to marine biosecurity; central government funding for marine biosecurity lies with MAFBNZ. While the Department is becoming increasingly involved in general biosecurity matters, this is primarily in a support and advocacy context rather than operationally, except where work can be readily "piggy-backed" with existing work programmes. DOC considers whether to manage pests within marine reserves on a case by case basis depending on priorities, available resources and potential impacts.

### *Ministry of Fisheries Role in Marine Biosecurity*

Marine biosecurity accountabilities and functions for policy, regulatory and science previously undertaken by MFish transferred on 1 November 2004 to Biosecurity New Zealand (MAFBNZ) within the Ministry of Agriculture and Forestry. MFish therefore has no direct legislative responsibilities for marine biosecurity.

MFish's primary purpose is to ensure that fisheries are sustainably used within a healthy aquatic ecosystem. MFish therefore has an interest in any organism that can harm the sustainable use of fisheries - for instance, any harmful exotic species that could slip into New Zealand waters through the discharge of ballast water or as fouling on vessel hulls - and in any process, system, policy or strategy that minimises the risks to New Zealand's aquatic environment from biosecurity threats.

MFish's role in marine biosecurity encompasses the following:

- MFish contributes to the formulation of strategic goals for the marine biosecurity system, and provides advice on biosecurity risks where appropriate
- MAF and MFish have agreed arrangements for contracts management and access to relevant fisheries data
- MFish assists MAFBNZ wherever possible in public awareness campaigns through its District Offices and Fishery Officers, e.g. keeping an eye out for organisms such as sea squirt while undertaking their normal duties.

The MFish Operations, Policy and Science groups all to a greater or lesser degree have an involvement in marine biosecurity issues:

- The Science group (among other things) reviews pest and disease test reports submitted with applications requesting authorisation from MFish to transfer fish from hatcheries for release into the marine environment (excluding release onto marine farms); advises MFish operations on potential risks associated with applications requesting authorisation from MFish to transfer fish from hatcheries for release into the marine environment; and liaises with Biosecurity NZ and MFish personnel on various biosecurity issues that could affect the sustainability of the fisheries.
- The Operations group participates in strategic biosecurity initiatives; and coordinates responses to BNZ on specific biosecurity risks, such as *Undaria* harvest applications and import risk assessments; and represents MFish at biosecurity consultative forums.
- The Policy group is coordinating the project to revoke the Freshwater Fish Farming Regulations as required under the 2004 aquaculture legislation. MAF BNZ is participating in this review, which includes clarifying who is responsible for biosecurity relating to freshwater fish farms and developing new regulations under the Biosecurity Act to manage the risks associated with the farms to replace the provisions in the Freshwater Fish Farming Regulations.

## *Appendix 3*

### ***Partnership Decision Framework***

To assist the Top of the South Marine Biosecurity partnership in its decision-making, the following decision framework is proposed. The framework will help prioritise actions, decide who will act and who will pay.

Note that a separate programme of work led by MAF Biosecurity is working towards joint MAFBNZ / industry decision-making and shared funding for responses. The aim of this work is to reach agreement between industry and national and local Government, to share resources for the direct and additional costs incurred during readiness and response activities. For the latest information on this programme please refer to [www.biosecurity.govt.nz](http://www.biosecurity.govt.nz). These discussions do not currently include agreements around pest spread.

#### ***Decision framework***

##### *Define outcome*

- What do we want to achieve with this action?
- Why do we want to take it? What is problem/issue?
- What are the results we want?
- What behaviours are we trying to change?
- How will we measure success?
- How will we know that we have achieved the desired outcome?

##### *Define the action*

- What is the action we wish to take?
- What are the options for undertaking this activity?
- Do we need to gather more information?
- Who has taken this action in the past and what lessons can we learn from them?
- Does wider consultation (beyond the partnership) need to occur to help identify the best means of undertaking the activity?
- How much effort is required and over which period(s) of time?
- How much resourcing (people, equipment) is required?
- How much funding is required?

##### *What are the benefits and impacts of this activity?*

- What are the intended/unintended effects of the action?
- What are the benefits of this activity?
- Who benefits most from this activity?
- What are the impacts of this activity?
- Who is most impacted by this activity?

### *Prioritise*

Principle: Prioritise partnership activities based on strategic fit, net benefit, feasibility, resources and opportunities/barriers to success.

Assess importance of the activity in relation to the partnership's other activities.  
Decide how much effort is needed.

- How well does this activity fit with the partnership's goal and objectives?
- How important is this activity compared to other activities?
- How much effort is needed?
- What is the urgency/need for action?
- Set timeframes

Assess activities using the following criteria.

- Strategic fit - how well does it fit with the partnership's strategy, goal and objectives, and partner organisations strategies?
- Net benefit - what is the overall net benefit including costs, benefits and their likelihoods?
- Feasibility - is it feasible and what is the probability of success?
- Resources - what resources, skills and capabilities are required?
- Opportunities/Barriers- are there other opportunities or barriers to success, such as timing or the factors that cause public concern (coercion, equity, fear, etc)?
- Commitment - Can we reach agreement on who will take action? Who will commit to this activity?

### *Who is best placed to act?*

Principal: Those with the most appropriate incentives, capability, access to resources and the best information related to any specific opportunity or risk should undertake that activity.

Agree who is in the best position to be able to undertake the activity.

- Who has a mandate / duty to act?
- Who has a legislative requirement or prearranged role?
- Who has the right information to be able to act?
- Who has the skills and capability required?
- Who has the resources, or is best placed to get them?
- Who has the most incentive to act?
- Who is motivated to act?
- Which is more appropriate - action by local government, central government or other partners?
- Do we need to agree role division between two or more partners?
- Who is best placed within the agreed partner group(s) to be responsible?

### *Do we have agreement?*

If yes, move to the next step.

If no, go back to redefine the activity, reassess options for acting or reprioritise this activity.

*What do we need to do to make it happen?*

- Who needs to approve this activity?
- Who needs to approve the resourcing?
- Who needs to approve the funding?
- Are there other barriers to success?
- How can we overcome those barriers?
- How will progress be measured and reported?
- When and how often will actions be reviewed?

## Appendix 4

### **National Interest Pest Programmes**

National interest pests (excluding animals managed under the Wild Animal Control Act 1977 and freshwater fish) are plants or animals that have become established in New Zealand and may have a potentially significant impact on our economic, environmental, social and cultural values. MAF became responsible for managing new pest response programmes for national interest pests on 1 July 2005, as part of its new biosecurity responsibilities.

A process for deciding the list of pest response programmes was agreed by the Central Regional Biosecurity Forum in October 2006. This included principles to guide decision making, the overall process to be followed and criteria for decision making.

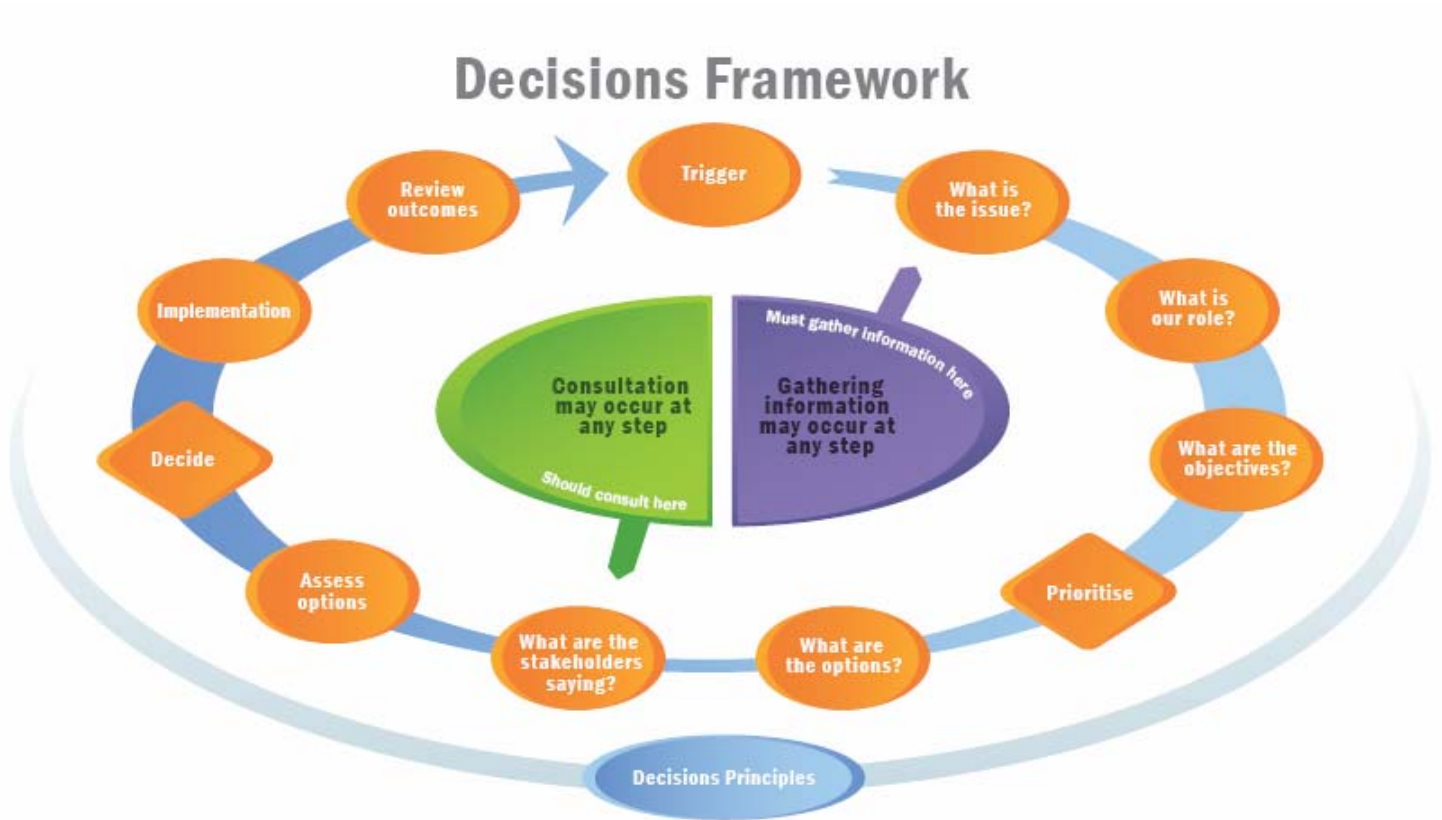
MAF Biosecurity New Zealand, regional councils, Department of Conservation, Land Information New Zealand, Ministry of Health and Ministry of Fisheries identified 20 pests they wished to see under a national management programme. To help with decision making, a comprehensive organism consequence assessment, and a management options evaluation were prepared for each species and reviewed by a Technical Advisory Group. Based on advice from this group MAF Biosecurity established programmes for 11 species. Future decisions on prioritisation of pest programmes will be based on the MAFBNZ Decisions framework. See Appendix 5.

As at October 2008 the following 11 species are the target of national interest pest responses:

Species	Response goal
Kariba weed or Salvinia ( <i>Salvinia molesta</i> )	Eradication
Water Hyacinth ( <i>Eichhornia crassipes</i> )	Eradication
Johnson grass ( <i>Sorghum halepense</i> )	Eradication
Cape Tulip ( <i>Moraea flaccida</i> )	Eradication
Pyp grass ( <i>Ehrharta villosa</i> )	Eradication
Phragmites ( <i>Phragmite australis</i> )	Eradication
Hydrilla ( <i>Hydrilla verticillata</i> )	Eradication
Hornwort ( <i>Ceratophyllum demersum</i> )	Eradication and exclusion from the South Island
White bryony ( <i>Bryonia cretica</i> )	Eradication
Rainbow lorikeet ( <i>Trichoglossus haematodus</i> )	Control to zero density in the Auckland Region
Manchurian wild rice ( <i>Zizania latifolia</i> )	Eradication in Auckland, Waikato, Wellington regions, outlier populations in Northland, containment of intransigent populations in Northland.

For more information on MAF Biosecurity's national interest pest programmes (NIPR) go to the Biosecurity website: <http://www.biosecurity.govt.nz/pests>

*Appendix 5*  
**Biosecurity Decisions Framework**



## Decisions steps

### Gather information

Gather information throughout the whole decisions process, particularly to help define the issue and to identify and assess options.

### Consultation

Identify and consult affected parties as early as possible in the process and give sufficient time and information to affected parties. Where there is little information, consultation may need to be ongoing or occur at several points in the decisions process. Consultation may not be necessary in all cases.

- Who should be consulted and how?
- What is the objective of the consultation?
- What is the key information that needs to be provided?
- What is the scope/timeframe of the consultation?
- Do the expectations of those consulting/those being consulted align with consultation objectives?
- What are the areas of concern identified?

### Trigger

A trigger such as an incursion, new information, or a new business need should prompt the decisions process.

### What is the issue?

Explain the background to the issue, including the nature and extent of the issue and the need for action.

#### *Nature of the issue*

- What is it?
- What is the underlying cause of the issue?
- What are the symptoms of the issue?
- What is the likelihood & consequence of the issue?
- What are the risks/opportunities?
- Has this been an issue in the past?
- How successful have we been at addressing it?
- What behaviours need to change?
- Who needs to change behaviour?

#### *Size and scale of the issue*

- How significant is the issue?
- What is the scope of the issue?
- Who is it an issue for?
- How reversible are the impacts of the issue?
- Does consultation need to occur to help define the issue/objectives?

### What is our role?

Clarify/agree who has the mandate/duty to act.

- Do we have a legislative requirement or prearranged role?
- Is it a pre-agreed role or responsibility of another agency?
- Who is best placed to solve it?
- Do we need to agree role division between MAF and another agency?
- Who is best placed within MAF to be responsible?

### What are the objectives?

Clearly define the objective(s) to address the underlying cause of the issue in a way that does not pre-determine solutions, and is specific, measurable and achievable. State if objectives are subject to constraints like time or resources.

- How will you measure success?
- How will you know that you have achieved the desired outcome?
- Recognise that different people may have differing objectives that you may need to balance or reconcile when evaluating options
- Are there any relevant government objectives/outcomes?

### Prioritise

Assess importance of the issue using the strategic fit and net benefit criteria and decide how much effort is needed, if any.

- How important is this issue compared to other issues?
- How much effort is needed, if any?
- What is the urgency/need for action?
- What are the likely costs associated with maintaining the status quo?
- Set timeframes and the amount of analysis required
- What is the appropriate governance mechanism?
- Who should be the decision-maker?

### What are the options?

Develop and analyse realistic options for achieving the objectives and that can be implemented.

#### *Develop options*

- What is the status quo?
- Is more information needed to inform development of options?
- Can the options be implemented?

#### *Analyse options*

- What is the level of analysis required and timeframe?
- What are the costs and benefits of intervening/not intervening?
- Who benefits and who bears the cost of each option?
- How well do the options manage the risks?
- How will behaviours affect the level of compliance?
- Do the options address the underlying cause or the symptoms of the issue?
- What are the indicators for measuring success/performance?

### What are the stakeholders saying?

Consult with affected parties even if you have already discussed the issue with them previously. Consultation must be genuine and feedback used to inform your decision. If you decide not to consult on the options make your reasons for this decision clear.

### Assess options

Assess options against strategic fit, net benefit, feasibility, resources, and opportunities/barriers to success (see Principle 9). Discuss and agree the meaning of the criteria before assessment is made.

- What is/are the preferred option(s)?
- How well does the preferred option(s) meet the objective(s)?

### Decide on an option

Choose an option, decide what we are going to do or not do and clearly communicate the decision to affected parties.

### Implement the decision

Develop an implementation plan and take action.

- Is a communication strategy required?
- What risks may affect successful implementation?
- What review mechanisms and performance targets are needed?
- What compliance and audit is needed?

### Monitor and review outcomes

Monitor and evaluate performance, and review against the objectives. If recommendations from the review identify new information or issues these should feed back into the decisions process.

- How well does the decision meet the success/ performance criteria and objectives?
- How well does the decision respond to the risks, costs and benefits and public reaction to your actions?
- What are the intended/unintended effects of the action?

- What is the likely level of compliance?

# Decisions principles

## Process Principles

### **1. Follow the criteria and processes prescribed in relevant legislation and ratified international standards**

Where legislation prescribes the process to be followed and/or criteria to be applied for a particular decision, these must be followed and applied. International standards or treaties that have been ratified by the government must also be followed.

### **2. Analyse the issue before trying to find solutions**

Spend time identifying the 'real' issue, before thinking through solutions by:

- understanding and analysing: the issue, the context, the risks and opportunities and the objectives first; *then*
- thinking through solutions to manage the issue and assessing strategic fit, net benefit, feasibility, resources, and any other barriers for the solutions.

### **3. Decisions should be made by those best placed to do so**

Unless specified elsewhere (such as in legislation), decisions should be made by the people who have the right information, skills and incentives as they are best placed to make good decisions in that area.

### **4. Timely and well-informed**

There will always be uncertainty and lack of information, but we must make the best decisions we can with the best information available at the time. The level of information sought and analysis should be proportional to the size of the risk/opportunity identified in the available timeframe and the urgency required.

### **5. Consistency**

Follow a consistent decisions process but only to the point where it is sensible to do so. Apply decisions principles, criteria and tools consistently so that decisions do not differ in assessment approach.

### **6. Consult affected parties, including Maori**

Identify and consult those affected by our decisions, including Maori, as soon as possible in the decisions process. Give sufficient time and information to affected parties so they can provide effective feedback before final decisions are made and so they can manage their own risks and interests at the same time.

### **7. Transparency**

Tell affected parties, in plain language they can understand, what the decision is and the reasoning behind the decision so they understand the decision, the implications, and the behaviours being sought.

## Content Principles

### **8. Decisions should aim to improve New Zealand's overall economic, social, health and environmental values**

Decisions should be driven by the objective of securing positive consequences and limiting negative consequences for our economic, social, health and environmental values as a country except where there are specific government objectives, directions or statutory requirements.

All decisions by the government to intervene should be tested to check that the intervention is justified and delivers more benefits than costs.

### **9. Assess options based on strategic advantage, net benefit, feasibility, resources and opportunities/barriers to success.**

Assess options using the following criteria. Discuss and agree the criteria before assessment is made.

- Strategic fit – how well does it fit with the government's strategies and MAF's Statement of Intent and/or strategies that reflect wider Government strategies?
- Net benefit – what is the overall net benefit including costs, benefits and their likelihoods?
- Feasibility – is it feasible and what is the probability of success?
- Resources – what resources, skills and capabilities are required?
- Opportunities/Barriers – are there other opportunities or barriers to success, such as timing or the factors that cause public concern (coercion, equity, fear etc)?

### **10. Uncertainty is not an excuse for inaction**

There is always uncertainty but it should not be an excuse for unnecessary delay or indecision. Decisions should focus on what reasonable steps can be taken at the time based on the best information available at the time, while maintaining future options where appropriate. Be transparent about the uncertainties and assumptions.

### **11. Irreversibility provides a stronger case for intervention**

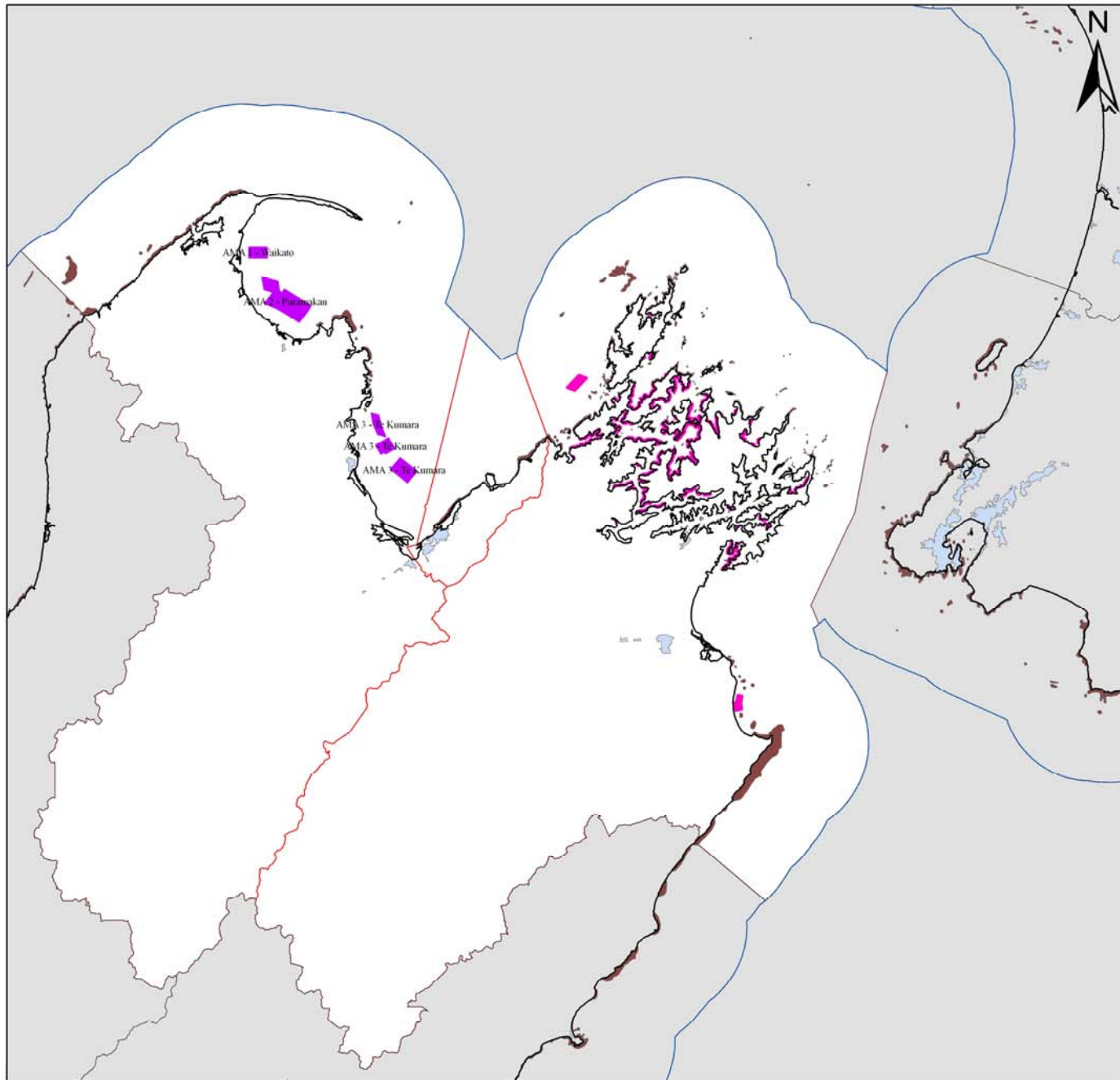
Where the impacts of not intervening are likely to be irreversible, there is a stronger case for intervention even when benefits only marginally outweigh costs.

### **12. Risks/opportunities should be managed by those best placed to do so**

Those with the most appropriate incentives, capability, access to resources and the best information related to any specific opportunity or risk should manage those risks/opportunities.

### **13. Favour outcome-based over prescription-based interventions**

Favour performance/outcome based interventions over prescriptive interventions wherever practicable and appropriate. This may be easier where sector groups have large well-resourced players that interact with each other. Standards should be enforceable, and should draw on existing (industry) standards as much as is practicable to minimise compliance costs and allow innovation. Try to describe criteria for equivalent ways of achieving the standard



- Coastline
- Territorial Sea
- Urban Area
- Marlborough Marine Farms
- Tasman Marine Farms
- Rocky Reefs
- Regional Authority Boundaries