

## 2.4 Ārai Koiora ā-Moana / Marine Biosecurity

The Tāmaki Makaurau / Auckland region has over 3000km of coastline, including three major harbours. Tāmaki Makaurau / Auckland is a high-risk site for marine pest invasion due to the scale and complexity of recreational and commercial local, domestic and international vessel and craft movements and industries such as marine aquaculture. Introduced marine species spread to and within marine environments by way of biofouling on hulls and other equipment and in ballast, bilge or holding tank water. Tāmaki Makaurau / Auckland is a source of invasion to other regions from vessel movements departing Tāmaki Makaurau / Auckland, especially via the Ports of Auckland.

The introduction of more non-native indigenous marine species to the region in the future is inevitable. Introduced marine species have the potential to cause significant ecological, social, cultural and economic impacts on our marine environment by: competing with native species for food, space and other resources, consuming native and aquaculture species, fouling natural habitat and artificial surfaces and structures, spreading disease, and releasing toxic compounds. About More than 260 non-indigenous marine species have been identified in Aotearoa / New Zealand, of which, over 14044 species are known to occur in the Tīkapa Moana / Hauraki Gulf alone (State of our Gulf 2014).

There are issues around the technical feasibility of controlling marine invasive species once an incursion has occurred. For effective biosecurity management, a thorough understanding of the pest's biology and its ability to adapt and reproduce in the region's environment is critical. Many marine invasive species produce thousands of offspring which can rapidly disperse across large areas via water currents. Application of toxins is also problematic in the marine environment, both due to pollution concerns and because it may be rapidly diluted and dispersed, thereby reducing efficacy. The marine environment poses access difficulties in comparison to land-based invasive species management. Because of these challenges, pathway management is by far the most impactful intervention point that can be targeted to protect the region from marine pests.

The council's involvement in marine biosecurity work is a relatively recent development, partially driven by the increased clarity on the respective roles in central and local government (as articulated in the Pest Management Plan of Action 2011 and adopted by Cabinet and Regional Council Chief Executives as a matter of policy).

Broadly speaking, as with other aspects of pest management under the Biosecurity Act, central government is responsible for preventing the establishment of pests new to Aotearoa / New Zealand, including through developing eradication programmes if these pests are detected, and will be the lead agency in implementing these

programmes. Additionally, if a pest is already in Aotearoa / New Zealand, but a national objective has been set to eradicate or contain that pest, this will also be the subject of a central government-led response. Because effective management of marine pests requires an inter-regional (national) approach, central government has a particularly important leadership and coordination role in relation to marine pest species, even for species where the goal is spread prevention rather than eradication. Central government will also be the lead agency in relation to programmes relating to government owned or administered areas (such as marine reserves).

As part of managing the risk of new-to-New Zealand marine pests, central government is also responsible for the production of craft risk management standards (CRMS) which specify requirements for the management of risks associated with vessels entering Aotearoa / New Zealand territory. A The 2018 CRMS addressing Craft Risk Management Standard: Biofouling on the hulls of Vvessels Arriving in to Aotearoa / New Zealand specifies requirements for the management of biofouling risk associated with sea craft entering Aotearoa / New Zealand territorial waters from overseas. will come into force in May 2018.

The government has also released a proposed NES for Marine Aquaculture, which includes requirements for marine biosecurity plans on aquaculture farms (see section **Error! Reference source not found.**). A government Aquaculture Strategy is also forthcoming.

#### **2.4.2 Sea Change – Tai Timu Tai Pari**

~~Sea Change – Tai Timu Tai Pari is a marine spatial plan for Tikapa Moana o Hauraki/ the Hauraki Gulf, developed as a collaborative effort between mana whenua, local and central government agencies, and local communities and interest groups.~~

~~The marine spatial plan identifies (amongst other things) that introduced marine species pose a serious threat to the marine ecosystems of the Tikapa Moana o Hauraki/ the Hauraki Gulf. In response to this threat, Sea Change – Tai Timu Tai Pari identifies the following objectives for the management of marine pests in Tikapa Moana o Hauraki/the Hauraki Gulf:~~

- ~~1. By 2020, develop pathway management plans and pest management plans to prevent the arrival and further spread of new and existing species and diseases, especially to high value areas.~~
- ~~2. By 2020, increase regional monitoring and surveillance efforts to be able to detect and respond quickly to new introduced species.~~
- ~~3. Where feasible, eradicate or control present species using available and evolving tools and methods.~~

#### ~~4. Increase stewardship through an informed and engaged industry and public.~~

~~As set out below in section , a inter-regional marine pest pathway plan management for the upper North Island (including Auckland) is currently being scoped cooperatively by the Auckland Council, neighbouring councils, and central government. Further action by central government to progress the implementation of Sea Change — Tai Timu Tai Pari in conjunction with the Council and other stakeholders, is also expected, including potentially relating to biosecurity. It will be important to ensure that biosecurity actions in Tikapa Moana o Hauraki/the Hauraki Gulf are integrated and coordinated to maximise the effectiveness of all responses.~~

#### **2.4.1 Whakahaere ara whāinga / Pathway management**

Given the limitations on effective control of marine pests, and their shared vectors of spread, the most effective and efficient way to address these pests is to prevent their establishment, and spread to new areas, by managing the 'pathways' which facilitate this establishment and spread.

Because of this, Auckland Council ~~has not included marine species in this plan, but rather~~ will focus on the management of the pathways, both within Tāmaki Makaurau / Auckland, and between Tāmaki Makaurau / Auckland and other regions.

~~This Regional Pest Management Plan does however include pest management provisions which address the movement of terrestrial invasive species to and between the high value islands of Tikapa Moana / the Hauraki Gulf.~~

~~To provide for comprehensive management of marine pest pathways, council will advocate for an inter-regional (national) marine pathway management plan. In addition, a~~As outlined in section **Error! Reference source not found.**, the council has included provisions in its Unitary Plan relating to the level and cleaning of hull biofouling on boats and linking of biosecurity considerations to the provision and management of aquaculture, marinas and other activities. These rules cover the following sections of the RMA: discharge of contaminants to water ((Sections 15(1)(a) and 15B(1)(a)); deposit any substance in, on and under any foreshore or seabed ((Section 12(1)(d)), and introduce or plant any marine pest in, on and under any foreshore or seabed (Sections 12(1)(f) and 12(3)(a)). These existing and future pathway provisions under the Resource Management Act and Biosecurity Act complement council's proactive non-regulatory activities to marine pest pathway management, including education and behaviour change programmes (particularly aimed at reducing hull biofouling), monitoring and surveillance and incursion response.

In addition, ~~To~~ provide for comprehensive management of marine pest pathways, council ~~is~~ will ~~advocate~~ ~~ing~~ ~~e~~ for an inter-regional (national) marine pest pathway management, which may be in the form of an inter-regional marine pest pathway management plan. Because of this, Auckland Council has not set out to provide a full marine pest pathway management plan accompanying this Regional Pest Management Plan, but rather this RPMP identifies nine specific marine pest organisms and includes management of their pathways, both within Tāmaki Makaurau / Auckland, and between Tāmaki Makaurau / Auckland and other regions.

#### **2.4.2 Tūhononga Ārai Koiora ā-Moana ki te Raki / Top of the North Marine Biosecurity Partnership**

The Top of the North Marine Biosecurity Partnership (“Top of the North” or “TON”) was established to increase collaboration and consistency between partners that have a statutory responsibility for preventing, reducing or eliminating adverse effects of marine pests that are present within the top of the North Island region.

The TON partnership currently consists of representatives from Northland Regional Council, Auckland Council, Waikato Regional Council, Bay of Plenty [Toi Moana](#) Regional Council, Gisborne District Council, [Hawkes Bay Regional Council](#), DOC and MPI.

TON partners are in discussions around the development of ~~an~~ inter-regional [marine pest pathway management plan for the TON area, with the aim of having consistent rules across the four northernmost regions. Its main focus would likely be on minimising the spread of organisms by domestic vessels.](#)

#### **2.4.3 Sea Change – Tai Timu Tai Pari**

Sea Change – Tai Timu Tai Pari is a marine spatial plan for Tikapa Moana o Hauraki/ the Hauraki Gulf, developed as a collaborative effort between mana whenua, local and central government agencies, and local communities and interest groups.

The marine spatial plan identifies (amongst other things) that introduced marine species pose a serious threat to the marine ecosystems of the Tikapa Moana o Hauraki/ the Hauraki Gulf. In response to this threat, Sea Change – Tai Timu Tai Pari identifies the following objectives for the management of marine pests in Tikapa Moana o Hauraki/the Hauraki Gulf:

1. By 2020, develop pathway management plans and pest management plans to prevent the arrival and further spread of new and existing species and diseases, especially to high value areas.
2. By 2020, increase regional monitoring and surveillance efforts to be able to detect and respond quickly to new introduced species.

3. Where feasible, eradicate or control present species using available and evolving tools and methods.

4. Increase stewardship through an informed and engaged industry and public.

Although the SeaChange objectives are specific to Tīkapa Moana o Hauraki/the Hauraki Gulf, they are broadly consistent with Auckland Council's regionwide approach to managing marine pests. As set out above, an inter-regional marine pest pathway management for the upper North Island (including Auckland) is currently being scoped cooperatively by the Auckland Council, neighbouring councils, and central government. Further action by central government to progress the implementation of Sea Change – Tai Timu Tai Pari in conjunction with the Council and other stakeholders, is also expected, including potentially relating to biosecurity. It will be important to ensure that biosecurity actions in Tīkapa Moana o Hauraki/the Hauraki Gulf are integrated and coordinated to maximise the effectiveness of all responses.