

TOS Marine Biosecurity Coordination Annual Report

July 2019 to June 2020

1. Regional Coordination

1.1 Full partnership meetings

The Partnership meeting allows participants in the wider marine biosecurity system to meet one another and become familiar with the current status of risk and management. It can also be an opportunity to workshop on issues of common concern. The Partnership meeting is sometimes associated with other events such as science workshops and response planning. It has also become an opportunity for people in the marine biosecurity system around the country to connect and network. The Management Committee decided that the 2019 meeting would focus on getting effective in marine biosecurity in the region now that formal pest management plan have been finalised and the agencies have coordinated Sabella spallanzi responses. Biosecurity New Zealand held a networking session for practitioners in association with the Partnership meeting as this did not happen at the NETS gathering. The Partnership met in August 2019 in the Nelson City Council Chamber. The following presentations were made: Katie Lubarsky on what's happening at the border, Jono Underwood - how the rules have changed in Marlborough, Oli Florel - the state of the science, Peter Lawless - summer survey results followed by a panel discussion.

Budget: \$2,700 Full year: \$1,620

1.2 Management Committee meetings

Four Management Committee meetings were held during the year chaired by Jono Underwood MDC. Fred Te Miha joined the committee on behalf of the TOS iwi.

Budget: \$4,900 Full year: \$3,180

1.3 Project Management

Monthly reporting and administration were completed as planned. The Coordination Team met monthly. All Health and Safety requirements were met including training. Action lists were updated monthly, and reports provided to the contract supervisor monthly.

Budget: \$19,050 Full year: \$15,483

1.4 National and regional links

Presented online to an international genomics workshop (IWEG, Newfoundland) with Anastajia Zaiko of Cawthron on why we need genomics in marine biosecurity.

Budget: \$2,320 Full year: \$435

2. Awareness, Engagement, and Intelligence

2.1 Website and newsletters

Provided for four newsletters and maintained the website weekly as well as designed of other public awareness materials (banners, rack cards, posters etc.).

Budget: \$3,250 Full year: \$2,550

2.2 Engagement and intelligence

Advertised rules etc. in Marine Hub magazine 4 times.

Completed face to face visits as planned subject to disruption by COVID-19 lockdown rules:

Blenheim (15/6/20)

Met with Liam Falkner (MDC marine biosecurity contact). Showed Marlborough engagement plan and Liam believes that visits are the way to go to keep people aware. Supportive of local training in pests.

Nelson

(22/6/20) Dropped tablet off to Bruce Lines and had a catch up about recent fanworm finds on vessels that have been cleaned (niche areas)

(30/6/20) Andrew Hog/Amanda Kerr Harbourmasters - general briefing. Wants to update bylaw to take out non-navigation and safety parts including marine biosecurity provisions.

Havelock (24/6/20)

Contacted Grant Boyd (Sanfords Havelock) he was not available for a visit but sent on the revised fanworm guide to all vessels. Pest id refresher to be considered.

Drop in visit to Steve McKeown at Havelock Marina. They record where vessels have come from and if from risk areas then request information on antifouling and cleaning. Information recorded on the prearrival form, but only for vessels that require a berth.

Havelock Haulouts is no longer trading.

Drop in visit to Havelock Slipway (Jim Bryant), provided updated fanworm guide and pest id guide.

Drop in visit to Johnsons Barge Service (Jennie Johnson), they check moorings for fanworm but aren't currently recording this. Provided updated fanworm guide and pest id guide which were to be provided to the vessels. Would consider pest id training in Havelock.

Drop in visit to Pelorus Boating Club, knitting club was meeting so left pest id and updated fanworm guide.

Drop in visit to Sounds Shipwright Services (Fiona) provided updated fanworm guide and pest id guide. Interested in pest id training in Havelock.

Picton (25/6/20)

Drop in visit to N-viro (Marine Services NZ -Gill Herbert) interested in pest id training for operational staff. Provided updated fanworm guide and pest id guide which were to be provided to the vessels

Drop in visit to Westshore marine (Vicki & David Pook) Provided updated fanworm guide and pest id guide which were to be provided to the vessels. Also interested in pest id training if local.

Drop in visit to TCC Boats (Matt Byrne) Provided updated fanworm guide and pest id guide which were to be provided to the vessels. Also interested in pest id training if local.

Drop in visit to O'Donnell Park Barging James). Provided updated fanworm guide and pest id guide.

Drop in visit to Harbourmaster port side office, spoke to the 3 maintenance staff who work on the vessels and often support at sea. Left updated fanworm guide and pest id guide.

Go-Dive Marlborough was visited but the shop was shut, information left.

Waikawa Marina (Peter Broad) currently on leave after a back operation, temporary replacement (Mark) has worked there before and aware of marine pests and marina rules around arrivals.

Vining Ship Brokers (Ian Michel) Provided updated fanworm guide and pest id guide. Very aware of marine pest issues and all vessels that are sold are hauled out and cleaned prior to delivery. Also very aware of partnership and pointed out an ToS marine biosecurity pest advertisement in a boating magazine.

Drop in visit to Odies (Marine equipment specialists). They based at Waikawa marina but service and sell stuff only, interested in newsletter. Pest guide provided.

Meeting with Marlborough Marinas (Anouk Euzeby).

There is a Havelock user group that Marlborough Marina is part of along with key stakeholders. Pest id training could be offered to this group to cover more than the current engagement.

Marlborough Marinas do what is called a 'dock walk' where they are checking structures etc and record the information. This could be expanded to include vessel LOF, presently only heavily fouled vessels in the marinas are followed up.

Interested in pest id training for marina managers and could include local businesses as well.

Anouk interested in the vessel risk app but would rather own and manage the results themselves. Suggest Barrie make contact with Anouk to discuss further.

Motueka (24 and 30 June)

Neil Clifton Commodore and Ross Loveridge Secretary - invited to address AGM in August. Still waiting on approaches from TDC to sort out hardstand.

Commodore Paul McIntosh and Secretary Anne Simmons - will coordinate with yacht club on getting a talk to members. No progress yet on marina and hardstand upgrade. Sump now has pump out facility. Would like clear standards from TDC.

Wellington (25 June)

Briefing for General Manager of Chaffer's Marina Andrew Welsh on phone. Keen for us to provide a workshop this year.

Budget: \$17,400 Full year: \$12,750

3. Component 3 Projects

3.1 Science advice

Decision support tool produced and developed into an App. Comment on new lightbulb ascidian provided.

Budget: \$15,750 Full year: \$12,525

3.2 Summer survey of mobile vessels and moored vessels and technical report. The results can be viewed at <https://marinebiosecurity.gitlab.io/report/>

In the over the last 5-years, checks have been made of 1947 boats, 1507 structures (90% of which are swing moorings) and 100 seabed sites. Most of the effort has focused on the Marlborough Sounds and Abel Tasman National Park coastline, where active boaters are most prevalent. Additional surveys and/or removal programmes for target pests are undertaken in the main TOS ports and marinas, as part of other council-funded work.

In the 2019/20 survey we checked 469 vessels (mainly recreational), 349 structures and 53 seabed sites. With a greater focus on active vessels in the 2019/20 survey than previously, the total vessel tally was slightly less than last year but the number of active vessels was relatively high (291). A total of 52 of these vessels were from outside the TOS, of which 79% were from marinas in Wellington.

Out-of-region visiting boats made up 29% of total 'active' vessel records, but their occurrence was disproportionate across the two regions, with visitors (mainly from Wellington) being most prevalent in Marlborough. Around 25% of visitors from New Zealand ports originate from outside Wellington. It is uncommon to encounter vessels from overseas (only 6 checked in 5 years).

No pests that are new to the TOS region have been found over the 5 surveys. With respect to established pests, points of interest are as follows:

In 2019/20 the Mediterranean fanworm (*Sabella spallanzanii*, assumed to be juvenile) was recorded in low numbers on 3 vessels (Nelson Harbour, Pelorus Sound, Queen Charlotte Sound) which were linked to origins outside the TOS. These vessels were cleaned at haul-out facilities. Previously, there had been only one wider regional fanworm find on a vessel, in the 2015/16 survey (although there are separate records from known populations in Picton, Nelson and Tarakohe marinas).

Other long-established pests (kelp *Undaria pinnatifida*, sea squirt *Didemnum vexillum*) are widespread regionally on vessels and structures. The more recently established sea squirt *Styela clava* is becoming increasingly common on structures and/or vessels in a few locations (Tarakohe, Nelson, parts of Pelorus Sound). For these established species, the disjointed distribution is consistent with human-mediated spread rather than natural dispersal, highlighting the importance of managing spread by hull fouling.

The Level of Fouling (LOF) status of boats was largely similar to previous surveys, as follows:

- Around 20-25% of active boats exceeded the 'light fouling' (LOF 2) threshold, with many heavily fouled boats (LOF 4 & 5) active throughout the TOS region.
- Overall, hull fouling tends to be the greatest on vessels originating from Nelson, less on vessels from Marlborough, and least on vessels visiting from outside the region. Fouling is also relatively low on vessels from Tasman, reflecting that many of the boats surveyed are on swing or pile moorings than dry at low tide.
- Data from the 5 surveys shows a clear trend for marine pests to become more prevalent with increasing LOF. However, even LOF 2 vessels (i.e. with light fouling) can have pests present, typically on the bottom of the keel, as this area is difficult to effectively antifoul.
- The vessel maintenance habits of recreational boaters have not changed appreciably over the 5 years, despite efforts to educate skippers about the importance of regular high-quality antifouling, and vessel cleaning before departure from their home port.

Combined survey data reveal that around 28% of boaters had undertaken a hull clean since their last antifouling. Based on survey data from 2015/16 and 2019/20 (and a 2017 travel-lift study in the TOS), it is apparent that more than half of these vessel were cleaned in-water, often while moored or anchored in high-value areas. In-water cleaning is considerably less effective at a management tool than a haul-out and water blast (e.g. some vessels were LOF 5 within a month of being in-water cleaned).

Out-of-region boaters, while generally having only 'light fouling', represent a particular risk of introducing new pests to the TOS due to fouling of niche areas (e.g. bottom of the keel). Wellington marinas are not currently thought to have pests of significance to the TOS, but if such pests established, those locations would become significant sources for spread into the region. In this respect, among the key needs are approaches to ensure that visiting vessels:

- Are detected before or upon arrival through an improved intelligence system.
- Arrive in the TOS with a 'clean' hull where this can be achieved.
- Are subjected to risk-profiling and an appropriate management response upon arrival, where feasible (e.g. where the point of arrival is a marina).

Changing the maintenance behaviour of within-TOS boaters is critical for reducing the regional spread of established pests and understanding current attitudes and barriers to change is part of this picture. One of the recognised barriers is lack of capacity at haul-out facilities in Nelson to enable boaters to be lifted from the water for cleaning or maintenance. Although this issue is now being addressed, the risk profile of recreational vessels plying the region's waters will not improve until it is fully resolved. Related to this issue, the current alternative practice of in-water cleaning in remote locations provides a potentially significant mechanism for the spread of pests to high-value areas across the TOS. Arguably, it is futile to be advocating or regulating improved hull hygiene without systems in place to support best practice

Budget: \$56,672 Full year: \$60,021

3.3 Training operators

Wellington training sessions completed at Mana, Seaview and Evans Bay haul outs with support from Altex paints. Approximate attendance 40 at Mana, and 30 at each of Seaview and Evans Bay. Good interest from public with intelligent questions. Had to cancel session in the same format in Nelson and Picton planned for 28 March and 29 March due to lockdown commencing on 25 March 2020.

Budget: \$7,520 Full year: \$3,625

3.4 Initial incident response

Dealing with reports made to the Coordination Team of risk incidents. All incidents were passed to the relevant Council or MPI after initial assessment. Generally little support was needed by councils as incident response procedures are now well developed.

The following incidents were recorded:

22 July 2019 *Sabella* and *Styela* Nelson Harbour - One *Sabella spallanzanii* (~50 cm tube length) was observed (and removed) from Nelson Marina and disposed of to landfill. *Styela clava* was observed throughout Nelson Harbour (23 of 30 diver search locations, 6 of 100 benthic sled locations and 1 of 26 shore search locations).

July 2019 *Sabella* Marlborough - Small *Sabella* growing in the hinge area of the rudder on a yacht that was on a mooring in the Grove Arm. Surveillance was undertaken through the Grove Arm and Anakiwa mooring areas with no evidence of fanworm found.

August 2019 *Sabella* Marlborough - Received a phone call from a mussel farmer re potential *Sabella* found on one of his mussel farms in the Tory Channel. MITS confirmed not *Sabella*. Confirmed as *Acromeglalomma suspiciens*.

November 2019 *Clavelina lepadiformis* Golden Bay - MPI reported a sighting of *Clavelina lepadiformis* at Tarakohe Harbour.

20 November 2019 *Sabella* Marlborough - During diver surveillance in Grove Arm, 15 suspected *Sabella* were discovered on the sea floor below the mooring. 2 December 2019 - a return visit to the area using lead-line searching of the seafloor out to 25m from the mooring block. Another 12 *Sabella* were found ranging from 100-200mm long close to where the original ones were found. Suspected as the same incursion.

26 November 2019 *Sabella* Nelson - As part of scheduled delimitation/elimination work a single *Sabella* specimen was found under a walkway platform on the shore side of the landing pontoon inside marina.

3 December 2019 *Sabella* Marlborough - *Sabella* found on a mussel farm in the eastern Port Underwood. 6 December 2019 two further fanworm were found and removed from the line.

5 January 2020 *Sabella* Marlborough - As part of a routine summer surveillance in Pelorus Sound, 20 *Sabella spallanzanii* was found on a yacht from the Far North. The vessel was anchored in Chance Bay.

16 January 2020 *Bonnemaisonia hamifera* Marlborough - Range extension of the non-indigenous seaweed *Bonnemaisonia hamifera* (Hariot, 1891). This was collected from Queen Charlotte Sounds in the Marlborough Sounds by the NIWA seaweed team when they were harvesting *Asparagopsis* for culture trials, where they recently noticed the tetrasporic stage of this species contaminating their cultures.

21 January 2020 *Sabella* Marlborough - D'Urville Island - removed a total of 16 kg bio fouling containing likely a few hundred small *Sabella* (10-80mm) and 18 larger worms (140-240mm from the sea chest).

30 January 2020 *Sabella* Marlborough - Onahau Bay nine immature *Sabella spallanzanii* were found on the keel of the vessel amongst turfing fouling.

26 November 2019 and 24 February 2020 *Sabella* Nelson - On 26 November 2019 a single *Sabella* was found under a walkway platform on the shore side of the landing pontoon inside marina. On 24 February 2020 a second *Sabella* was found under a marina finger pontoon.

28 February 2020 Marlborough - Vessel reported by public in Moetapu Bay, Mahau Sound that has not been hauled out and cleaned in at least 5 years and has considerable growth on it. Assessed as no risk.

18 March 2020 *Sabella* Nelson - During the annual TOS Marine Biosecurity Summer Survey, two fanworm were found on a yacht- 110 and 130m tube length, one of each side of keel.

24 March 2020 *Clavalina oblonga* Picton - Turned out to be *C. lepadiformis*.

19 June 2020 *Sabella* Nelson - As part of scheduled delimitation/ elimination work discovered approximately 20 *Sabella* on a catamaran in the two outboard cavities in Nelson Marina.

Budget: \$3,950 Full year: \$1,910

Overall

Overall, 84% expended as at 100% of the year. Note that provision for Fred Te Miha has been included in this total. Year-end \$23,000 under spent due to COVID caused reduction in activity.

Peter Lawless
Director
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