

TOS Marine Biosecurity Coordination Annual Report July 2017 to June 2018

1. Regional coordination

1.1 Full partnership meetings

Provides for 1 full Partnership event each year.

Now linked with NETS conference and moved to 24 July 2018. Around 80 registrations with capacity for 20 more. Also supporting the NETS conference field day the biosecurity managers later the same week.

Budget: \$2,700 YTD \$1,630

1.2 Management Committee meetings

Provides for 4 Management Committee meetings per year including all admin and staff attendance.

Four meetings of the Management Committee were held alternating between Nelson and Havelock. The Cawthron Institute joined the Committee part way through the year.

Budget: \$3,520 YTD \$4,978

1.3 Project management

Provides for all project management and administration.

All monthly reporting completed and budgets for projects adjusted according to emerging priorities.

Budget: \$19,050 YTD \$22,583

1.4 National and regional links

Provides for the Coordinator to attend 2 national meetings each year on behalf of the Partnership.

Presented for the Partnership at the NZ Marine Sciences Society, attended a meeting of the Biosecurity Ministerial Advisory Committee invited to discuss the need for a national pathways plan and provided an end user perspective on MBIE funded marine biosecurity research through NIWA.

Budget: \$2,320 YTD \$2,538

2. Awareness, engagement and intelligence

2.1 Website and newsletters

Provides for 5 newsletters per year and weekly maintenance of the website as well as design of other public awareness materials (banners, rack cards, posters etc.).

Website maintained and updated weekly, email address monitored and newsletters moved to quarterly so four produced during the year.

Budget: \$3,520 YTD \$4,000

2.2 Engagement and intelligence

All planned site visits completed for year with coverage extended to further slipways and industry sites and detailed briefing provided to staff of Port Marlborough, Sanfords aquaculture and Department of Conservation. In water cleaning and intertidal cleaning guides printed and distributed. Rack cards updated with new messaging and logos and 1,000 printed and distributed to councils. A small number of press releases produced with good coverage.

Budget: \$17,400 YTD \$13,400

3. Component 3 projects

3.1 Science advice

Provides science advice for all aspects of the project as requested by the Management Committee.

Advice provided on a wide range of issues to members of the partnership including the Marine Farming Association. Included preparing research bids, advice on new risk organisms such as *Cladophora* in Pelorus Sound and issues associated with the spread of *Sabella* and *Styela*. Data formats and reporting standardisation agreed with MDC.

Budget: \$10,500 YTD \$14,419

3.2 Summer survey of mobile vessels

Target of 180 mobile vessels was exceeded with 232 inspected and data gathered from 231 skippers. See the technical report details below for results. Approximately 23% were from locations outside the TOS, of which only two were of international origin. Of the New Zealand boats originating outside the TOS, 39 (17% of total vessels) came from Wellington; mainly from Mana Marina. Only six vessels were from Auckland and Northland localities where the fanworm is well established; however, no fanworm was found on these boats.

Budget: \$20,759 YTD \$25,313

3.3 Survey moored vessels

Moored vessels inspected were 312, so in total, 544 vessels and 546 structures were checked last summer, which is considerably greater than in previous surveys (186 boats & 73 moorings in 2016/17; 226 vessels & 135 moorings in 2015/16). The high numbers achieved in the latest survey reflected not only the greater effort (17 days c.f. 5-6 previously), but also that fine weather during the holiday season meant a lot of boaters were on the water. Of the 546 structures, 85% were swing moorings. The distribution of vessels surveyed across the council jurisdictions was: Marlborough (410 vessels; 323 Queen Charlotte, 87 Pelorus), Nelson (43 vessels), and Tasman (89 vessels; 84 Abel Tasman coastline, 5 Golden Bay).

Budget: \$34,061 YTD \$24,519

3.4 Technical report for all surveillance

The technical report was completed and published in June 2018. Key findings are reported below.

Although no Mediterranean fanworm was detected during the surveys, other marine pests were recorded. The key findings described below reinforce the role of recreational vessels in the spread of marine pests and highlight the importance of managing this pathway effectively.

The fouling (LOF) status of boats was similar to previous surveys. Overall, hull fouling was the greatest on vessels from Nelson, less on vessels from Marlborough, and least on vessels visiting from outside the region. The long-established marine pests, *Undaria pinnatifida* and *Didemnum vexillum*, were widespread. The most notable change since 2016/17 was the increased prevalence and relatively widespread distribution of the sea squirt *Styela clava*. The disjointed distributional pattern of *Styela* is consistent with human-mediated spread rather than natural dispersal. The current prevalence and wide distribution of *Undaria* and *Didemnum* likely reflects the future distribution (e.g. over the next 10-20 years) of *Styela*, and also of the fanworm in the absence of comprehensive management.

Survey results illustrate that intensive population control for target pests in vessel hubs is an effective way to reduce vessel colonisation and subsequent vessel-mediated spread. The fanworm has been managed to low densities in Picton/Waikawa, Nelson, and Tarakohe, and was not recorded anywhere outside of these hubs. By contrast, the more abundant unmanaged pests in these hubs were the ones that were prevalent on vessels. In the absence of *Styela* population control, or continued fanworm control, it can be expected that vessels in TOS hubs will increasingly act as vectors for the within-region spread of multiple marine pests.

The above results reinforce the importance of direct management of vessel fouling as an integral part of effective biosecurity. Achieving effective vector management is not straightforward, as it requires means to address the risk from vessels coming into the TOS from other regions.

A significant challenge for effective vessel management is reducing “niche” area fouling on the bottom of vessel keels, especially in situations where the main hull appears well-maintained and free of visible fouling. The Coordination Team is continuing to explore the potential for development of effective antifouling practices for keels. A related challenge, and critical issue to address, is the lack of capacity at haul-out facilities in Nelson, to enable boaters to be lifted from the water for cleaning or maintenance. The risk profile of recreational vessels plying the region’s waters is probably going to worsen unless this issue is addressed. Exacerbating this situation is the likelihood that some boaters will scrape these pests to the seabed while they are moored or anchored in high-value areas.

Budget: \$6,672 YTD \$7,603

3.5 Training operators

Provides for training divers, marina managers, marine farmers, and compliance staff.

Three half day programmes provided and many 1-hour briefings plus support provided to NIWA for 2 full-day species identification courses.

Budget: \$7,520 YTD \$10,614

3.6 Feasibility of mooring surveillance

Establishing feasibility of using mooring inspection systems for surveillance.

Proceeding ahead of programme with two mooring operators trained in fanworm surveillance with a nil return to date. Requires further work next year to ensure continuity and quality control.

Budget: \$4,160 YTD \$1,350

3.7 Initial incident response

Dealing with reports made to the Coordination Team of risk incidents. All incidents are passed to the relevant Council or MPI after initial assessment.

Support provided as required but Councils now up to speed in dealing with incidents directly.

The following incidents were logged:

July 2017	Tug Pacific Way and barge WH761 were in Tarakohe for 2 months before being inspected. Prior to arrival they were checked by a dive company in Auckland and cleared as clean, however <i>Sabella</i> has been found on them. NZ Diving Services team wrapped and chlorine treated the barge. They also did a diver sweep of the area where the vessels were loading and manoeuvring to check for and remove any <i>Sabella</i> that might have been knocked off the barge. No further <i>Sabella</i> were found.
August 2017	Vessel, Acquasition, came from Auckland was in Picton Marina since November. Had a few trips out in the Sounds and one to Stephens Island, Catherine Cove, Pelorus Sound, Kenepuru Sound and Raetihi for a few nights. NIWA inspected on 15/08/2017 and found <i>Sabella</i> on the hull. They removed all visible <i>Sabella</i> . MDC back traced locations visited and checked for <i>Sabella</i> , but none found.
October 2017	Yacht Bloody Mary was found to have <i>Sabella</i> up to 210mm long and <i>Styela</i> when it was lifted after being on a mooring in Nelson Haven for almost a year. The worms were found not to have reached reproductive maturity when they were sent to MITS.
November 2017	Fouled yacht Trediga was inspected on the slip in Nelson and found to be free of the suspected <i>Sabella</i> but had <i>Undaria</i> and <i>Styela</i> .
November 2017	During routine MDC surveillance work in Picton Marina, a substantial number (~35) of mature <i>Sabella</i> were been found on the sea floor of the outer Picton Marina. Nothing was found on any vessels currently in berth.
December 2017	Report of a yacht in Nelson marina with <i>Undaria</i> planning to sail to Abel Tasman but by the time of inspection the <i>Undaria</i> had been removed.
December 2017	While the TOS Marine Biosecurity team were carrying out the Summer Survey <i>Styela</i> was found on the keel of a vessel moored near Linkwater. Referred to MDC for follow up.

- January 2018 Dr Chris Piper sent a sample to MITs of an organism found on a mooring at Kenepuru, Second Friendship Bay. Barrie Forrest identified the sample as *Ciona*. Dr Piper was informed that it was no risk.
- January 2018 *Asciella aspersa*, *Asterocarpa humilis*, *Ciona intestinalis* Kenepuru, Marlborough. Submission was made to MITs of a number of these ascidians. Taxonomist identified that none of these ascidians had been previously detected from this area so technically represent a range extension. However, the taxonomist noted that due to the remoteness of the locality the ascidians were sampled (Kenepuru Sound) and lack of frequent collections or surveys in the area, it is possible that *C. intestinalis* and *A. humilis* have been there for some time, but not formally reported.
- January 2018 *Styela clava* found on the vessel Park Lane by Blumine Island. Subsequent cleaning confirmed.
- February 2018 *Styela clava* Ketu Bay, Marlborough detected by NIWA field team member during a scallop survey. Registered in the MITs database and represents a minor range extension for this species.
- March 2018 *Styela clava* Wairangi Bay, Marlborough. Marlborough Oysters reported juvenile *Styela* in Wairangi Bay, Croisilles.
- March 2018 Marfells Beach, Marlborough. Reported to MPI that juvenile or larval crayfish dead by the hundreds of thousands. Marfells Beach to Cape Campbell MPI asked us to investigate and when checked out it was found to be krill-like shrimp.
- March 2018 *Styela clava* Waikawa Marina, Marlborough. During marine fieldwork by NIWA two individuals were found on separate wharf piles by divers in Waikawa Marina They were removed and disposed on-land.
- Dec - March 2018 *Styela clava* Tasman, Nelson, Marlborough. During the summer of 2017/18 a survey was carried out looking at vessels and structures in the top of the South Island. Results: 5.2% of boats surveyed and 7.1% of structures had *Styela clava* as follows: * Abel Tasman - 5 vessels. * Nelson - 16 vessels, 21 structures. * Pelorus Sound - 3 vessels, 18 structures. * Queen Charlotte Sound - 4 vessels.
- April 2018 *Styela clava* Golden Bay. TDC Debbie Stone, Marine Farming Assn reported a suspected *Styela clava* incursion on the Golden Bay Ring Road Farming Site. The spat on this line was transferred from the Golden Bay Ring Road Spat catching site. Reported to the MPI 0800 hotline. Sanford removed the lines and took the marine waste to be dumped at a landfill in Takaka, there was about 12t in total.
- May 2018 *Sabella* Picton. NZ Diving Services found *Sabella* during MDC scheduled monitoring. There were approx 80 smaller (up to 200mm) and skinny animals that were found on the substrate underneath the 'Marverick'. With the exception of three, one of which was found on the substrate in the berth next to the 'Maverick', another on a pier three berths away and another which was an empty half tube on the keel of the 'Maverick' half way along it. It seemed a reasonable assumption that the *Sabella* that have been found have established from a spawning from the large *Sabella* that were found at the end of November 2017. The MITs report from the samples sent away from

the November find found that they were spawning ready, suggesting that they haven't yet spawned. However, because of their size, they had probably spawned during a previous spawning season. This led later in the year to a formal review of the MDC *Sabella* programme.

June 2018

Styela clava, Tasman. Sanfords reported *Styela clava* in the KA Sanfords advised MPI and TDC. Organism established in block in the Tasman Bay farming area. Also growing in the Golden Bay Ring Road farming area. The samples were 20mm to 120mm, there are many samples now where previously there were just a few. Sanfords advised they will, as they work on the lines capture as many creatures as they can and place them in a landfill.

Budget: \$3,950 YTD \$1,450

3.8 Policy advice

Responding to requests from the Management Committee for advice on planning and operations.

Most policy advice requested related to in-water cleaning and appointment of authorised persons.

Budget: \$5,800 YTD \$1,595

Overall

Overall, we were 97% expended as at 100% of the year. Due to an accounting error The Lawless Edge Ltd owes \$7,518.75 + GST to the Partnership and this will be corrected in the first billing of the new contract period.

Peter Lawless
Director
The Lawless Edge Ltd