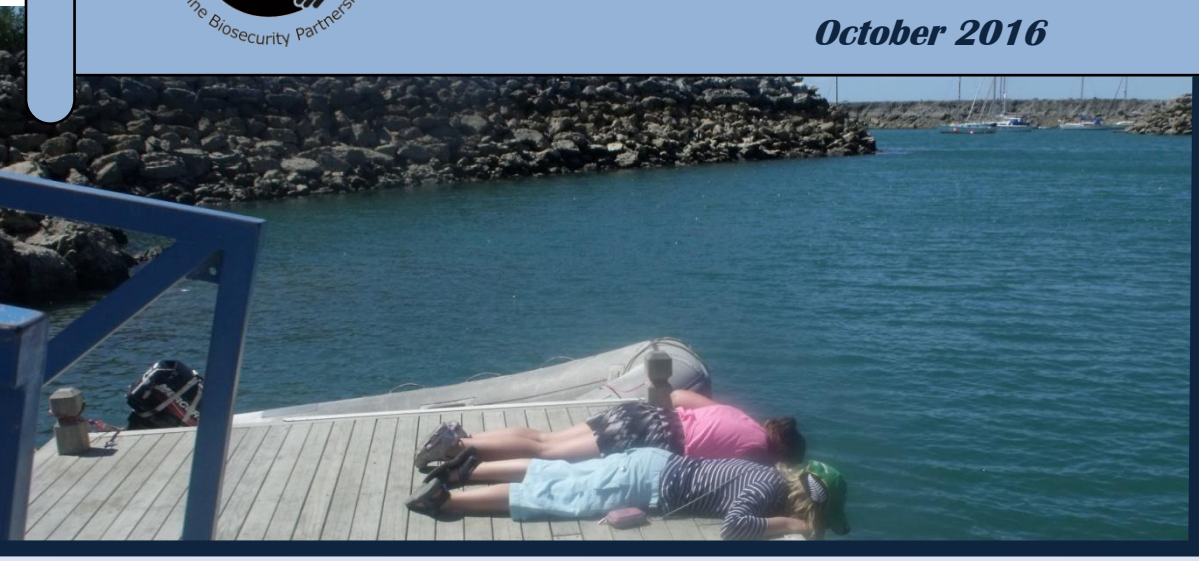
Partners Newsletter

Keeping you informed

October 2016



Fanworm in the Top of the South

A substantial population of mature fanworm was found in Tarakohe Harbour in Golden Bay in September as part of a Tasman District Council survey for clubbed tunicate. Fanworm is well established in locations outside the region, particularly Auckland. Surveillance in the TOS has revealed fanworm on both recreational and commercial vessels entering the region. It has arrived and established in the top of the South Island, and is poised to spread to marine farms and natural habitats. Fanworm has been confirmed from Tarakohe, Nelson, Picton, detected on vessels in Waikawa and may already occur at other locations. Populations have been suppressed by hand removal in nodes where it has been found and infected vessels have been treated. Responses have been led by the three Top of the South Councils and MPI. The parties now need to decide whether to undertake further work.

Technologies and methods are available to slow the spread of fanworm, but not to eradicate it from the region. Unmanaged, we might expect fanworm to become widespread. Effective management might slow that spread. The costs of widespread fanworm in the region are unknown, but are potentially high. They are likely to include financial losses for the marine farming industry, compromise of high value ecological areas and adverse effects on social values[1].

The primary mode of spread for fanworm into and across the region will be by human mediated vectors. The two most important vectors are the marine farming industry and the recreational boating sector. The marine farming industry is actively involved in marine biosecurity and has strong incentives for risk reduction and involvement in surveillance. The recreational boating sector is diffuse and our monitoring shows no active reduction of risk after seven years of awareness raising in the region.

The Coordination Team is facilitating discussion amongst the agencies and industry to decide next steps. Some of the factors being considered are:

1. The costs of intervention will rise sharply the longer further action is delayed.
2. Piecemeal and small scale interventions at risk nodes (e.g. population management) are likely to have proportionally less regional risk reduction, due to ongoing vector risk from within the region. Experience shows that control needs to be intensive and ongoing to be effective.
3. Controlling nodes and vectors within the region without controlling vectors crossing the regional border would leave the TOS open to from sources outside the region.

[1] Fanworm background report available at: http://www.biosecurity.govt.nz/files/pests/mediterranean-fanworm/caw-rpt-2479A.pdf

Pete's Pondering

Disease

Diseases that adversely affect marine organisms are part of the biosecurity brief. These risks are mostly dealt with by industry and the Ministry for Primary Industries.

Impacts of fish and shellfish disease

Diseases can cause fish and shellfish stock collapses, which in turn can affect the natural balance of an ecosystem. Fish stock collapses can have severe effects on commercial, cultural and recreational fisheries. . In most cases pathogens of fish and shellfish are not a danger to humans, however there are a few pathogens that are present naturally in the marine environment that can affect humans, so it is advised not to touch or consume fish or shellfish that appear abnormal or are found dead.

Mass-mortality events

Mass-mortality events involve the death of a large number of organisms. A mass mortality is usually unexpected and there may be a number of species involved (including but not limited to fish, invertebrates and marine plants, including farmed or wild species or both). A mass mortality of commercially and/or recreationally valuable species is often known as a "fish kill", and it is this type of event that is of particular concern. A mass die off of pilchards occurred in 1995 in Australia and New Zealand and researchers said "... *to our knowledge this is the largest mortality event ever recorded in any fish species in terms of both numbers affected and geographic range*." This was linked to a pilchard herpesvirus which propagated through the population very fast and almost certainly represented the recent introduction of the virus into a naïve (i.e. susceptible) population, possibly assisted by human movement of pilchards.

Why marine diseases are a concern

- Aquatic diseases are a potential risk to both wild fish populations as well as aquaculture - fish, shellfish, starfish, crustaceans can all be affected.
- Due to the connectedness of the marine environment, it is virtually impossible to "quarantine" affected animals and stop it from spreading.
- New Zealand's isolation means our aquatic animals might be naive and vulnerable should a disease reach our shores
- NZ has its own unique assemblage of microorganisms and as new species are developed for aquaculture, some new diseases may also emerge
- Climate change may mean aquatic organisms tolerance limits are challenged or pathogen ranges change leading to more health events in the future.

What can partners and stakeholders do?

- First signs may present as mass deaths of aquatic organisms.
- Get fresh samples. Frozen samples are of limited use.
- Get MPI involved as soon as possible. Phone 0800 80 99 66.
- In farmed stock – know your animals and their health status. If there are concerns have your stock investigated appropriately. You can use an aquatic animal veterinarian and/or contact MPI.

Picture of a fish (from outside NZ) displaying signs of infectious disease – protruding eyes, some haemorrhage in the eye, swollen red vent, bright skin haemorrhages on the belly, swollen belly.

Barrie's Bilge

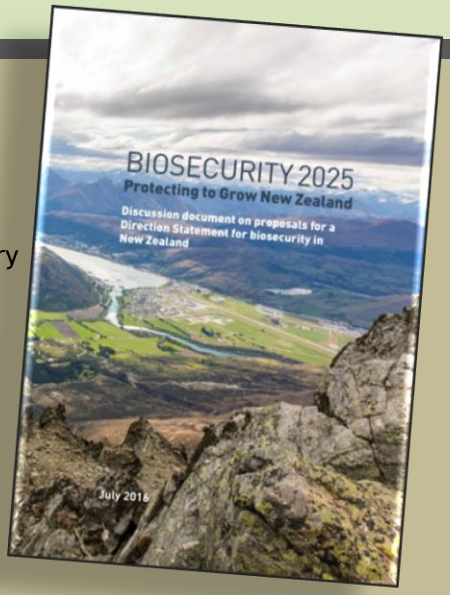
Antifouling

With summer approaching many recreational boaters will be thinking about renewing their antifouling. Doing a good antifouling job can cost more time and money than a 'quick and dirty' one, but is worth it for the benefits. For boaters the main benefits are increased boat speed and decreased fuel consumption, but for the wider environment having an effective antifouling coating is the no. 1 tool for slowing the spread of marine pests. Even though biocidal antifouling coatings release chemical contaminants like copper, the irreversible impacts of marine pests are a far greater threat. Key things you need to consider when antifouling include:

- Choose the correct antifouling for your boat based on: the material your boat is made from, compatibility with any existing coating, how fast you travel, how frequently your boat is used, and the coating's suitability for areas prone to high fouling.
- Undertake the correct surface preparation to achieve good antifouling adhesion, and apply the antifouling using the method and coverage rate recommended by the manufacturer to achieve an effective coating thickness.
- Do you need specific coatings or extra layers of antifouling for high wear areas and niche areas? Think about whether you can lift you boat high enough on hard-stand to access the bottom of the keel, as this area often harbours marine pests. Also, move your hard-stand supports where possible, so you don't have patches along the sides of your boat that miss being antifouled.
- Pay attention to minimum drying times, which depend on environmental conditions like temperature and humidity. Slapping a coat of antifoul on the keel just before the boat goes back into the water isn't particularly effective.
- What is your planned 'in-service' period before coating renewal? Different coating types and thicknesses have different service lives that need to be matched with planned maintenance and reapplication. Australian and New Zealand government guidance on antifouling recommends that recreational boaters plan for a 12-month in-service period for biocidal coatings and 24-months for biocide-free coatings.

Comprehensive guidance on antifouling can be found on the websites of the main paint manufacturers, and there are even apps for your phone or tablet (see for example: http://www.yachtpaint.com/nzl/diy//boat-paint-guide-app.aspx). Also, for local information, drop into somewhere like Burnsco or have look at the antifouling tips on their website: https://www.burnsco.co.nz/a-complete-guide-to-antifouling_1524.aspx.

MPI Update



Biosecurity 2025

On the 9th of September public consultation closed on the Biosecurity 2025 direction statement for New Zealand, following a series of public meetings and Hui around the country including a public meeting in Nelson and Hui at Waikawa Marae in August. Biosecurity 2025 is about reviewing and future-proofing New Zealand's biosecurity system, of which marine biosecurity has been a recurring theme for discussion and feedback, particularly at the meetings and Hui in the top of the South Island.

The final Biosecurity 2025 Direction Statement will be launched at the *Protecting to Grow New Zealand: Biosecurity Forum 2016* in Auckland in late November. The forum will also provide an opportunity to participate in planning for the implementation of the Biosecurity 2025 strategy.

Ballast Water Developments

Significant progress has been made recently in addressing the risks associated with ballast water, which is the water taken on by a ship for stability or structural integrity. It can contain large numbers of harmful marine organisms of all different life stages, which can then be transported and released into ports all around the world.

New Zealand has been managing the risk of ballast water since 2000 through the Ballast Water Import Health Standard ("Ballast Water HIS"), which was amended in 2005 following the signing of the International Convention for the Control and Management of Ships' Ballast water and Sediments ("the Convention"). The Ballast Water IHS requires vessels either to undergo mid-water exchange of ballast water (carried out far from the coast) or to have on-board ballast water treatment systems. The Convention aims to prevent the spread of harmful aquatic organisms around the globe by establishing standards and procedures for managing ships' ballast water.

While New Zealand signed the Convention in the early 2000's, the Convention states that it will only enter into force 12 months after ratification by a minimum of 30 States, representing 35% of the world merchant shipping tonnage. This milestone was reached in early September with Finland's accession to the Convention. This means the Convention will enter into force on the 8th of September 2017 and will include stricter requirements on how international vessels record and carry out their ballast water management practices, such as a requirement for vessels to have on-board ballast water treatment systems which are a safer and a more effective method of managing ballast water risk.

Sustainable Seas National Science Challenge

By Julie Hall, Director

Right now many of New Zealand's top marine scientists are focused on the beautiful Nelson region as they begin an innovative research programme that, if successful, will have benefits far into the future.

Tasman Bay and Golden Bay is the first case study for the Sustainable Seas National Science Challenge and the research area will stretch from D'Urville Island to Farewell Spit and out into Cook Strait, taking in the entire ecosystem.

The Challenge was formed to enhance use of our marine resources while also ensuring that our marine environment is understood and cared for, and that we use it wisely for everyone's benefit now and in the future.

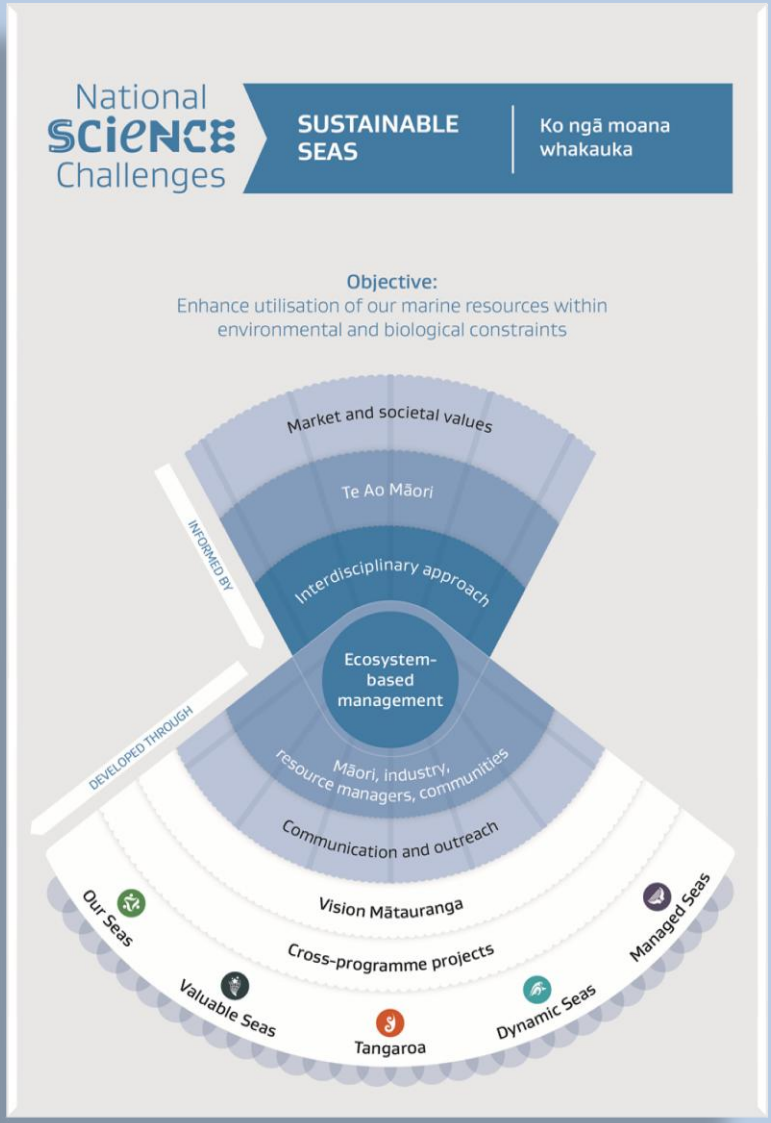
It aims to provide new ways to ensure our marine resources are well managed, that marine industries operate effectively and responsively, that Māori values are included and the Māori marine economy is strong, that New Zealand is a world leader in sustainable marine production and stewardship, and that our society understands and is engaged in marine issues.

The approach we're taking uses ecosystem-based management. It means we recognise that oceans don't operate in a vacuum; they're part of a complex web of interactions, affected by rain falling on an inland forest to urban stormwater, as well as fishing, boating, the seabed, aquaculture, marine animals, biosecurity incursions, and climate change.

We haven't had ecosystem-based management before because we haven't known enough about our ecosystem. There are a number of studies overseas where researchers have looked at a single bay or a very small estuary, but we're looking to apply it throughout New Zealand. If we can do that, we'll be world leaders.

We'll be bringing a wide range of people together, including resource managers, users, local and central government, Māori and the wider community, to look at what their values are and how to incorporate these into managing our oceans. In that way we'll be setting ourselves up to enhance the use of our marine resources as well as looking after this wonderful resource for many generations to come.

For more information see: www.sustainableseaschallenge.co.nz



www.marinebiosecurity.co.nz