



Partners Newsletter

Keeping you informed

June 2014

Pathway Management for TOS

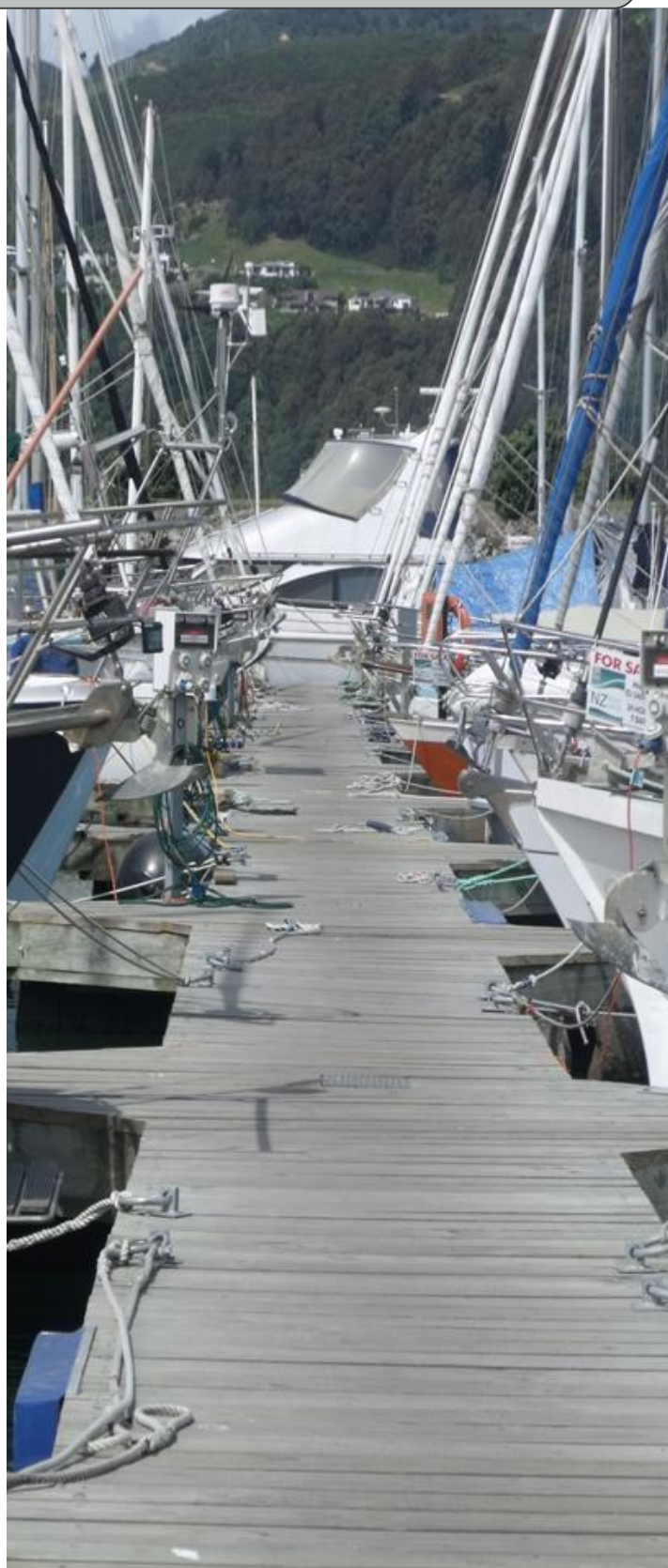
Managing the spread of harmful marine organisms by human activities is essential to protecting the future of our marine environments in New Zealand and in the Top of the South (TOS). This was the clear conclusion of the annual TOS partnership forum in May and was reinforced by discussions at a national level the following week. Participants in both events emphasised that managing the ways pests can spread (known as pathway management) will be no silver bullet. We will still have to deal with new incursions, but hopefully at a much lower rate than we have experienced over the last year.

So what is pathway management, and how will it be put into practice?

Pathways are any way by which harmful organisms are moved – in the marine environment this includes activities by people such as moving fouled boat hulls or equipment. These activities can be grouped together by sector so that management actions are as effective as possible. For instance, the pathways associated with recreational vessels are quite different to those associated with marine farming, even though they may spread some of the same organisms.

In 2012 the Biosecurity Act was amended to allow legally binding plans to be made to control risks on domestic pathways, such as shipping between ports around New Zealand. These plans can be made at a national or a regional level. MPI has the support of the country's regional councils to both develop a national pathways plan, and to take interim measures to reduce risk on domestic marine pathways. Southland is actively developing a pathways plan for Fiordland and Northland is following the same course for their area.

In the Top of the South, the Management Committee has instructed the Coordinators to work with these other agencies in completing analysis to a level where the three local councils (Marlborough District Council, Tasman District Council and Nelson City Council) can make informed decisions about the costs and benefits of a regional pathways plan for our region. Over coming months we will be gathering information on the practical and legal requirements for effective risk reduction. We will be reporting to the Management Committee on this in August and November. The Biosecurity Act imposes a strong requirement for informed decision-making, and the three councils and MPI all need to be in agreement on a regional pathways plan before proceeding to the next step of a formal proposal. Barrie's science report in this newsletter covers this in more detail.



Barrie's Bilge



Partnership meeting science perspectives

The Partnership had its annual meeting on Friday 16 May. It was attended by a number of stakeholders from across the region, and included presentations from those working at the coalface of marine biosecurity. The presentations highlighted that the Partnership has put considerable effort into managing populations of two recognised marine pests, the clubbed sea squirt *Styela clava* (in Picton marina) and the Mediterranean fanworm *Sabella spallanzanii* (in Nelson marina). For both species, the systems put in place by the Partnership led to rapid responses. The responses included dive surveys to remove as many individuals as could be found. As a result, the pest populations appear to be under control in both marinas.

Despite these population control efforts, there is still an ongoing risk that *Styela* and *Sabella* will continue to be reintroduced to the TOS region by human activities (e.g. arrivals of infected vessels), and eventually spread beyond feasible control. The main reason is that the spread of these species around New Zealand is unmanaged, and there are now many source populations in other

ports and harbours which pose serious risks to the TOS. For example, an infected recreational boat from another New Zealand harbour could travel directly to anywhere in the TOS (e.g. the Abel Tasman coastline), and bring marine pests with it. A further factor is that the biology of the species gives them the ability to naturally spread to areas beyond the zones where the present diver removal operations are being undertaken.

These issues highlight that preventing the first arrival of new species into the TOS, or reducing their subsequent spread by human activities, is critical to the protection of our marine environment here in the TOS. Prevention will require effective management of risks from the many types of activities that take place in New Zealand waters, such as cargo ships, fishing boats, barges, recreational boats, and aquaculture gear and stock movements. Measures to address risks from these activities are now being considered as part of a proposal for a regional pathway management plan for the TOS. Critical to the success of this approach will be parallel efforts in other locations that act as source regions for potential pests to the TOS, and MPI is currently working with regional councils around the country to develop support for a national pathway management approach.

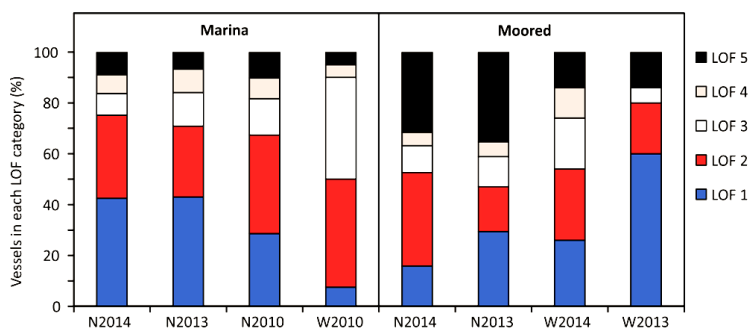
Boat fouling levels in the Top of the South

In February this year, Barrie Forrest surveyed hull fouling on 528 recreational vessels in the Top of the South (TOS), covering the berths in Nelson marina, and swing moorings in Nelson Harbour and Waikawa Bay. This was a repeat of a survey carried out in summer 2013. Fouling status was assessed using a 1-5 scale "Level of Fouling" (LOF) index. Of most interest were "heavily fouled" boats, which were those with an LOF of 4 or 5, meaning that at least 16% of their hull surface was fouled. LOF scores were first made from the surface, and then by snorkelling around boats in the water. The snorkel survey included a quick check for some of the species designated as marine pests by the Ministry for Primary Industries.

The summer 2014 survey showed similar fouling levels to previous surveys, indicating that there has been no reduction in vessel fouling in the Top of the South as a result of awareness-raising activities by the TOS Partnership. About a third of vessels on swing moorings in Nelson Haven and a quarter of those in Waikawa Bay were heavily fouled (LOF 4 & 5 on the graph). In Nelson marina, the incidence of heavy fouling was about half that on moored vessels, which is still significant in terms of regional marine biosecurity.

Three designated pests were found in the 2014 survey. The Mediterranean fanworm, *Sabella spallanzanii*, was found on a moored boat in Waikawa Bay, which was the first record of the species in Marlborough. Additionally, the sea squirt *Styela* was found on a moored vessel in Nelson, and the Japanese kelp *Undaria pinnatifida* was found on quite a few vessels. Both *Styela* and *Undaria* are well-established in Nelson, hence their presence on boats comes as no surprise. In addition to designated pests, a number of other significant species were abundant on boats. One of these was an animal known as a bryozoan, whose large spaghetti-like colonies were a nuisance to quite a few boaters in Nelson marina during summer (see photo).

Now that we have a good baseline of vessel fouling, the monitoring survey will not be repeated next year, but perhaps occur every second year. Instead, the Partnership is focusing on developing approaches to managing vessels and other risk pathways that can quickly spread pests around the region. Keeping your hull clean and your antifouling in good condition, especially when you plan to leave port, will be a vital part of these efforts.



Surface level of fouling (LOF) results from 528 boats surveyed in summer 2014 at Nelson (N) and Waikawa (W). Compared with previous surveys, the number of heavily fouled boats (LOF 4 & 5) has changed very little at each location



The bryozoan *Zoobotryon verticillatum*, sometimes mistaken for seaweed, was a nuisance to many boaters during summer.

Pete's Ponderings

Annual Report highlights

In March 2008, we started work on a marine biosecurity strategy for the Top of the South. Looking back to write an annual report for this year, I found it constructive to assess what we had achieved over those six years. Our vision was *a marine environment where the Top of the South Island is protected from damaging marine pests and diseases*. To achieve this, we set out *to prevent the introduction, and minimise the spread, of damaging marine species throughout the Top of the South region by coordinating the action of all partners committed to its implementation*. We have implemented all of the actions set out in the strategy, but with changing emphasis over time and variable levels of success. The Partnership has held together, is healthy and the agencies are working cooperatively. Communications are well established with regular newsletters reaching widely in the TOS and the website being regularly updated. Emphasis has moved from general public education to targeted stakeholder networking with strong industry connections. Science capability in the team has been greatly enhanced and this has allowed the funding base to be expanded with Envirolink grants. Standard systems are well developed, particularly for incursion responses. We have become very proficient at responding to incursions, unfortunately because we have had six of them in the last year. Here is a report card on the indicators of success in the strategy:

Indicator	Current	Next steps
Number of vectors with reduced risk profile regionally due to improved management regimes.	Two: the petroleum exploration industry now has excellent inspection and compliance regimes and port managers are intervening to reduce risks with large vessels	Increase industry networking and create a pathways management plan.
Increase in knowledge of, and support for, marine biosecurity in the community.	Increased knowledge evident across all key stakeholder sectors. This is reflected in the increase in information and enquiries through the industry network.	Sustain and increase communications with those capable of reducing biosecurity risks.
Incorporation of effective marine biosecurity measures in industry and other stakeholder practices.	Begun, but needs a lot more work. Nelson marina berth holder agreements include biosecurity provisions from July 2014. Aquaculture NZ active on codes of practice.	Generalise the Nelson marina approach across the TOS and work further with other industries.
Area and number of species under effective surveillance.	All major nodes are under 6 monthly surveillance by NIWA on contract to MPI. Two species, <i>Styela</i> and <i>Sabella</i> , are under active management at Nelson and Picton to slow regional spread.	The decision is to focus on pathways rather than nodes and species, but as these programmes are funded outside the TOS budget, the NIWA surveillance and active management by MPI and councils continue.
Number of recently arrived damaging organisms as an indicator.	Two: <i>Styela</i> in Picton, <i>Sabella</i> in Nelson and Waikawa. Current rate is about one new organism every three years.	The target is zero further incursions to be achieved through effective pathways management.
Number of groups and organisations involved in the strategy.	The newsletter list has topped 211 and links to many more. The number of groups actively participating continues to expand and the core partnership membership is stable.	Increase level of participation by those already involved by offering new products such as training opportunities and resources.
Number of response plans prepared.	One – the decision was made to have one response plan and this has been regularly updated and improved.	One or zero – MPI is developing a single response framework across its whole area of responsibility including biosecurity. The TOS will need to decide whether a regional plan is still required once this work progresses further.



Feature Marine Pest

Chinese Mitten Crab, *Eriocheir sinensis*



Status in New Zealand: Not detected

Why is this a threat?

If the Chinese mitten crab invaded New Zealand waters, it could pose a serious threat to both our marine biological communities and the stability of our river banks. They burrow into river banks and can cause accelerated erosion and slumping. They have also been known to block water intakes in irrigation and water supply schemes. They host liver fluke (*Paragonimus* sp.) that is harmful to human health. These crabs consume both plants and animals.

Key features:

- Hairy "mittens" on front claws – unlike any New Zealand crab.
- Mitten claws have white pincer tips.
- Four spines or serrations on each side of the shell.
- Distinct notch between eyes.
- Light-brown to olive green shell – up to 10cm across.

Where are they found?

- Burrows into sand, mud or clay banks.
- Adults inhabit the bottom and banks of freshwater rivers and tidal creeks, before migrating to brackish and saltwater to reproduce.
- Larvae develop into juveniles in marine coastal areas then migrate up rivers and creeks.
- Able to survive in highly polluted habitats.



Report sightings:

- Note exact location.
- Take a photo or sample where possible.
- Seal in plastic bag with small amount of seawater and chill, or preserve in methylated spirits.
- DO NOT FREEZE
- Call MPI on 0800 80 99 66.

New Craft Risk Management Standard

New national biosecurity requirements for all vessels entering New Zealand announced in May are designed to minimise the risk of marine pest species being introduced to New Zealand as biofouling.

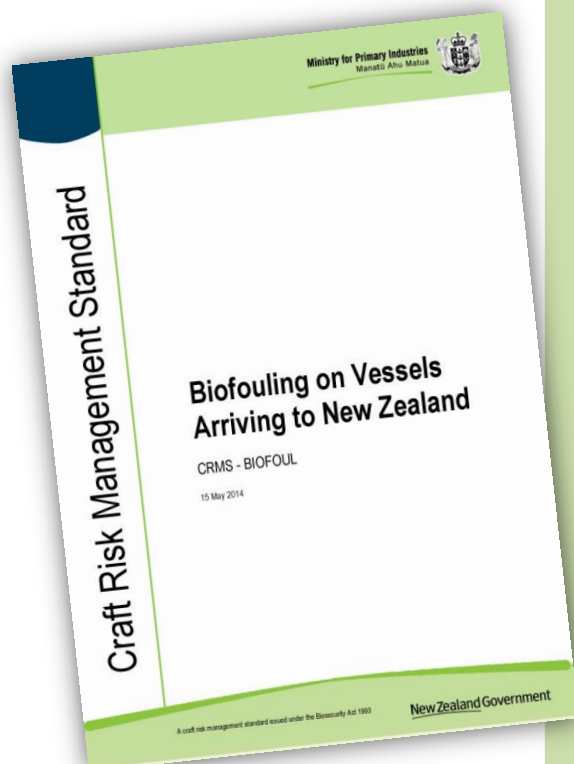
The new border requirements are called the **Biofouling Craft Risk Management Standard** (the CRMS). The requirements of the CRMS will be voluntary during the next four years, and will come into legal force in May 2018. MPI says that this lead-in period will provide an opportunity for industry and sectors to adapt to the new requirements, without breaking current maintenance cycles. During the lead-in period, MPI will continue its current policy of directing any vessels with very severe risk biofouling to mitigate the risk. For example, heavily fouled yachts may be directed by a border inspector to go to a haul out and hull cleaning facility for defouling at their expense.

Early voluntary compliance will be encouraged and MPI will assist operators to understand the requirements and determine the best measures to use for their particular vessels and operations.

The basic requirement is that all arriving vessels will have a level of biofouling that is no more than a slime layer (for long-stay vessels and vessels that will visit places other than designated ports). There is a further allowance of light growth of some specific types of biofouling in the case of short-stay vessels undertaking a fast turnaround.

The CRMS requirements align with the International Maritime Organisation's (IMO) 2011 Guidelines on Biofouling Management to Minimise the Transfer of Harmful Aquatic Organisms. Continual maintenance using best practice is one of the acceptable measures given in the CRMS for meeting the requirements and the one most likely to be adopted by commercial shipping. Following the IMO Biofouling Guidelines is recognised in the CRMS as an example of best practice maintenance.

More information on the coming requirements including the CRMS document, and a draft guidance document can be found at www.biosecurity.govt.nz/enter/ships



www.marinebiosecurity.co.nz



**MARLBOROUGH
DISTRICT COUNCIL**



Department of
Conservation
Te Papa Atawhai



Taihoro Nukurangi



**CAWTHRON
INSTITUTE**



MARINE FARMING ASSOCIATION



PORT marlborough
NEW ZEALAND LTD

Ministry for Primary Industries
Manatū Ahu Matua



Nelson City Council
te kaunihera o whakatū

Te Tau Ihu o te Waka a Maui

PORT NELSON

The Region's Gateway to the World