Incursions and Near Miss Register – updated 14 August 2023

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
Late 90's	Choose an item.	*Undaria*	Nelson	Old longliner from Suva via Wellington was towed into Port Nelson because it was a cheap mooring site while they decided whether to keep the vessel or scrap it. Swing moorings were then unregulated and free. There was also possibly, a local connection with the area. *Undaria*, which was probably picked up in Wellington, got into Nelson Haven and has become established on artificial structures. Fortunately it's not spreading because it gets caught in the sandy bottom and has nothing to hold onto. It is lightly distributed through Tasman and Golden Bays, mostly on mussel farms outside Nelson Haven. However is widespread in the Marlborough Sounds.	For *undaria* a code of practice was agreed with Marine Farmers. However it's not clear how effective this is.	Choose an item.
2003	Choose an item.	*Undaria,* poss *Didendum*	Nelson	A barge was beached and scraped by its owner on the shingle bank on Vickerman Street in Nelson. Undaria had been spotted on the hull from a distance.	The owner had the error of his ways pointed out to him and the barge was moved, probably out of Nelson.	Choose an item.
2004	Choose an item.	*Didendum vexillum* and other stuff'	Marlborough	Came from Tauranga on The Steel Mariner, a logging barge, to Shakespeare Bay in the Sounds (deepwater mooring in Picton). It is thought to have spread from the SM to salmon farms to mussel farms to other mussel farms and spread around TOS.	It cost MDC lots of money as they tried to eradicate it - $200,000 - need detail from Dave Grueber. Also cost Marine Farmers $500,000. Cawthron did a report on the event. In the end the vessel was towed out to Cook Strait and sunk	Choose an item.
2005ish	Choose an item.	*Styela*	Nelson	*Styela* found on the hull of a ship out of Lyttelton. Nb. This was a commercial vessel ie not slow moving.	It is not clear as to how *Styela* got into Nelson Haven. It could have been this incident. Also, although it is doubtful, because they are fastidiously cleaned, it could have been transmitted by 2 naval vessels here for the Nelson centenary just after *Styela* was discovered in Auckland, their home port.	Choose an item.

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2008	Choose an item.	*Styela*	Tasman	A fishing vessel, the Hemnestral, had been sitting in Port Lyttleton for three years before moving to Port Tarakohe in 2010. During a special survey of the port (because of a proposed expansion of the marina), a solitary *Styela* stalk was found and removed.	The vessel remained in Tarakohe.	Choose an item.
2008	Choose an item.	Brown mussels	Nelson	The Ocean Patriot was an oil rig which came from South Africa to NZ in c. 2005 where it drilled off Canterbury, Wairapapa and Taranaki, it was due to move to Australia but the Victorian government required it to be biofouled. To avoid very rough weather, it was brought into Tasman Bay for cleaning, initially beyond the 12 mile limit but subsequently moved into NCC's territorial waters MAF were aware of its movements but had no legal authority to act.	The owners were taken to court but due to a legal technicality the action failed (NCC lawyer left it too long and fell outside permitted timescale). However, MAF and the oil industry are being more proactive as a result. The oil industry produced guidelines on cleaning rigs. Stakeholders met and actions were agreed - not sure what has actually happened (see PDF of a PowerPoint presentation by Lindsay Vaughan in June 2008 on Box.Net). The oil industry is good at informing NCC now. The oil industry body in NZ is PEPANZ (Petrol Exploration and Production Association of New Zealand). AWE is an Australian oil exploration company and is the main company operating in the area; Paul Sheldon has a good working relationship with Dennis Washer, the Chief Operating Officer. The oil Co. in question paid for a brown mussel clean up in Tasman Bay, ie. dredging at a cost of hundreds of thousands of dollars.	Choose an item.
August/ Sept 2011	Choose an item.	*Undaria*	Tasman	The Santa Monica towed by the Hemnestral from Wellington. Had been in Port Wellington for five years. Was removed from Wellington seemingly without full permission but was accepted into Tarakohe with conditions.	On inspection by a diver the biosecurity risk turned out to be less than was first thought and wrapping was deemed not necessary. The vessel remains in Tarakohe and will be moved to Nelson in October for cleaning.	Choose an item.

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					Update February 2013 - Santa Monica remains in Tarakohe.	
Feb-13	Choose an item.	*Eudistoma elongatum*	Near Pepin Island, north of Nelson city	On the evening of 7 February 2013 at 9pm Rob Davidson of Davidson Environmental reported by email a possible incursion of *Eudistoma elongatum*.	Mike Page of NIWA confirmed that the find was an algae. Roberta D'Archino, an alga specialist at NIWA Greta Point, identified the alga that Rob Davidson collected was an endemic brown species of *Myrioglea intestinalis*.	Choose an item.
Mar-13	Choose an item.	*Styela clava*	Wellington	Melanie Russell emailed a heads up that *Styela clava* (an invasive foreign sea squirt) has turned up in Pauatahanui Inlet in Wellington.		Choose an item.
6-May-13	Choose an item.	Fanworm *(Sabella)*	Nelson	*Sabella Spallanzanii* x 9, Caldwell Slipway, Vessel "Manini", forward on hull, collected by Don Morrissey, exposed one day after slipping. Sent to Geoff Read, NIWA for identification.	Confirmed as *Sabella*, but all those collected were much smaller than reproductive size, and there were no mature oocytes in the 2 worms that Geoff took coelomic fluid from. No larger specimens among the worms picked out of the debris were seen - maximum length of any tubes was 10cm. Will include Lay Up Berth 2 in next NIWA surveillance survey (27-31 May). Worms could have been knocked off the hull so NIWA will try to search the seabed at the berth using their ROV or possibly divers. The Caldwell Slipway was thoroughly searched by Bruce Lines (funded by MPI) and no further *Sabella* were found. The other areas the Manini was berthed will be searched by NIWA in the survey commencing 27 May. All areas will be further checked in the summer survey. The Daniel Solander is no longer coming	Choose an item.

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					to Nelson. A press release was issued by Nelson City Council and this was picked up by local and national media. The learnings from the event were incorporated into the incident exercise as part of the annual Partnership meeting. The report of the incident exercise should be read with this report.	
12-Jun-13	Choose an item.	*Styela clava*	Inner basin on the Picton Marina inside the "Coat hanger" bridge. At the innermost sites at 2m depth (max depth in the basin 3.5m).	The clubbed tunicate was found in the NIWA port survey 12 June 2013. The positive identification was confirmed by Mike Page of NIWA and the incident phoned through to the 0800 number by NIWA.	A delimiting survey was completed as soon as visibility allowed. 100 individuals found in various states of maturity – results and background summarized in Barrie Forrest's report. Infestation restricted to inner Picton marina. Looks like settlement in Spring 2012 with spawning since then. Individuals carefully removed but only about 90% success rate expected. Comms prepared and distributed. **Update 19-Nov-2013:** Key stakeholders met in mid-October 2013 to discuss the future of the *Styela clava* incursion in Picton. It was agreed that an objective of Containment and Spread Reduction was the favoured option. In effect, attempt to maintain a low density in Picton marina to minimise spread risks. This would mean an end to the Response and a new Long Term Management Plan developed. A minimum of two comprehensive dive surveys was agreed as the minimum to achieve this	Choose an item.

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					with any added benefit from wider in-kind or community based contributions welcomed. There remains the ever present risk of re-infection from other populations located nationally. All stakeholders recognised this and the need to develop and maintain a dynamic management plan with regular review points. The Long Term Management Plan is being developed with commitments still being finalised. **Update 5 May 2014:** In Waikawa Bay, Barrie Forrest discovered the Mediterranean fanworm *Sabella spallanzanii* on the keel of a moored yacht in February. A further delimitation survey by Diving Services New Zealand has not find any more fanworm to date. However, three clubbed sea squirts *Styela clava* have been found during the fanworm surveys. This represents a further range extension of *Styela* in Marlborough outside the managed population in Picton marina. **Update 17 July 2014:** The first dive survey under the Picton Long Term Management Plan for *Styela clava* was scheduled for May 2014. After 6 *Styela* were found Waikawa Marina and Bay in April 2014, a brief pause and re-think was conducted. It was agreed to proceed with the dive work but spread it across both Picton and Waikawa in the 3 days of work budgeted for. In the end, approximately 1.25 days were	

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					spent covering the head of the Picton Marina and targeted locations moving outward and the remaining 1.75 days spent in Waikawa. Some areas not dived in the Waikawa Marina were covered along with virtually all the swing moorings in the main part of Waikawa Bay (where the 3 were found in April). Final numbers found and removed in this July 2014 dive are: - 57 Picton Marina + 4 dead ones found (2 in one location). - 3 Waikawa Marina + 3 in April 2014 - 16 Waikawa Bay swing moorings + 3 in April 2014. **Update November 2014:** Suppression dive survey took place. Time/budget constraints meant not 100% of areas in Waikawa (a very large area) could be covered. This meant only structures in the outer part of Waikawa Marina were searched along with a sub-set of swing moorings. The entire Picton Marina, including most of outer commercial jetties were searched. Final numbers of *Styela* found and removed were 97 in Picton Marina (multiple very large individuals up to 200mm length), 1 in Waikawa Marina (1 x 85mm on seafloor adjacent to berth 16).	

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9-Aug-13	Choose an item.	Heavily fouled vessel from Marlborough	Marlborough Sounds to Wellington	Don Morrissey from NIWA was made aware of a heavily fouled vessel in Wellington from the Harbourmaster on the 7th of August. NIWA were surveying at the time however by the time they followed up on the vessel it had been hauled out and cleaned. The vessel was reported to have come from Picton, however Port Marlborough confirmed that vessel had not been at marina since Jan 2013 and likely to have been on a private mooring in the Marlborough Sounds	Port Marlborough following up with previous owner and will report back to partnership of findings.	Choose an item.
23-Sep-13	Choose an item.	Possibly heavily fouled vessel coming to Nelson.	Nelson	Vessel Raroa came to Nelson for repairs. Came from the Taranaki oil fields, is originally from the Indian Ocean. Concerns about possible heavy fouling.	Raroa was clean, no further action required.	Choose an item.
5-Nov-13	Choose an item.	Fanworm *(Sabella)*	Nelson	One fanworm found on the bottom of a finger wharf E between vessels 10 and 12. Specimen was 130mm.	Specimen sent to Geoff Reid who reported it to be non-reproductive. Finger wharf E and the next finger wharf were searched. Delimination survey to be undertaken. Next steps to be discussed at next TOS Management Committee meeting when results are in hand. **Update 5-May-2014:** In Nelson marina, the Mediterranean fanworm was found in early November 2013 by NIWA. Subsequent delimitation by Diving Services New Zealand found an additional 11 worms in the marina in late November, and 22 worms in an April survey. Two of the finds were on boats. Barrie Forrest found suspected fanworms on two boats in Nelson marina in February, but these samples went missing en route to MITS. However, NIWA	Choose an item.

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					later found a fanworm on a pontoon next to one of the suspect boats. **Update 20 May 2015:** Bruce Lines of Diving Services NZ did a *Sabella* survey in Picton. Found 2 *Sabella* and 400 Styela. At this date the survey has not yet been completed.	
20-Jan-14	Choose an item.	Fanworm *(Sabella)*	Nelson	Bruce Lines dropped off a worm tube at NIWA that his dive team collected from the hull of a yacht (Diomedea) in Nelson Marina. The tube was small (50mm long and 2-3mm diameter) but there was no worm in it when the tube was cut open. The vessel arrived in Nelson in early December having spent the previous six months in Northland, and the Gulf. Previously was in Sydney Harbour up until April. Last antifoul was in January 2013 in Australia.		Choose an item.
17-Feb-14	Choose an item.	Fanworm *(Sabella)*	Nelson	Diver working on "Spirit of Independence" found suspected fanworm. Reported to MPI.	**Tim Riding (MPI) response:** We have been trying to get a biofouling sample from the Spirit of Independence since we had the initial report several weeks back. The diver who reported this issue was scheduled to be undertaking more routine maintenance on the Spirit of Independence during this time. They were going to take a sample for us to assist with confirming ID, but the maintenance diving hasn't gone ahead yet. Unfortunately, until we confirm identification of the biofouling there is little that we can do. Similarly, unfortunately we don't have budget for diving on every vessel in New Zealand with biofouling on it. As it hasn't	Choose an item.

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					been offshore for 3 years it is highly unlikely that there are species on its hull which aren't already present in New Zealand - protecting our waters from new marine pests is MPI's primary focus and responsibility, although we will assist with regional marine pest issues as best we can. **4 March:** No update on the Spirit of Independence- Bruce hasn't dived the vessel since, and Pacifica shipping hasn't divulged the dates of their next scheduled maintenance. Jeannine or myself will let you know if this happens.	
20-Feb-14	Choose an item.	Fanworm *(Sabella)*	Nelson	Barrie Forrest found a couple of samples of small sabellids that he had collected from two boats in Nelson Marina and took them to Cawthron	Identified as small *S. spallanzanii*. One sample is of 1 or 2 worms from the vessel Xas on berth E1 and the other is a cluster of worms, among other fouling, from the vessel Vela on berth D5. At present they are being fixed in formalin, and will be sent to MITS for Geoff to confirm either later today or first thing tomorrow. 6 March The samples collected by Don from the Nelson Marina and the vessel 'Xas' have now been identified and are as follows: The tube on Xas was a Hydroides serpulid, presumably Hydroides elegans, embedded in a bryozoan (?) turf (MITS 70870). The *Sabella spallanzanii* specimen from the pontoon = Tube 250 mm, BL 135, female, semi gravid, 200 µm oocytes (MITS 70871).	Organism managed in place

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21-Feb-14	Choose an item.	Fanworm *(Sabella)*	Waikawa Bay, Picton	Barrie Forrest discovered suspicious fanworms on heavily fouled vessel in Waikawa Bay. The samples were preserved and sent to MITs for formal identification. The 0800 MPI hotline was also informed.	**Location details:** The yacht was called the Prince of Tides, moored at E2597791, N5993263 (these coords are NZ Geodetic Datum 1949), which is about 300 m NE of the main Waikawa Bay wharf/launching ramp. This boat is heavily fouled with mussels and Undaria. I couldn't see an MDC number on the mooring. As I recall, it was the most northern of a cluster of yachts just south of a small bay (Wharetukura Bay?). There were a few vessels just to the S or SW of the yacht which did have numbers that matched the MDC moorings database. These were the yacht Tuhira (MDC mooring 2504) and power boat Lanakai (MDC mooring 2593). Next to the Prince of Tides was the sailboat Cabalito de Mar, but this boat didn't have a visible mooring number. **Remaining worms:** There are still some *Sabella* (ca. 5-10) on the bottom of the keel of the Prince of Tides (may also be some on other parts of the hull). They're embedded into the mussel clumps, making me think that the worms have been present for quite some time – conceivably they're attached directly to the base of the keel (which was probably never antifouled), and the worms tubes have managed to outgrow the mussel clumps that have also developed. **5 March:** Here are the results for the second lot of 16 large adult worms from Prince of Tides, Picton. Rather inconclusive overall. It was difficult to get uncontaminated samples out of these because mostly gut contents had leaked	Vessel risk mitigated inside TOS

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					widely into the coelomic space. **Update 5-May-2014:** In Waikawa Bay, Barrie Forrest discovered the Mediterranean fanworm *Sabella spallanzanii* on the keel of a moored yacht in February. A further delimitation survey by Diving Services New Zealand has not find any more fanworm to date.	
28-Mar-14	Choose an item.	Fanworm *(Sabella)*	Nelson	Matt Molloy spoke to Dave Duncan, the Nelson Harbourmaster, who advised that the vessel Columbus was going to come to Nelson for slipping. Dave advised that the vessel was reportedly fouled with *Sabella* and some of them were being removed by hand in Wellington, there were plans to slip and fully clean in Nelson, however the vessel is too large for the small slip and there is not an available berth in the large slipway for another month or so. Dave advised the vessel owner not to come to Nelson as we do not want the fouled vessel sitting round in the harbour.	Owner advised he may get it fully cleaned in Auckland.	Vessel risk mitigated outside TOS
17 Jun 14	Choose an item.	Fanworm *(Sabella)*	Nelson	The MPI response team has contracted Diving Services NZ Ltd to inspect the sea chests and hull of the Spirit of Independence for suspected Mediterranean fan worm. They will carefully remove and bag any fanworm found by hand and these will be sent to NIWA for preservation and assessment of reproductive status. If they see any other organisms that they consider are unusual, these will also be carefully collected and sent to NIWA.	**19 June 2014:** Diving Services inspected and removed a large number of *Sabella spallazanii* (Mediterranean fan worm) from several of the sea chests of the Spirit of Independence when it was berthed in Nelson Port. Due to poor visibility the team ran out of time and will complete the work when the vessel returns to Nelson next week. So far, approximately 20 specimens have been collected and	Vessel risk mitigated inside TOS

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				This work is being carried out under the Biosecurity Act as urgent measures to reduce the risk of spread of Mediterranean fanworm into Nelson harbour that this vessel may pose. Costs are being split between the shipping company, the council and MPI.	preserved, these will be sent to MITS for assessment of reproductive maturity and size. The hull and bow thrusters were inspected and no *Sabella* were detected, as well as no other significant biofouling. **23 June 2014:** NIWA has now assessed the reproductive status of *Sabella* removed from the Spirit of Independence on 18 June by Diving Services. Five of the 23 specimens assessed were found to be gravid. However, none of the fan worms had reached the stage of spawning. Expert advice is that it is likely those with gametes could have reproduces this winter if they had not been removed. The inspection and clearance of the sea chests and emergency fire intake will be completed when the vessel is next expected in Nelson – scheduled for this Wednesday. **25 June 2014** The clearance of *Sabella* from the sea chests and emergency fire intake of the Spirit of Independence was completed on 25 June in Nelson Port. More than 100 *Sabella* were removed by Diving Services NZ and a little over 50 assessed for their reproductive status by NIWA. Advice from Geoff Read, who assessed the samples, was that a large proportion of both the males and females were gravid and "ready to spawn imminently".	

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					MPI have also received the report from Diving Services NZ Ltd, documenting the work they did to clear the *Sabella*. All sea chests (5) and the emergency fire intake have now been inspected and cleared of *Sabella* by manual removal. However, the divers could not get to the deeper recesses of the lower sea chests so it's not known if there are any *Sabella* in those areas. The dive team did an impressive job of inspecting the hull and clearing the sea chests and fire intake during the vessel's brief time in port. Kathy Walls, Jeannine Fischer and Rose Bird have met to discuss the issues and lessons learned from this pathways risk vessel and agree on recommendations that have come out of this event. **Results from MITS:** 23 worms assessed by MITS – 4 females (1 was gravid), 9 males (4 gravid), and 10 indeterminate (MPI investigation number TAR10148b).	
12 Aug 14	Choose an item.	Notification of possible risk	Golden Bay	Kurt Aldam of Programmed Marine enquired about anchoring a semi submersible drilling rig for several months in Golden Bay. Drilling Rig is non propelled and would be towed to location by an AHSTV and a 4 pc primary anchor spread laid. The purpose of this is awaiting the rig's next contract and she would also under take some maintenance works, stores and bunkering activities would need to be undertaken on the location, crew would be	Paul Sheldon, NCC: It was dry docked in Singapore last year along with it support vessels and dry lifted out to NZ only 12 months ago. We will need documentation but it sounds like the right things have been done (see below) On that basis any fouling will be of NZ origin and less of a concern. I would assume the rig has been off shore since 2013 and therefore unlikely to have picked up the type of fouling from harbour areas where the greatest risks	No risk

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				changed out by crew boat. Rig was dry lifted into NZ August 2013 via Heavy Lift Vessel ex Singapore, In Singapore the hull/pontoons were fully cleaned of all growth and subsequently cleared by Primary Industries Agriculture Dept on arrival NZ. The AHTSV's also arrived in NZ in the same condition, these vessels will not be staying in NZ and will probably depart NZ late November 14.	are. An offshore location on a fine sandy bottom (like Golden Bay) is quite unsuitable for most species of concern to establish. Provided the antifouling on the support vessels is still effective there should be little risk. We would want some sort of documentary confirmation perhaps dated photos showing the rig in dry dock and transit and anything relevant on the antifouling status of the support vessels but it sounds as good as you get.	
27 Aug 14	Choose an item.	*Perkinsus olseni*		An aquaculture facility notified MPI of a suspected detection of the protozoan parasite *Perkinsus olseni* in a NZ green lipped mussel (*Perna canaliculus*). The notification was based on histopathological findings during routine health monitoring by the aquaculture facility. No unusual mortality or signs of ill health have been observed in Perna canaliculus at the facility.	NZ's national animal health laboratory verified the presence of *Perkinsus* by histopathology and confirmed *P. olseni* via conventional PCR and sequencing. This is the first detection of *Perkinsus olseni* in NZ green lipped mussels. *Perkinsus olseni* is known to occur in wild populations of the bivalves *Austrovenus stutchburyi* (Veneridae), *Macomona liliana* (Tellinidae), *Barbatia novaezealandiae* (Arcidae), and *Paphies australis* (Mesodesmatidae), as well as farmed and wild populations of *Haliotis iris* (Haliotidae) in the North Island of NZ.	No risk
22 Sept 14	Choose an item.	Suspected fouling of vessel Voyager P	Nelson	The Voyager P is at layup berth 2. Barrie had a look at it on 22 September at 3.30pm. The external appearance was that the boat looked a bit rusty and worn topside. Was quite hard to see fouling from the surface, as the berth side was in shade. All that was visible was filamentous macroalgae (quite thick) on bow section at water-line, and lesser algae on stern,	**Update: 23 September 2014** Peter advised MPI – Simon McDonald and Rose, to see if they are prepared to act. **Update: 9 October 2014 (Peter Lawless)** MPI put together a team of about 10 people and are working on wrapping the vessel. Rose Bird is overall liaison for the response and Simon McDonald is leading	Vessel risk mitigated inside TOS

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				which most likely occurred in Nelson. He had a chat with the skipper/engineer and gleaned the following: • Vessel was cleaned in south Australia Feb 2014. Had been working in at least NSW and Tassie prior. • Was antifouled about 2 years ago, but the job was poor. • Arrived Napier about April and worked out of that Port. • Been in Nelson ca. 2 months • Need to slip and antifoul vessel before it goes back to Australia (probably in Nelson). This has been required by Australian authorities. Need to find out how long he plans to be at berth before slipping. If it's getting into summer, it may pay to do a quick in-water check. Clearly the antifouling is poor/spent, so it may have picked up something of interest in Australia (i.e. re-growth post-clean + 2 months before departure to New Zealand).	it. The Minister for Primary Industries visited the response room yesterday and was briefed. Clare Barton is the lead at NCC as she has not yet appointed a third tier person to the biosecurity role. MPI and NCC are now working together directly on Comms. I am still dealing with resource consent issues. Bruce Lines is being commissioned to wrap the vessel. Thomas Marchant is the key contact in the Port and MPI is now working with him and Dave Duncan directly **Update: 13 October 2014 (Peter lawless)** MPI intend to proceed and have Bruce Lines wrap the vessel tomorrow at the McGlashan Quay. They do not intend to use chemical dosing. Cawthron will be engaged to record the die off under the plastic.	
24 Oct 14	Choose an item.	*Sabella*	Chaffers Marina, Wellington	The marina manager at Chaffers Marina in Wellington contacted MPI about a vessel that had been hauled out to be cleaned and the marina manager suspected it had *Sabella* on it. Samples were taken for ID and these have been confirmed as *Sabella*. The information we have suggests a colony of worms capable of reproduction has been present in Chaffers Marina from around autumn 2014 onwards (the period the vessel has been in the marina). The vessel had previously spent time in	Anjali Pande from MPI's Investigations Team spoke to the vessel owners and advised them of the need to clean and disinfect the vessel, concentrating on niche areas, to remove the *Sabella*. They have now relaunched the vessel after thorough cleaning and antifouling. While there is a likelihood that the worms have spawned in the marina the National Marine High Risk Surveillance undertaken in July recorded no *Sabella* in	Organism managed in place

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				Auckland (West Harbour marina).	the marina. The next surveillance dive is due in November, and we are looking at getting the divers in the water to inspect the area in the marina where the vessel was moored as part of that survey.	
1 Dec 14	Choose an item.	*Eudistoma* (Australian droplet tunicate)	Golden Bay	Kris Solly sent photo through to Matt Molloy: "This was found in Tasman Bay today and sounds like there is more of it in Collingwood too, is it the Australian Droplet Tunicate? Photo was forwarded to Barrie Forrest who said that superficially it looks like the droplet tunicate but it's hard to tell inside a plastic bag. He advised that the correct procedure is to call the MPI pest and disease hotline: 0800 809966 and they would advise what to do next.	**Update – 8 December** Email from Anjali Pande, MPI: "Confirmation from taxonomist that it's mollusc eggs....and my colleagues agree with me also. I'm happy to stand it down on this basis."	No risk
November 14	Choose an item.	*Sabella*	Picton Marina	A single Mediterranean fanworm was found in Picton Marina while searching for *Styela* – on a new rock wall at the head of the marina.	ID was confirmed by NIWA and the fact it was only 147mm long and note mature. Discussions between MDC and MPI are underway as to 'where to from here' as it is the first find on substrate, not a vessel. **Update May 2015:** A dive survey was done in May 2015 and 3 *Sabella* were found around the same location as the earlier find.	Organism managed in place
19 February 2015	Choose an item.	*Bonamia ostreae*	Marlborough	MPI (Richard Fraser) reported a new incursion of *Bonamia ostreae* in the oyster farms in the Marlborough Sounds. This is a new to NZ incursion. It was found by Cawthron in the course of other work.	MPI has taken responsibility for it. **Update 10 March 2015 from Richard Fraser, MPI:** Two sites were confirmed positive for the parasite *Bonamia ostreae*. This strain	Organism managed in place

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					on *Bonamia* is the first time it has been reported and detected in New Zealand. *B. ostreae* is closely related to *B. exitiosa* that has been present in New Zealand since at least 1964 that impacts the Bluff oysters. *B. ostreae* has already spread through many countries where commercial production of European flat oysters takes place. There are no human health implications. Affected oysters are still safe to eat. Further surveillance (sampling) is kicking off in Big Glory Bay and Foveaux Straight this week with the results of this sampling used to inform response options. MPI will provide further updates as new information comes to light. **Update 4 May 2015 from Richard Fraser, MPI:** Monitoring, surveillance and testing to determine current extent and spread of *B.ostreae* continues. To date three locations in the top of the South Island have tested positive for *B.ostreae*. All other sample locations have resulted in a negative at >5% prevalence (locations listed below). Work now continues to test to >2% prevalence. A Controlled Area Notice will be put in place to limit the spread of *B.ostreae*. A permitting process will be developed to manage the movement on conveyors in relation to the requirements of the Controlled Area Notice.	

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					Long-term and contingency planning will be undertaken to prepare for long-term management of the response and unanticipated consequences. As part of the above, MPI must consider, assess and manage the legal, trade, reputational, and biosecurity risks at all stages of this response. **Samples sites**: Positive sites: Port Underwood, Tory Channel, and Nelson. Negative at >5% prevalence sites: Hauraki Gulf, Manukau Hbr, Wellington Hbr, Golden Bay, Tasman Bay, Nelson (re-test of the above site), Cloudy Bay, Chatham islands, Otago Hbr, Foveaux Strait, Big Glory Bay (Stewart Island). Chatham Islands have tested and returned negative at >2% prevalence. **Update 9 May 2015:** *Bonamia ostreae* have only been found at Queen Charlotte Sound and Tory Channel. MPI have declared a controlled area – all MDC area and all NCC area (land and sea). The consequence of controlled area is that 4 species can only be taken out of a controlled area with a permit. Species are flat oysters, Pacific oysters, green shell mussels and gooey ducks. They can all be moved around *within* a controlled area. MPI also declared two protected areas –	

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					Southland and Chatham Islands. These species can't be moved into protected areas without a permit.	
16 February 2015	Choose an item.	*Perkinsus olseni*	Marlborough	*P. olseni* was detected in scallop samples sent from locations in the Marlborough Sounds. The 'poor condition' of the scallops sent in for sampling could not be directly linked to presence of *P. olseni*. The investigation determined a multi-factor cause was responsible for the scallops 'poor condition'. The detection was reported to the OIE – the world animal health organisation	*Perkinsus olseni* is not a new to New Zealand organism having been recorded in clams and other shellfish, particularly shellfish from the North Island. *P. olseni* has also been reported from to the top of the South Island previously (in 2014). An investigation was initiated by MPI at the end of 2014, into poorly conditioned scallops in the Marlborough Sounds, after a MPI fisheries staff member notified the 0800 number The biosecurity risk remains, in terms of presence of an endemic parasite in scallops in the Marlborough Sounds; but as it is widely established and there are no feasible direct control measures (given the nature of the organism) a biosecurity response was not initiated. Options to mitigate the risk need to take a more holistic view such as fisheries management decisions on available catch, to capture the impact the parasite might have on maximum scallop yield under certain environmental and harvest methods.	Organism established in place
20 May 2015	Choose an item.	*Styela* and *Sabella*	Picton	A commercial diver who had been asked to clean the propeller of a 59 foot/35t yacht in Waikawa Bay, Picton saw what he thought was *Styela clava* and Mediterranean fanworm and notified Peter	**Update 20 May 2015 from Jono Underwood:** I have been in touch with vessel owner, Marlborough Marinas and local	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
				Lawless. The diver reported 100's of sea squirts along the keel line and on stabilisers. Six samples were taken and photos submitted to Peter Lawless and Jono Underwood – they are satisified that it is *Styela clava*. He also noticed a few small fanworms, but no photos were submitted so not sure if it was *Sabella* or something else at this stage The yacht was imported dry from USA arriving to NZ in November 2014. It sat in Baywater Marina for 1 month, before setting off for Pelorus Sound. It stopped for 1 night in Wellington before arriving in Duncan Bay, Pelorus Sound on Christmas Eve 2014. It has remained in Pelorus Sound (Duncan Bay, Tennyson Inlet and Elaine Bay) for most of the time, and only travelled around to Waikawa Bay recently. The skipper has been cooperative so far with Jono and has agreed to hold off returning to Pelorus Sound until this issue is resolved.	commercial divers as a Plan B. Unfortunately the vessel is too big for the Waikawa Marina travel-lift. As a result, I have contacted a local commercial diver – James Brody – who is available tomorrow and Friday to do work for us re manual removal of organisms if required. Given the situation with facilities, this is the likely immediate steps to take. All going well, tomorrow morning will see a berthing location arranged in Picton, diver(s) in the water and immediate steps undertaken to remove the organisms on the hull. Samples will be removed of the suspect fanworm by the divers and preserved by one of my staff who will be on site during the diver work. Vessel was slipped and cleaned. MDC and MFA are planning to do surveys in Duncan Bay to see if *Styela* and *Sabella* have established there. **Update 28 August 2015:** *Styela* have spread into natural substrates. Targets the initial plan was based on have been exceeded, we now need to re-work the plan.	
26 June 2015	Choose an item.		Nelson	Message from Rose Bird, MPI: Our colleagues in Border space have been made aware of a potentially high risk vessel that is under tow and currently on its way to Nelson – due to arrive this afternoon. The vessel is owned by the owners of the Voyager P. MPI's Border staff are currently working with others in	**Update 29 June 2015 from Rose Bird:** The MPI Border team are still leading this work and are working closely with the Port - Dave Duncan, an MPI Quarantine Officer and Kelly Leonard from Port Nelson went out to see the vessel on Friday (26th).	Vessel risk mitigated inside TOS

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				biosecurity response and fisheries compliance, as well as local providers to ensure that the state of the vessel is assessed and any risk managed accordingly.	Divers have been in the water and the footage is on its way to the Border team to make an assessment and decide what the best course of action is. **Update 1 July 2015 from Liz Jones:** This is to update TOTS on MPI's progress so far in taking border action on the fishing vessel Saxon Onwards. The operator of the vessel has been directed to deal with the risk fouling and has chosen to do this by contracting Bruce Lines to remove by hand using a method that prevents material including propagules from being discharged into the sea. Bruce has developed a methodology and has started the work. He has consent from the council. We expect the removal to be completed by tomorrow. Images from the dive showed the vessel was severely fouled so we went ahead and directed the action on the Monday after the arrival on Friday (26 June). Some samples were taken during the dive survey that MPI required on arrival The result of identification for the sea squirts has come back as *Pyura doppelgangera,* the species that has been introduced up north. These will be removed along with all the other major fouling that is predominantly in the niche areas. **Update 14 July 2015:** MPI and NCC are sorting out what happens next. The vessel may be sent back to Australia.	

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					Update 4 August 2015: Vessel has gone back to Australia.	
14 August 2015	Choose an item.	Heavily fouled vessel	Picton	From Jono Underwood: On 14 August 2015 I was notified by Marlborough Marinas (Picton) that they have noticed a vessel come into Picton that looks pretty 'hairy'. An ex navy patrol vessel now privately owned. After asking around they were told it had come across from Wellington after 7 years in the water and is being slipped at Sam Webster's slipway in Picton.	Given it was due for slipping, didn't consider taking further action but did ask whether they could find out some more details for me. A second call and I was told it wasn't actually going to be slipped for "a week or two". Because of this decided to contact NZ Diving Services to check their availability for a trip over to check out this vessel. They had a window and came over on Saturday 15 August 2015. Results were nothing of concern found but did have plenty of old growth fouling. Also signs of where big clumps of mussels have either fallen of in transit or manually knocked off before the trip across the strait. Given nothing was found, took no further action.	Vessel risk mitigated inside TOS
October 2015	Choose an item.	*Sabella*	Wellington	Sabella have been found at Chaffers Marina in Wellington.	MPI are commissioning a survey.	Organism managed in place
20 November 2015	Choose an item.	*Styela clava*	Marlborough Sounds	MDC carried out a survey of Duncan Bay, Pelorus Sound, and found *Styela clava* on a range of substrates. Full extent of infestation not yet known.	**Update 27 November:** Jono Underwood, MDC: There is a strong case that these could be a result of the infested vessel discovered in Waikawa back in May, which was permanently moored in Duncan Bay last summer. There were 9 *Styela clava* found in total. This information has been supplied to the Marine Farming Association and has been	Organism established in place

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					logged with MPI. Discussions between MPI and MDC have occurred as a result of the hotline call and some fresh conversation will be needed with industry over this find, especially in terms of shaping up who is best placed to lead the decision making process.	
25 November 2015	Choose an item.	Possible fouled vessel (possible *Sabella*)	Nelson	Troy Dando contacted Peter Lawless reporting that a vessel "Bella Rossa" was coming to Nelson from Auckland. The skipper said they had anti-fouled the vessel but it has been sitting around for 2 months since being anti-fouled.	26 November – Bruce Lines is going to dive under the boat and have a look.	No risk
21 December 2015	Near miss	*Styela clava*	Marlborough Sounds	Boat owner was interviewed in Lochmara Bay during TOS "Is your bum clean" campaign. The boat was recently bought at Opua and was in Chaffers Marina before heading to Lochmara Bay. It got picked up by MPI at Chaffers during a survey for fanworm. Tim Riding found *Styela clava*.	The owner was asked to clean the boat, and that has been done.	Vessel risk mitigated inside TOS
28 December 2015	Organism on vessel	*Styela clava*	Tarakohe Harbour, Golden Bay	During a recreational vessel survey in Tarakohe Harbour, the Coordination Team recorded small numbers of the sea squirt *Styela clava* on three sail boats, two of which were on moorings and one at a marina berth. *Styela* was also recorded on three mooring lines.	No samples were taken, as *Styela* has been present in Tarakohe for several years, and is not managed there. Lindsay Vaughan, TDC was advised.	Organism established in place
31 December 2015	Organism on vessel	*Sabella*	Queen Charlotte Sound	During a recreational vessel survey in Queen Charlotte Sound, the Coordination Team recorded a small number (c. 10-20) of an unidentified sabellid fanworm species (small individuals <10 cm long) on a sail boat in Endeavour Inlet. The boat was from Wellington.	The MPI hotline was phoned but there was no response. Samples and photos were taken, and contact details obtained from the vessel owner. The MPI hotline was successfully contacted on 4 January, and samples were sent to MITS, and photos/details	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					sent to MPI. The sample is suspected to be the Mediterranean fanworm, but this has yet to formally determined. MPI & MDC followed up with the vessel owner, and ascertained that the vessel ("Bear Fox") was slipped and antifouled at Mana marina (Wellington) on 7 January 2016. An email from MPI (Kathy Walls) on 11 Jan 2016 indicates that the vessel had come from Auckland and was purchased by the current owner 2 or 3 months ago in Wellington. **Update 2 February 2016 – Kathy Walls:** All fanworms were found to be juvenile and non-reproductive. The boat was slipped and defouled soon after being detected.	
21 January 2016	Organism on vessel		Nelson	Dean Evans (NCC) reported to Coordination Team that there is a Dredge (Pelican) in Nelson Harbour that MPI want Bruce Lines to wrap and dose. NCC (Claire Barton) has said they need a consent to dose. Peter Lawless referred Dean back to Rose Bird (MPI) on consent issues.	The vessel is scheduled to be slipped so Peter advised that wrapping without dosing would remove the immediate risk. **Update 16 Feb 2016:** Dredge was wrapped – awaiting update from MPI.	Choose an item.
28 January 2016	Organism on vessel	*Sabella*	Nelson	Kathy Walls of MPI received message from Bruce Lines concerning a tug that was being slipped in Nelson. It was infested with *Sabella*, the size range was estimated at 25mm – 80mm. He was not able to estimate the overall density of fanworms as he only saw part of the hull while slipping the vessel. There were also oysters on the hull. The tug is owned by Seaworks, a	Kathy Walls spoke to the Operations Manager of Seaworks on 29 January 2016. He provided the following trace back details: • The tug "Searanger" was built in 2008. It is 30m LOA. • She was purchased by Seaworks in October 2015 from Freemantle, Western Australia. The vessel had been there for 12–18 months and	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
				Wellington-based company that provides support vessels, including for offshore work. As the vessel was being slipped, cleaned and antifouled on the day of his call, there was no further operational action required to mitigate the biosecurity risk the vessel posed.	previously was in Dampier. • The tug was slipped (and presumably cleaned/antifouled) 2.5 years ago in Freemantle. • The vessel's hull was "scraped" in November 2015 prior to coming to NZ. She went direct to Wellington and was berthed at Glasgow Wharf until 27 January 2016, apart from a 3 day trip offshore (New Plymouth area). There is no history of her ever being in Auckland or Lyttelton where Sabella is established. "Searanger" went to Nelson on 27 January to be slipped. She was at the port "a few hours" before being slipped (on 28 January). As follow up, Kathy sent information on *Sabella* to the Seaworks Operations Manager and requested that all Seaworks staff be vigilant for this fanworm. The risk of infestation to Nelson Port is negligible, given that the tug was there for a matter of hours and the estimated size range of the fanworms suggest they were juveniles and immature. There are potential risks to Wellington Port which MPI is following up.	
7 February 2016	Organism on vessel	*Styela clava*	Penzance Bay, Pelorus Sound	During a recreational vessel survey in Penzance Bay, Pelorus Sound, the Coordination Team recorded a yacht with suspected *Styela clava* on it's hull, the specimen was removed for identification.	Barry Forrest confirmed the specimen is *Styela clava.* Size c. 4 cm incl stalk The vessel had come from Mana marina in last 3-4 days, vessel nz 431 Tara III. Owner plans to voyage around Sounds and D'Urville until early March. Boat inspected thoroughly on snorkel,	Vessel risk mitigated outside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					LOF was 2 (niche area fouling), only the one *Styela* was found, no other recognized pests. No further action needed.	
8 February 2016	Organism on vessel	*Styela clava*	Adele Island	During a recreational vessel survey at Adele Island the Coordination Team recorded *Styela* on a yacht named Music. A sample of 5 *Styela* were taken off the keel.	Owners agreed to have the vessel slipped immediately and cleaned themselves. Peter reported to Dean Evans.	Vessel risk mitigated inside TOS
21 February 2016	Organism on vessel		Nelson	Yacht "Nehaj" arrived in Nelson Marina directly from Europe. Had been identified at the border as a problem. Was covered in Goose neck barnacles and had heavy fouling. Was notified to us by Underwater Services.	Owner agreed to slip it soon. When slipped Barrie Forrest will look at what came off it.	Vessel risk mitigated inside TOS
23 Feburary 2016	Organism on vessel	*Styela clava*	Nelson	Naval vessel "Otago" is in Nelson and has been identified to have *Styela.* It is leaving Nelson tomorrow (24/02/2016) for Devonport for maintenance.	Jeannine Fischer and MPI's liaison with the Navy are working with the Navy to manage this.	Vessel risk mitigated outside TOS
1 March 2016	Organism on vessel	*Styela clava*	Nelson	While visiting the marina, Peter Lawless saw a boat being pulled out of the water by the Travel lift that had *Styela clava* on it's hull. Boat belonged to Michael Talley. Barrie Forrest confirmed that it was *Styela clava.*	Peter emailed photos to Dean Evans, NCC. Follow-up required. Peter to contact Doug Loader, Talleys	Vessel risk mitigated inside TOS
March 2016	Suspect vessel	*Styela clava*	TDC	The derelict vessel Santa Monica wanted to move from Tarakohe to Westport. When last inspected it was free of pests. Since then a population of *Styela clava* has built up in Tarakohe and has probably reached the Santa Monica. If the vessel moves with known *Styela* it would technically be a breach of the Biosecurity Act. The *Styela* would not survive in the low salinities at	Inspected by NZ Underwater Services on Friday, 19 March. Found no invasives (other than DV). The vessel looked like it had been very recently cleaned underwater, although many 'clumps' of fouling did still exist. The water visibility was very poor due to the recent heavy rain and strong winds, however it was ok to undertake a good slow search of the	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
				Westport. If the derelict vessel broke its tow on the way it could led to *Styela* causing a new infection. The owner had run out of money so would not be able to afford to clean the vessel before moving it. It's in TDC area but only MPI has the powers to intervene. MPI currently only have powers to intervene if there were known unwanted organisms on the hull of the vessel. If this was confirmed, then a suggested course of action would be to get the owner to apply for a Section 52 permission to communicate an unwanted organism. In processing this application they would consult with the West Coast Regional Council and DOC within the region to determine if they had any concerns with the proposed activity.	hull. Unfortunately it meant getting video and still pictures was pointless. After doing the inspection their feeling was that the vessel should pose little to no (biosecurity) risk for its transfer to Westport.	
June 2016	Organism on vessel	Mediterranean fanworm	Marlborough	During surveillance for marine pests in Waikawa Bay during June 2016, jointly funded by Marlborough District Council and the Ministry for Primary Industries, a recreational vessel was found harbouring the highly invasive Mediterranean fanworm.	Immediate steps were taken to ensure the risk was mitigated by removing the animals and confirmation obtained that they were juvenile and not reproducing. The vessel owner proceeded to lift and clean the hull of the vessel of all fouling which removed any residual risks. Tracing of the vessel had shown it had recently travelled south in January 2016 after a period of time in the upper reaches of the Waitemata Harbour in Auckland. The vessel was last lifted and antifouled in January 2015 which demonstrates the marine pest pressure vessels face in Auckland and the vigilance required preventing the movement of these pests around the country.	Organism managed in place

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
8 July 2016	Organism in place	*Styela clava*	Golden Bay	*Styela clava* reported on mussel lines at Collingwood At 1435hrs on 8 July 2016, Rose Bird left a message with Paul Sheldon at TDC regarding a probable find of Styela clava (Styela) on a spat line on a marine farm in Golden Bay. MPI had received a call from the marine farm operator (Sanfords) on their 0800 number and a sample had been taken for formal identification. Contact had also been made with Cawthron Institute (Grant Hopkins). Paul was on leave and other TDC staff were made aware of the situation (Environmental Information Manager Rob Smith and Harbour Master Dan Cairney) Paul and Rose spoke on Monday and Rose explained the MPI response team was taking a lead and was in discussion with Sanfords on the best way forward. Samples were still being identified and Sanford's were voluntarily checking mussel lines on the farm in order to gauge the extent of the infestation. On Monday Evening Rose followed up with an email copied below. Note this phone conference still has to occur and is likely to happen once MITs confirmation is received and what industry finds on pulling up mussel lines. Paul asked for information related to the location of the farm implicated and the likely economic impact of Styela on marine farms.	28/07/2016 Dumping of material from Sanfords marine farm lines commenced on land in Golden Bay owned by Brent Page. Material was emptied from the bags into a trench cut into undisturbed ground. Line stripping continued until 5/08/2016 but dumping was held up due to poor weather and soft ground conditions (trucks getting stuck). Dumping was completed by 19/8/2016 (Dave Herbert pers com) with a total weight of 123400kg of material removed and dumped. 23-25/08/2016 Bruce Lines and the Diving Services team undertook a survey and removal of Styela clava within Tarakohe Harbour. In summary the survey and removal included • All vessels moored within the Harbour during the survey dates • All wooden and concrete piles in the main commercial wharf areas • All piles within the marina are • All pontoons within the marina • All swing moorings inside the harbour • Selected sea bed areas • Rocky seawalls at selected areas Rope and other structures in the marina that provide suitable substrate. ***Styela clava***. This diving operation accounted for the removal of 437 *Styela clava* specimens, ranging from 15mm to 170mm. These	Organism established in place

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					were found on all searched substrate types being ropes, boats, piles, rock walls, pontoons and seafloor debris. The population is well established and is spreading, as large numbers of smaller *Styela clava w*ere found. They do not seem to be overly well established on the seafloor, but are present. It was noted that populations of *Styela clava* were often found grouped quite tightly, with only a few individuals found in isolated pockets. The result of this survey work confirms an established infestation of Styela clava at Tarakohe as well as a population of Sabella spallanzanii. Further consideration will need to be given to the future management of these infestations.	
23 October 2016	Organism in place	*Sabella spallanzii*	Golden Bay	***Sabella spallanzanii*** In total just over a dozen *Sabella spallanzanii* were found in Tarakohe Harbour in the course of the *Styela* survey above. These were found to be very wide spread throughout the inner harbour and found on pontoons, piles and seafloor substrate. The sizes ranged from 280mm to the largest of 520mm. What is of real interest was that the sizes found were on average very large 300-400 mm. No small or 'juvenile' specimens were found during this work. All samples were sent to MITS for testing.	As a result of this incursion, the three TOS Councils commissioned Peter Russel to write small scale management programmes for each of the three council areas. A workshop was held on 7 November and a first draft of the programmes was received by the Councils early December 2016. **Results from MITS:** 13 samples submitted to MITS of which 11 worms (tube lengths 270-524mm, body lengths 130-240mm) were NOT spawning ready, and 2 worms (tube lengths 350 & 511mm, body lengths 152 & 202mm) were spawning ready (MPI investigation number LMA14569).	Organism managed in place

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17 Nov 2016	Organism in place	*Styela clava*	Golden Bay	Barrie Forrest was informed that *Styela clava* has been found on mussel lines at Wainui Bay in Golden Bay. Colin Johnson investigated and found that the Wainui Bay occurrence was inferred from the Admiralty Bay find below. Bruce Lines is being commissioned to do a detailed search of Wainui Bay.		Organism established in place
17 Nov 2016	Organism in place	*Styela clava*	Marlborough Sounds	Barrie Forrest was informed that *Styela clava* has been found on mussel lines at Admiralty Bay, Marlborough Sounds.		Organism established in place
29 November 2016	Suspect vessel	*Sabella*	Marlborough Sounds	Tory Channel Contractors reported to Peter Lawless that they had seen fanworm on a vessel's trim tabs. Vessel named Bella Rosa.	Peter reported to Jono Underwood, MDC. Diver James Brody looked at vessel and confirmed it was not *Sabella* and removed what was there. Bella Rosa is due to go to Fiordland and is being slipped and cleaned.	No risk
Late Dec 2016 and Jan 2017	Organism on vessel	*Styela clava*	Abel Tasman	During a survey of 187 boats in the top of the south the TOS Marine Biosecurity team found six vessels on the Abel Tasman coast that were fouled with *Styela clava*. In all cases the boats were from Nelson, and *Styela* was on the bottom of the keel.	Owners were told at the time.	Owners advised to clean their boat.
24 Feb 2017	Organism on vessel	*Sabella*	Nelson	At 9.40 am Diving Services NZ team located to the vessel MY Vibrant Curiosity under the direction of the vessel managers to check the hull for marine pests prior to travelling into the Fiordland area. The vessel had recently been dry docked (Auckland, approximately 3 months prior) and had new paint applied. The vessel has a system of a silicon type hard paint as opposed to an Ablative antifoul and was found to be covered with hard case worms and bryozoans over much of its hull . Some small goose neck	**Action undertaken:** Contact was made to MPI via the Hotline and discussions were made with Anjali and Kathy (MPI). We also contacted Shaun at Environment Southland. A decision to spot clean in water was made. Some key factors enabled this quick response to be undertaken: • First the *Sabella* were only found on	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
				barnacles and oysters were also present. The divers inspected the hull and found it to have small isolated populations of *Sabella spallanzanii* From this discovery, further inspections were made to gauge the actual extent of the incursion and gain enough information to assist any response plan.	the dry dock support strips, meaning the treatment areas are localised • Secondly all specimens seen were very small 10-15mm and were in position that made recovery relatively easy. No Mature specimens would be on the vessel. • The sea chests, stabilizer fin recesses, bow thruster tunnels etc. were all coated with Ablative antifoul and were all found to be completely clean. **Response:** At 1400 the dive team returned with equipment to enable spot cleaning and capture of the debris. This work was done to all the dry dock support strips. A total recovery of approximately 18kg of marine fouling. During this work, no other invasive species were noted Work was completed at 1600. The vessel could now be considered low risk	
20 March 2017	Organism on vessel	*Sabella* Vessel: The Border	Nelson	Troy Dando, Port Nelson, reported a vessel arriving in Nelson from Whangarei. It had been parked up in Whangarei, which is a risk location, since February 2016. It had been in Nelson 3-4 days.	Bruce Lines dived it on 23 March and found one small *Sabella* which he removed. Oysters were also found which could be a potential risk for transfer of the oyster virus. The vessel was last slipped in April 2015 and is due to be slipped in September. Bruce Lines did a second inspection. No further *Sabella* found. Bruce noted the vessel had been moored in an area with lots of fresh water while up north.	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
30 March 2017	Organism in place	*Styela clava*	Golden Bay	Diving Services NZ Ltd was contracted to undertake a second diving survey at the spat holding sites, in Wainui Bay. This was a follow up survey to the original one looking for *Styela Clava* at this site	**Survey findings** The inspecting divers during this survey, found small numbers of *Styela Clava*. No *Styela* were found on warps, droppers or during any of the seafloor transects. All specimens found were on or directly next to the concrete mooring blocks. While found in very sparse numbers they were spread over a wide area. Finding *Styela* on the mooring blocks was not surprising as we have found concrete mooring blocks provide ideal habitat for *Styela*. The fact they are in such low numbers over a wide area could suggest that they have been in Wainui Bay for some time. However, the site is perhaps not providing them ideal conditions to fully establish. *Styela* are often found in sheltered waters such as harbours in very high numbers and its possible that the shifting sediments and rapid rope turnover at this relatively exposed site, may be suppressing the population. **Treatment options** In terms of treatment options the obvious and most likely to provide the best 'Bang for the Buck' so to speak, would be to dive all mooring blocks and remove all *Styela* from the blocks and the immediate surrounding seafloor. This should at least suppress the population greatly.	Organism managed in place
13 May 2017	Organism in place	*Sabella*	Marlborough	DOC conducted a dive clean-up on 13 May concentrating on Anchorage and Adele Island. Stew Robertson advised he found	The photo was forwarded to Kathy Walls, MPI, to identify. This is being dealt with	No risk

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				Mediterranean fanworm at Anchorage. A photo was taken but a sample wasn't kept.	by TDC as a follow-up. **18 May 2017:** Geoff Read, fanworm expert at NIWA, confirmed it to be native *Pseudobranchiomma grandis*.	
17 May 2017	Suspect vessel		Nelson	Advised by Dave Duncan, Harbourmaster, Port Nelson, that vessel 'Tenacious' is due at the super yacht berth at 9am on 18 May. MPI has advised the vessel may have biosecurity issues as it is coming from Port Phillip Bay.	Harbourmaster has arranged for the vessel to go to anchor. MPI requested Nelson Dive Services dive on the vessel, this will be done at anchor to avoid any incursion into the port. MPI is dealing with this as a border incident. Tracy Bates, MPI, is flying to Nelson to deal with it. Richard Frizzell, Nelson City Council, has been advised. **18 May 2017:** Tracey Bates, MPI, reported the dive inspection confirmed the vessel was fouled. MPI quarantine officers have issued a direction for the vessel to leave by 1200 hours tomorrow (19 May) to allow them to arrange travel for the passengers that wish to leave. The vessel has been directed to then travel via the most direct route through Cook Strait and down towards Lyttelton to dry dock. They must remain outside 12nm while travelling down the coast and stay outside our territory until they can be received directly to dry dock. They have been advised that due to bad weather they can remain outside 12nm in Tasman Bay to avoid them hitting weather during their voyage and sheltering in the sounds.	Vessel risk mitigated outside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
11 June 2017	Organism on vessel	*Styela clava*	Marlborough Sounds	Received email from Stuart Scaife, Waikawa Dive Centre. He was working on a boat in the Waikawa Marina saw what looked like a *Styela clava* hanging from a vessel. Location is jetty 7E berth 11, at the very end and the vessel name "Joy Maree". Attached a photo.	Photo looks like native sea tulips (*Pyura pachydermatina*) with other fouling overgrowth on them. Jono Underwood, MDC, sending Bruce Lines to have a look and confirm it's not *Styela clava*.	To be confirmed.
25 June 2017	Organism in place	*Styela clava*	Wainui Bay, Golden Bay	**Report from Aquaculture NZ:** *Diving Services NZ Ltd* was contracted to undertake treatment work at the spat holding sites at Wainui, Golden Bay. This was follow-up work from recent survey findings on the marine pest species *Styela clava*. It has been established that *Styela clava* are widespread over this site, however at this stage the numbers appear to be very low. The focus of this work was to dive on all mooring blocks to remove any *Styela Clava* present. This is aimed at reducing the already sparse numbers to a level where the population should remain significantly suppressed limiting further spread. Dive was done on all mooring blocks at the site (total of 140 blocks.)	The divers inspected all mooring blocks at the site plus approx another 10 blocks that were discarded on the seafloor near the active blocks being treated/inspected. As the work progressed divers found 1 *Styela* on a warp and while not included with this clearance work it was decided to do a full row of warps (35 warps on the most eastern side of the site) to see how significant warps may be in terms of infection. After checking the 35 extra warps only a further 2 *Styela* were found. **Total *Styela* collected** After diving all the mooring blocks and over ¼ of all warps a total of 15 *Styela clava* were recovered and cleaned out Industry will be reminded about spat movement processes etc.	Organism managed in place
11 July 2017	Organism on vessel	*Sabella*	Tarakohe, Golden Bay	Tug Pacific Way and barge WH761 have been in Tarakohe for 2 months. Prior to arrival they were checked by a Dive Company in Auckland and cleared as clean, however *Sabella* 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 have been loading and manoeuvring to check for and remove any *Sabella* that have been knocked off the barge over the last couple of months. No further *Sabella* were found.	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
15 August 2017	Organism on vessel	*Sabella*	MDC Marlborough Sounds Picton Marina	Vessel, Acquasition, came from Auckland has been 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 *Sabella* on the hull. They removed all visible *Sabella*.	**History of vessel movements:** The Aquasition come over to New Zealand from Australia in July 2016, when it arrived in Auckland it was cleaned and anti-fouled and left in the marina in Auckland until it was sailed down to Marlborough in November. It would have been during this rest period in Auckland while it was just sitting there that the fouling would have occurred on the prop shaft. Between November and Easter (April) it sailed throughout the Sounds, spending nights at multiple locations with 10 nights spent at Onahau. Since April the Aquasition has stayed in its berth (see map) MDC has been in contact with the owners and the vessel was slipped, cleaned and anti-fouled on Monday the 18th of September.	Vessel risk mitigated inside TOS
18 October 2017	Organism on vessel	*Sabella* and *Styela*	Boulderbank, Nelson	The yacht Bloody Mary was lifted in the Nelson travel lift 18/10. The serving agents Abel Marine rang Peter Lawless as they suspected fanworm and clubbed tunicate. Peter instructed Abel Marine to ensure nothing went back in the sea and asked them to take samples of both suspect organisms. On his return on Friday he retrieved the samples that had been kept refrigerated and were still alive. The owners were present and he was able to get a history on the vessel. It came down from Auckland November last year and has been on a mooring near the Boulder Bank	7 November update: MITS confirmed it was fanworm. NCC/MPI to decide what to do next. Kathy Walls, MPI, asked MITS to take another look at the fanworm specimens to get an understanding of their reproductive status. Geoff Read looked at the three largest worms. **Body length data** (as the worms were mostly not in their tubes): 34mm; 54mm; 63mm; 64mm; 75mm; 80mm; 84mm; 87mm; 136mm; 139mm **Reproductive assessment**:	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
				in the Nelson Haven. The owner will provide GPS coordinates of the mooring that is reported to have been lifted and cleaned recently. The vessel is ex Westhaven marina and had not been cleaned for about three years before coming to Nelson. The owners bought it in this period. Other vessels in the immediate vicinity have not been inspected recently as part of port surveys and fanworm control. The area is reputed to be a high current area where dispersal may occur on a wide area over incoming or outgoing tides. Peter's on-site inspection revealed worms of multiple sizes up to 210mm suggesting a least one spawning incident since November. He immediately phoned a report to MPI on the 0800 number. The samples were still alive and he preserved them in 80% ethanol as the MITS kit was out of formalin.	87 mm worm - indeterminate, coelomocytes only 136 mm worm - female, immature, sparse coelomocytes and oocytes 170 µm 139 mm worm - female, immature, sparse coelomocytes and oocytes 170 µm The smaller worms were not assessed due to their size (not mature). This is my initial assessment of the risk posed by the fanworms on the Bloody Mary: Fanworms with a body length less than 120mm are unlikely to be reproductively mature (Fletcher, 2014). The two larger females from the sample were reproductively immature. As the vessel came from Auckland in November 2016, and the worms were assessed as reproductively immature, I don't think they have had a chance to spawn while in Nelson. While in Auckland, the vessel's hull had not been cleaned for 3 years and was at Westhaven Marina, a heavily infested marina. That may explain the different cohorts found on the hull. I am basing my assumption on the further assumption that the largest fanworms on the hull were those that were collected and submitted by Peter. I still consider this vessel poses a risk of infestation to Nelson Haven, as some could have dropped from the hull while at the mooring. These could in turn survive on the seafloor but are likely to be in an area of swing of the vessel about	

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					its mooring. So, a delimiting is still warranted but the concerns of a spawning event occurring and larvae being carried by currents over a wide area are less. Nevertheless, I suggest a surveillance programme over a wider area of Nelson Haven beyond the location of the vessel and will build this into my suggested survey approach. Regarding the tunicate collected from the vessel – It has been identified as *Cnemidocarpa hemprichi*. **Update 24 January 2018:** Bruce Lines, Diving Services NZ reported they have completed checking on the moorings in the area and the seabed around the infected mooring. Awaiting clear conditions to complete checks at travel lift berth. Nothing found to date.	
29 November 2017	Organism on vessel	*Styela clava* and *Undaria*	Nelson	A yacht called Trediga was slipped in Nelson this morning. Peter Lawless inspected but found no pests other than *Styela* and *Undaria*.	Vessel has been cleaned.	No risk
30 November 2017	Organism in place	*Sabella*	Picton	During routine MDC surveillance work in Picton Marina, a substantial number (~35) of mature Mediterranean fanworm have been found on the sea floor of the outer Picton Marina. Nothing has been found on any vessels currently in berth.	From Jono Underwood, MDC: The *Sabella* have been removed with some being sent away for analysis. The good news is that they have been found in distinct 'clumps' but their size is concerning. We are finishing a scour of the area then looking at what a new plan would look like for the next round of work. Will provide another update when this Nov/Dec 2017 work wraps up.	Organism managed in place

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1 Dec 2017	Organism on vessel	*Undaria*	Nelson	Bruce Thompson contacted Peter Lawless about the yacht "Luatrec" that is moored in the Nelson Marina. This yacht is potentially fouled with *Undaria* and is planning on travelling to other parts of top of the south over summer e.g. Golden Bay. It is due to be slipped in January the owner has cancelled other slip bookings in recent times close to when they were due. Suggesting talking to owner.	Peter advised NCC there are 3 potential courses of action. 1. Advise the owner of the risk and leave it up to him 2. Tell the owner that if he leaves the marina he will not be welcome to return as he is in breach of his berth agreement 3. Ask MPI to give you a notice of direction to serve on him. **Update 11 November 2017:** Richard Frizzell from Nelson City Council advised that based on result of dive inspection the Lautrec has a relatively low level of fouling and no further action is required before it travels to Abel Tasman.	No risk
18 Dec 2017	Organism on vessel	*Styela*	Picton	While the TOS Marine Biosecurity team were carrying out the Summer Survey *Styela* was found on the keel of a vessel moored near Linkwater. Sample was taken.	Sent to Jim Herdman for action.	
12 Jan 2018	Organism on mooring	*Ciona*	Picton	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.	No risk
Jan 2018	Organism in place	*Ascidiella aspersa, Asterocarpa humilis, Ciona intestinalis*	Kenepuru, Marlborough	Submission was made to MITS of a number of these ascidians.	Abraham Growcott (MPI) reported: Taxonomist identified them. 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	Organism established in place

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					area, it is possible that *C. intestinalis* and *A. humilis* have been there for some time, but not formally reported.	
January 2018	Organism on vessel	*Styela clava*	Marlborough	*Styela clava* found on the vessel Park Lane by Blumine Island.	**Update 19 March 2018:** The yacht has been antifouled by Sounds Marine.	Vessel risk mitigated inside TOS
Feb 2018	Organism in place	*Styela clava*	Ketu Bay, Marlborough	Detected by NIWA field team member during a scallop survey.	Abraham Growcott (MPI) reported: This has been registered in the MITS database and represents a minor range extension for this species.	Organism established in place
2 Mar 2018	Organism in place	*Styela clava*	Wairangi Bay, Marlborough	Aaron Pannell of Marlborough Oysters reported juvenile *Styela* in Wairangi Bay, Croisilles.	No action taken.	Organism established in place
11 Mar 2018	Incident		Marfells Bay, Marlborough	Reported to MPI that juvenile or larval crayfish dead by the hundreds of thousands. Marfells Bay to Cape Campbell	MPI asked us to investigate and when checked out it was found to be krill.	No further action.
19-23 Mar 2018	Organism in place	*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.	Organism managed in place
9 Apr 2018	Organism in place	*Styela clava*	Golden Bay, TDC	Debbie Stone, Marine Farming Assn emailed Peter Lawless advising an MFA member found 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. Photos were attached.	Peter Lawless advised Debbie to ask the person to phone the MPI 0800 hotline. Peter also phoned Paul Sheldon, Tasman District Council, who agreed with Peter's advice. **Update 12 April 2018:** Advised by Dave Herbert, Sanford: We have applied two vessels (San Nikau and Okiwi Spirit) to the *Styela* issue on the farming site. We should be finished the clean-up by Friday if the weather allows	Organism managed in place

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					We are capturing the hard material into bags, I have arranged for the marine waste to be dumped at a landfill in Takaka, there will be about 12T as an estimate	
Dec 2017 – Mar 2018	Organism in place	*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.	
1 May 2018	Organism in place	*Sabella*	Marlborough	David Webb, MDC: This morning I met with our diver Bruce Lines in Picton to discuss the recent find of *Sabella*, 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 seems 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 have probably spawned during a previous spawning season. Bruce is going to continue as normal with his dive monitoring, but he will also be putting some extra effort in the searching the substrate in the area where vessels turn to enter their berths which has not previously been searched, as well as on the outer side of the rock wall from where the recent find of *Sabella* were found.	Vessel risk mitigated inside TOS

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					I have contacted the owner (John Currie) of the Maverick as well as Tory Channel Contracting who last did their anti-foul. I was informed it was hauled out, cleaned and anti-fouled on 13/03/2018 by Tory Channel Contracting, but they admit that they can't get the very bottom of the keel due to the cradle. It seems that the *Sabella* tube that was found on the keel was crushed by the cradle during the haul out. The vessel did spend 3 weeks in Auckland in October and then travelled back to Picton. The boat does yearly trips overseas (e.g. Australia and Fiji) and is planning a trip away soon after going down through Fiordland. It also regularly goes through Auckland, often as its first port of called when returning to NZ. Bruce is confident that the vessel is now clear of visible *Sabella* and it had an anti-foul 1½ months ago. MDC dare getting a discussion group together to discuss the management of the *Sabella* in the Picton Marina going forward.	
15 May 2018	Organism on vessel	*Sabella*	Marlborough	On 9 May during routine surveillance by Diving Services NZ in Waikawa Bay a vessel (Highlander) was detected with ~83 fanworm on its hull. Reported immediately to MDC. Diver removed the fanworm.	MDC contacted owner and advised a lift and clean was needed. Owner agreed and will notify MDC with a date for the haul-out. Boat lifted out at Waikawa Travel lift and water blasted. MDC attended the haul out. Then vessel moved to where owner would do anti-foul painting.	Vessel risk mitigated inside TOS
21 June	Organism in	*Styela clava*	Tasman	Received email from Sanfords informing us of the presence of *Styela Clava* in the KA	Sanfords advised MPI and TDC.	Organism established in

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2018	place			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.		place
1 Oct 2018	Organism in place	*Styela clava*	Marlborough	Kono Horticulture sent photo to MFA of single specimen found on site 8310 outside line while sourcing, bushy point next to Brightlands Bay.	Confirmed by Peter Lawless as being *Styela clava*. No action needed at this stage.	No action
26 Oct 2018	Organism in place	*Styela clava*	Tasman	During a delimitation survey at Port Motueka by NZ Diving Services, divers found small populations of *Styela clava* throughout the inspected areas. Most were found on piles with a couple found on pontoons and one from a vessel.	Divers removed a total of 43 small *Styela clava* ranging from 15mm to 60mm.	
14 Dec 2018	Organism in place	TBC	Marlborough	Sanfords sent a sample to MITS of a suspicious worm found on one of their marine farms.	Dived on the marine farm during the Summer Survey and found nothing of interest. Awaiting MITS report	
15 Dec 2018	Organism in place	*Styela clava*	Marlborough	During Summer Survey inspections in Kenepuru Sound it was found that 70% of moorings had *Styela clava*. None on boats.	No action.	
16 Dec 2018	Organism in place	*Styela clava*	Tasman	During Summer Survey inspections in Torrent Bay two boats (both from Nelson) and one swimming raft had *Styela clava*.	All removed.	
14 Jan 2019	Suspect organism in place	*Sabella*		Graeme Ingles reported that one of his neighbours in Mahau Sound had sent him a text saying their son may have seen some fan worms when they were snorkeling over the weekend in Stafford Bay, near Te	23 January 2019: David Webb of MDC responded that a diver would check this out when they are doing surveillance at Elaine Bay.	

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				Rawa. He did'nt have an exact location, but they would have been moored at one of the two club moorings in Stafford Bay and probably snorkeling to and from shore. Confirmed it was the outermost mooring.		
Feb 2019	Organism in place	*Styela clava* & *Undaria*	Nelson, Tasman, Marlborough	Results of the 2019 Summer Survey carried out by TOS Marine Biosecurity: *Styela* found on: • 22 vessels, mostly Nelson boats, many of which were active along the Abel Tasman coastline • 96 structures, in particular swing moorings in Nelson, Kenepuru Sound and Nydia Bay *Undaria* found on: • 70 vessels, mostly those active or moored in Queen Charlotte Sound where water temperatures are cool enough for it to persist during summer • 379 structures, in particular swing moorings and jetties throughout Queen Charlotte Sound	No other pests of significance found in 2019.	
6 May 2019	Organism on vessel	*Sabella*	Marlborough	Marlborough Marinas picked up the worst case we have had to-date of Mediterranean fanworm on a vessel. The fanworm were discovered after an owner-requested lift yesterday. A yacht purchased from Auckland arrived in December 2018 into a private berth in Waikawa Marina (so very little opportunity to intervene/detect given lack of direct contact with the marina). The local owner turned out to be genuinely oblivious.	Jono Underwood, MDC reported: Everything has been notified smoothly, rapidly, and the risk associated with the vessel addressed on the spot, samples taken etc. 100% ID confirmation + reproductive status should be known in the next week or two. Marlborough Marinas have committed to conduct an internal review as to somehow raise flags for not only visiting vessels but also private berths/vessel	Vessel risk mitigated inside TOS

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					changes especially from risky domestic origins. Immediate focus is intensive searching around the travel lift, its berth along with some other work over time linked back to this vessel. **Update 13 May 2019 from Jono Underwood:** Further surveillance has found ~146 further fanworm on the seafloor underneath where this vessel was berthed in the Waikawa Marina. During delimiting, a second vessel in the marina was also found with 2 small juvenile suspicious fanworm	
14 June 2019	Organism on vessel	*Sabella*	Nelson	During routine work by Diving Services NZ Ltd on a catamaran vessel in Port Nelson, fouling by 50-60 fanworms was discovered on the port side hull. It was reported immediately to MPI and Nelson City Council (NCC).	All worms were small in size (30-45mm tube length) and not considered to be spawning (too small\) The owner was advised a lift and clean was needed. The owner agreed and will notify NCC with the date for haul-out (expected to be 4/5 July). NCC to attend haul-out.	To be advised.
June 2019		*Sabella*	Port Nelson, Tasman & Golden Bay	The first Environmental DNA testing was completed in Port Nelson, Tasman and Golden Bays. The objective of the study was to provide Tasman District Council and Nelson City Council with information on the presence of *S. spallanzanii* in 11 areas across Tasman/Golden Bay and 2 areas around Port Nelson. This was achieved by collecting water samples and analysing these using droplet digital PCR (ddPCR). It was intended that results of this study	No positive ddPCR signals were detected in any of the sampling areas, although four ambiguous samples with < 0.1 copies/µL confirmed to be negative after re-run (see Supplementary 1 and 2 for detailed results). No positive results were detected in any of the blank controls (both field and laboratory), as well as in the no-template ddPCR control, indicating no instances of cross-contamination.	

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				would then be used to update information on the large-scale distribution of *S. spallanzanii* and to refine surveillance strategy accordingly.		
22 July 2019	Organism in place	*Sabella*		During a MPI-NIWA Marine High Risk Site Surveillance winter survey in Nelson Haven One *Sabella* was found in the Marina and *Styela* were found at numerous sites in the 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). No specimens were retained due to their commonality and history of presence.	Organism managed in place
July 2019	Organism on vessel	*Sabella*	Marlborough	Boat owner phoned into MDC enquiring about Mediterranean fanworm. Owner has noticed what he believed to be small *Sabella* growing in the hinge area of the rudder on his yacht that was on a mooring in the Grove Arm. Jono Underwood visited the site and confirmed the presence of *Sabella* as well as preserved some samples	Diving Services NZ Ltd wrapped the vessel and treated it with dichlor. Treatment was within 10 days of the find. While waiting for the treatment, surveillance was undertaken through the Grove Arm and Anakiwa mooring areas with no evidence of fanworm found. After the wrap was removed, the divers also carefully removed all dead fanworm All fanworm where small. All were controlled.	Organism managed in place
August 2019	Suspect organism on structure	*Sabella*	Marlborough	Received a phone call from a mussel farmer re potential *Sabella* found on one of his mussel farms in the Tory Channel. Discussed getting a sample preserved ASAP. He explained one of his skippers were bringing in a clump to town. Arranged with skipper to receive the sample. Preserved sample. Mussel lines where being harvested for	MITS confirmed not *Sabella*. Harvesting resumed. Confirmed as *Acromeglalomma suspiciens*.	No risk

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				spat, this was put on hold on pending confirmation of what it was.		
November 2019	Organism in place	*Clavelina lepadiformis*	Golden Bay	Email from MPI reporting a sighting of *Clavelina lepadiformis* at Tarakohe Harbour/Marina identified by MITS.	No action taken.	
20 November 2019	Organism in place	*Sabella*	Marlborough	During diver surveillance at mooring M3441 in Grove Arm, 15 suspected *Sabella* were discovered on the sea floor below the mooring. Phoned to MPI hotline by MDC.	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. 5 December 2019 – ID confirmation received from the specimens collected on 20/11/2019. Showing that the larger specimens had likely spawned the year prior but not this year. Operations on hold pending collaborative discussion and further scientific advice over next surveillance effort.	
26 November 2019	Organism on structure	*Sabella*	Nelson	As part of scheduled delimitation/ elimination work by Bruce Lines a single *Sabella* specimen was found under a walkway platform on the shore side of the landing pontoon inside marina finger F9 (where the shore ramp meets the pontoons).	The worm was 400mm long and was removed and saved for analysis. Unfortunately it was sent to Marlborough District Council and then delivered to Nelson City Council on 17 February 2020. After discussion with Kathy Walls (MPI) it was decided too much time had passed/likely to have deteriorated so was not sent through MITS for analysis and disposed of at landfill.	
3 December 2019	Organism in place	*Sabella*	Marlborough	Call received re potential *Sabella* being found on a mussel farm in the eastern Port Underwood. Phoned to MPI hotline by MDC.	Sample uplifted that evening and preserved by MDC staff. Obtained initial information on the nature of the mussel stock on the line where it was found and linkages	

Date	Incursion type	Organism/ vessel name or type	Council area	Event description	Outcome description	Outcome code
					backward and forward. 4 December 2019 – meeting held at MDC between MDC staff, AQNZ and MFA with mussel farmer on the phone. Discussion over the situation and immediate actions that could be taken. Immediate plan put in place to undertake investigation for more information on presence/absence/ abundance. Industry initiated a halt to movements of stock and fouled gear from the Port for December. 5 December 2019 – confirmation received that the NZKS dive team are willing to inspect the spat farm 8409 in Tory Channel to assist. Planned to occur 11 December 2019. 6 December 2019 – dive work got underway starting with line 19, farm 8433. Two further fanworm were found and removed from the line. 11 December 2019 – delay to the NZKS work on Tory to Friday 13/12. 12 & 13 December 2019 - further dive surveillance targeting the lines with linkages to farm 8433 was completed in the Port. 13 December 2019 – NZKS completed surveillance work on the spat farm in Tory Channel. Operations on hold pending steer from collaborative discussion.	
5 January 2020	Organism in	*Sabella*	Marlborough	Peter Lawless reported that as part of a routine summer surveillance in Pelorus	All visible fanworm were removed from the hull. These 20 specimens were 5 to	

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	place			Sound, *Sabella spallanzii* was found on a yacht from the Far North. The vessel Kieren was anchored in Chance Bay. Around 20 small fanworm were found in niche areas around the stern of the vessel. The yacht was last anti-fouled 12months ago and the skipper was a diver who had been checking the hull every 3 or 4 days. He was highly aware of fanworm and reported that his home port was Whangaroa, the marina there, and his vessel had all been checked by Northland Regional Council and given the all clear in the last three months. The vessel came direct from Whangaroa to the Marlborough Sounds one month ago. It came direct down the West Coast and made no stops. The owners have taken a berth for three months in Waikawa.	50mm. They were taken live to Barrie Forrest who confirmed the identification and preserved them for submission to MITS. Peter's assessment is that the vessel does not pose any immediate biosecurity risk. The worms were all too small to be reproductive. All visible and therefore the largest worms were removed. Given the difficult conditions it is likely that some small worms might remain on the vessel in niche areas difficult for a snorkel diver to examine thoroughly. Therefore it would be wise to treat the vessel to remove any further risk. Slipping and high pressure water blasting or in water biocide are indicated. Jono Underwood, MDC, will follow-up with owners.	
16 January 2020	Range extension	*Bonnemaisonia hamifera*	Marlborough	Email received from Cara Brosnahan, marine incursion investigator with the Ministry for Primary Industries: For your awareness, I have had through a formal notification today for the 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. This species was reported as new to NZ on 09/05/2019 when an unusual bloom was observed by members of the public in Karitane, north of Dunedin. At this time, a		

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				marine exotic species note was produced to assess the risk of this detection. This information reported that *Bonnemaisonia hamifera* has a native range in the North Western Pacific and evaluation showed this species does not appear to be invasive so no further response was recommended.		
21 January 2020	Organism on vessel	*Sabella*	Nelson	Diving Services New Zealand Ltd was asked to inspect the *Spirit of NZ* at Port Nelson prior to it heading into the Abel Tasman National park. This work was planned for the 24th January. Knowing the high likelihood of Mediterranean fanworm *Sabella spallanzanii* being found on the vessel, and the sometimes poor harbour conditions in Port Nelson, we chose to keep close contact with the vessel to see if an earlier inspection could be undertaken in clearer waters. As it turned out ideal conditions were found and an ideal location (low current, clear water) at a safe anchorage inside the Paddock Rocks, D'Urville Island. It turned out the vessel was to transit to the Abel Tasman National Park from this location, so this early inspection proved valuable. Divers made initial inspections of the hull. This soon revealed the presence of Mediterranean fanworm *Sabella spallanzanii*. The vessel was found to be generally very clean, or with a light slime layer over much of the hull. Only isolated patches of fouling such as mussels and barnacles	**Work undertaken at anchor:** Several factors were considered for the best approach to deal with the vessel. Dry-docking was not available, encapsulation would be time-consuming and involved the vessel transiting to Nelson with the *Sabella*. As we had special capture baskets and superb conditions, we chose to use our two most experienced divers and undertake a careful manual removal process. This also included the wrapping of the rope guard for a chemical treatment while other work progressed. The bow thruster tunnel grating was removed to provide good access. The main seawater integrating was removed to gain good access. All fouling was manually removed by divers using scrapers carefully capturing the material in fine mesh baskets and collection bags. This included the underside of the rudder, anodes, paint damaged areas, thruster hubs and propeller areas. Many Mediterranean fanworm *Sabella*	Organism managed in place

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				were noted on expected areas such as the anodes, thruster blades and any areas of paint damage. It was in these areas of fouling that the Mediterranean fanworm *Sabella spallanzanii*, were seen. **Niche areas:** • Bottom of keel: moderate cover of small bio fouling with very small *Sabella* (10-20mm) attached within this fouling. • Bilge blocks positions: 100% cover small bio fouling. • Tail shaft/propeller: only light fouling in the form of small barnacles. • Rope guard: moderate levels of fouling. Fan worms ranging from 40-80mm long. • Main seawater intakes: were found to be clean. However, the largest *Sabella* recovered were taken from here. They were 140-240mm long and attached to a zinc anode and attached to a valve face. • Zinc anodes: had only light fouling in the form of small barnacles around them. *Sabella* were removed from several anodes. • Rudder stock and pintel: *Sabella* found in both locations (10-30mm). • Bow thruster tunnel: *Sabella* found on the blade hub.(20-80mm long).	*spallanzanii*, and a single clubbed tunicate *Styela clava* were removed. **Summary:** The treatment work went very well, and we are confident we were able to carefully capture and recover all visible Mediterranean fanworm *Sabella spallanzanii*. These were disposed of to a landfill in Nelson on our return. The process 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). We recommended to the vessel they have the hull re inspected in 2-3 months	

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30 January 2020	Organism on vessel	*Sabella*	Marlborough	The vessel Stornoway was inspected in Onahau Bay on 30 January 2020 as part of the routine TOS summer survey. The vessel is a large ketch rigged sailing yacht and was on a mooring in Onahau Bay. The vessel had been previously inspected at Port Ligar on 5 January and found to have level of fouling 2 and to be free of visible pests. Picton was recorded as its home port with 9 months since last antifouling and one month since last clean. The cleaning was an in-water scrub/scrape. Nine immature *Sabella spallanzanii* were found on the keel of the vessel amongst turfing fouling. The fanworm were removed and transferred live to Nelson where Dr Barrie Forrest confirmed the ID. The worms were 10mm to 30mm long and have been preserved in formalin as per standard procedure. The find was phoned into the MPI hotline on the morning of 31 January. The Marlborough District Council was informed of the find on the 30th of January immediately after the inspection.	No-one was aboard the vessel so we went aboard to see if we could find contact information. The owner had fortunately taped contact details to hatch. We phoned the owner to notify him of the find and gather preliminary information. He said he was resident in Christchurch and the vessel was now permanently located in Onahau Bay. The vessel had been to Auckland about three months ago and had been cleaned by divers before leaving there. He was aware of risk of fanworm but had assumed the diver removal would deal with that. The owner reported that he had been trying to get the vessel slipped but had run into barriers due to the size of the vessel (35tonnes) and congestion at a range of facilities. The vessel is marginal for the Waikawa travel lift due to its weight and length. It is a good fit for the Tory Channel Contractors that take vessels up to 180tonnes but they were booked out and had stopped returning his calls. He is pursuing an option at Chaffers in Wellington though this has other limitations. We said that the MDC would direct next steps and may be able to help get priority for slipping. We said he should expect a call from MDC today for more thorough information and directing him on next steps. **Conclusions** This vessel represents no immediate risk	Vessel risk mitigated inside TOS

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					but should be slipped as soon as possible as further very small fanworm could well remain. The deep draft of the vessel made snorkel diving difficult but all visible worms were removed. This is the third vessel this season where diver inspection and removal has failed to detect and remove fanworm. These cases should be written up and the lack of efficacy of this method made known through all available networks.	
26 November 2019 and 24 February 2020	Organism on structure	*Sabella*	Nelson	As part of scheduled delimitation/ elimination work by Bruce Lines two *Sabella* specimens on separate dates. On **26 November 2019** a single *Sabella* was found under a walkway platform on the shore side of the landing pontoon inside marina finger F9 (where the shore ramp meets the pontoons). This worm was 150mm and was removed and saved for analysis. On **24 February 2020** a second *Sabella* was found under a marina finger pontoon A). This was attached to a plastic pontoon float near the surface. It was noted at the time that the pontoons in this area were found to be very heavily fouled.	**Planned actions/actions underway:** Maintain surveillance at these sites during delimitation and elimination surveys (next round May/June 2020). These areas will be targeted for the top of the tide cycle to improve access for divers. Bruce Lines has removed both *Sabella* found and did not find any other incursions at the sites. The two worms recovered were noted to be growing just clear of heavy fouling on the underside of pontoons Situation has been discussed with MPI – Kathy Walls comfortable that only 2 worms found in December and February as this has been pattern over years since first incursion.	Organism removed.
28 February 2020	Suspect vessel		Marlborough	Received email about a vessel in Moetapu Bay, Mahau Sound that has not been hauled out and cleaned in at least 5 years and has considerable growth on it.	Liam Falconer, MDC, responded: As the vessel probably hasn't moved off the mooring over this period it isn't expected to be a biosecurity issue and unlikely to have species from outside the district on the hull.	No risk

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2 March 2020	Suspect vessel	Okiwi Spirit	Marlborough	Email from Darren Brown, Sanfords. They have a vessel working out of Lyttelton, has been there for 6 months, they want to bring her back to Havelock. Wanted to know if vessel needed to undergo inspection or cleaning before returning to Havelock.	Liam Falconer, MDC, asked the vessel operators to get the vessel washed as a precautionary measure before leaving Lyttelton. Given they will be operating all over the Sounds and visiting various mussel farms they were happy to undertake a wash.	No risk
18 March 2020	Organism on vessel	*Sabella*	Nelson	During the annual TOS Marine Biosecurity Summer Survey, two fanworm were found on the yacht 'Scorcher' – 110 and 130m tube length, one of each side of keel. The entire keel was dirty but the main hull looked as though it had been scraped very recently.	Peter Lawless notified Richard Frizzell (NCC). Sample sent to MITS. **Update from Richard Frizzell 2/4/20:** Although ideally it would be good to get this vessel lifted and anti-fouled ASAP, given lockdown situation and relatively low biosecurity risk (ie all found *Sabella* removed, no more *Sabella* discovered, and fact vessel will not be going anywhere (owner is in Queenstown)) we've made the decison at this stage to wait until lockdown is lifted for getting vessel treated. **Update from Barrie Forrest 22/5/20:** Barrie went to the marina last week to check Scorcher on the travel lift. Didn't see any more fanworm, but there were quite a few small *Styela* on the keel, plus a few *Undaria*.	No risk

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24 March 2020	Organism on vessel	*Clavalina oblonga*	Picton	Liam Falconer (MDC) emailed Barrie Forrest – he had just been snorkelling a boat in Picton and came across a significant amount of what looks to be *Clavalina oblonga* on the bottom of a vessel.	Barrie said that if it's on a regional boat that hasn't travelled to Hauraki Gulf or Great Barrier specifically, he would be surprised if it was *C. oblonga*. In that case it's most likely *C. lepadiformis*. He said if there is any doubt it would be best to follow the MPI reporting/ sampling procedure.	No risk
19 June 2020	Organism on vessel	*Sabella*	Nelson	As part of scheduled delimitation/ elimination work Bruce Lines discovered approximately 20 *Sabella* on a catamaran (the Lotus) in the two outboard cavities in Nelson Marina. Bruce called Richard Frizzell at NCC reporting the find and also contacted Kathy Wells at MPI. 25Jun2020 Richard Frizzell spoke with owner and confirmed the following details about the vessel's movements: Vessel arrived in New Zealand from Tonga on 21 Nov 2019; stayed at Opua Marina in Bay of Islands for 4 days, and was lifted and cleaned there on 18 December 2019. It travelled via Marlborough Sounds arriving in Nelson early March before heading to Adele Island in Abel Tasman NP for 7 weeks during Covid lockdown. It has been at Nelson Marina since 28 April 2020 and must depart from there by 1 July 2020.	Bruce Lines sealed both openings to areas around the drive shaft and treated them with Dichlor; leaving them sealed for a few days and checked to ensure treatment was successful. Situation has been discussed with MPI – Kathy Walls comfortable that worms were too small to be reproductive – did not need to be collected and sent to MITS for analysis. Kathy will discuss situation with Opua Marina.	Vessel risk mitigated inside TOS

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8 October 2020	Suspected organism	Seaweed	Motueka	TDC harbourmaster (Dan Cairney) phoned Barrie Forrest regarding a seaweed he was alerted to on a boat hauled out at Mapua. The seaweed hadn't ever been seen by the boat owner, despite the boat being on the same mooring (in Mapua channel) for 30 years. BF received a sample and photos from DC the same day, and couldn't definitely identify the specimen as a native. BF contacted the MPI hotline, and MPI arranged for sample to go to MITS on 9 October.	The MITS ID came back as follows: *The sample was mostly Papenfussiella lutea, but there were also two small plants of Scytosiphon lomentaria mixed in. Both are native.* *Although Scytosiphon commonly fouls boats/ropes/buoys, it is probably pretty unusual for Papenfussiella to grow on a hull.*	No risk
30 Nov 2020	Suspect vessel	Fanworm?	Picton, Waikawa	Vessel in Waikawa Marina has come from Auckland and Opua. Was diver inspected before it left. Could have tiny fanworm that were missed in the inspection.	Peter Lawless sent Liam Falconer of MDC the contact details of the owner and asked him to check the vessel with the ROV in a couple of weeks to see if any fanworm have grown. Liam to report back. Liam reported that MDC have dived the vessel with nothing of concern seen. The vessel is still quite clean, the only fouling seen was around 2-5mm long.	No risk.
9 Dec 2020	Suspect vessel	Fanworm?	Nelson	Annie at Nelson Marina rang Peter Lawless to report that the vessel Windora had arrived from Northland including a stay in Opua. Last antifouled 4 October 2019. "Cleaned" in water 1 December.	Peter sent the information to Richard Frizzell at NCC and suggested a dive inspection of niche areas within a week.	

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6 Jan 2021	Organism on vessel	Fanworm	Marlborough Sounds	As part of summer survey Barrie Forrest reported coming across an Auckland-based trimaran (triple hull) "Romanza" at Anchorage with fanworm around the top of the rudder. There were 6 worms, clearly Mediterranean fanworm. Tube lengths were ~12, 20, 30, 72, 75 & 96mm. The boat had been cleaned in-water by a dive company in Auckland 1 month earlier – so the worms were missed during this process as they were too big to have colonised post-cleaning. On leaving Auckland, the boat travelled to Anchorage via Kawau and Cavalli Is, New Plymouth, Nelson (21-29 Dec), throughout Pelorus Sound, arriving Abel Tasman 3 January. LOF was low 3 (~6-10% cover) due to recolonisation of main hull by cosmopolitan summer fouling species. Antifoulant was long life Coppercoat, which is designed to be cleaned regularly. Intended voyage destinations of boat in TOS are D'Urville and Queen Charlotte Sound, before heading back to Auckland between 20-30 January.	The worms were removed on site as: a) The boat was too wide for any of the TOS cleaning facilities, and b) removal was straightforward on snorkel, and considered the best option (and low risk) given the tube lengths (which suggest the worms were unlikely to be reproductively mature). Barrie was satisfied there were no worms remaining unless very small – also, given the main hull had been cleaned, any very small worms remaining would most likely be in the rudder top near the ones that were found, as this was the only complex niche area on the boat. Barrie's **assessment is that the boat presents a negligible ongoing risk in the TOS** for the 2 weeks or so that it remains there. He felt that he took sufficient practical steps to mitigate risk, with anything more comprehensive (haul out or wrapping) either not feasible or not warranted. Note that the owners were very willing to comply/assist, and have agreed to not clean the hull in water, as they had been intending to do while in Marlborough. Barrie felt it would be worth follow up call to the owner from someone on the TO committee to reiterate that they shouldn't clean in-water. He reported the find to MPI. Paul Sheldon, Tasman District Council, emailed Samantha Happy at Auckland Council and copied Barrie's message and concerns.	Vessel risk mitigated inside TOS

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9 Feb 2021	Organism on vessel	Fanworm	Nelson	Bruce Lines notified Richard Frizzell (NCC) that *Sabella* has been found on a vessel (Into the Blue) that has come into Nelson marina. Few small *Sabella* (4-5 up to 60-70mm long) found in bow thruster tunnel. Bruce believed the vessel was cleaned in Auckland recently so may have been missed.	Bruce met the Skipper and discussed plans for removal/treatment. Bruce inspected vessel and saw no visible *Sabella* on main hull (likely divers had cleaned it up north but missed niche areas). Tiny *Sabella* found inside main intake, and inside rudder hinges and larger specimens found (up to 60mm long) in the bow thruster tunnel. Bruce wrapped rudder and treated area with Dichlor; sealed off bow thruster tunnel and treated with Dichlor; capped off main intake and treated with Dichlor. Treatment left on overnight to be checked in the morning of Wednesday 10 February. Bruce contacted Liam Falconer at Marlborough District Council about the vessel as it is heading to Marlborough Sounds after leaving Nelson to cruise around for a week or two before sailing back to Auckland for the America's Cup. Notified Kathy Walls (MPI) – vessel will likely become reinfested when it returns to Auckland unless slipped and properly cleaned/antifouled; suggests vessel is kept on 'watch list' should it come back to Top of the South or return to Bay of Islands in the future. Kathy has advised Marlborough DC; Tasman DC and Northland Regional Council staff.	Vessel risk mitigated inside TOS

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15 June 2021	Organism on structure	Fanworm	Picton	One large fanworm was recently detected in Picton Marina by a commercial diver undertaking maintenance checks on a vessel hull. The fanworm was large, approximately 350mm long, found on a pontoon jetty near the coat hanger bridge.	Marlborough District Council responded by putting a dive contractor in the water to carefully check over the entire jetty including the piles and all boats on the jetty. Intensive lead lining was also undertaken on the seafloor below the immediate area. Nothing further was found. Councils regular Autumn surveillance work has been undertaken throughout the Picton and Waikawa Marinas along with the Waikawa Bay moorings area. No further fanworm have been found.	Mitigated inside TOS.

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28 Sept 2021	Large mooring monopoint mooring buoy being moved to Picton Harbour		Picton	Anouk Euzeby of Port Marlborough emailed Peter Lawless, TOS Marine Biosecurity, asking advice on the monopoint mooring buoy from Taharoa near Kawhia being brought to Picton Harbour.	Peter's advice: This is a substantial structure of 250t which has been in place for some years. Under the Marlborough Pest Management Plan no significantly fouled structure should be brought into the Marlborough region. You therefore need sign off from the Council about what should be done. We discussed the idea of a dive inspection for marine pests. I advised against that as we have seen 6 recent cases where such inspections were ineffective. The better option is simply to kill the fouling before leaving or on arrival. Taking a practical approach my recommendation to the Council would be to permit the buoy to be towed as is to Shakespeare Bay and require it to be immediately wrapped in plastic and dosed with chlorine to kill all the marine life on it. The buoy has been visited every 6 weeks by international shipping from before the 2018 hull fouling restrictions were put in place. Wrapping and dosing before it came down would be better but the currently exposed location if it is still out at Taharoa would make that difficult and perhaps impossible. to Kawhia.	

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					If it is currently in the Kawhia Harbour it could be wrapped and dosed there. However, as you are aware there are facilities for securing barges in Shakespeare Bay that could be used with the buoy. The area is very easy to work in and is inspected as part of the ongoing programme. In addition, if any biological material is lost from the buoy it would happen in transit down the West Coast rather than in the sheltered waters of the Sounds. This would also be a far cheaper solution (maybe $10,000) rather than tens of thousands to send in a crew in to Kawhia. If I were you I would ask the MDC for a notice of direction under the Biosecurity Act pursuant to their Pest Management Plan. This would define the conditions that had to be met. They could also determine whether they have requirements under any of their other legislation.	

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10 January 2022	Organism on vessel	Fanworm	MDC Lochmara Bay	Four fanworm 30-50mm found during summer survey on bottom of keel of LOF5 yacht. Location -41.224535, 174.005082. Antifoul was 12 months prior and in-water wipe 5 months prior. Vessel based in Picton but had been in Auckland for Americas Cup (Feb/March 2021? - i.e. not long after last antifoul). Owner notified via his son who was at an adjacent bach. Asked to have haulout and hull clean.	**Update from Liam Falconer, MDC:** Boat was wrapped on 16 February with one additional 80mm fanworm found on it. We also undertook a snorkel check of the other vessels in Picton marina that were on the same jetty as the boat that was found in Lochmara. During the snorkel we found one 50mm tube on a vessel in an area the antifoul had missed due to the block. The tube we found had no visible fan, until it was preserved when a small orange fan fell out. The tube looked very likely to be fanworm. We removed it from the vessel. The vessel had originated from the upper north. So we have treated it as fanworm. The rest of the vessel was spotless. Nothing else was found during our snorkel.	Vessel risk mitigated inside TOS
29 January 2022	Organism on vessel	Fanworm	TDC Abel Tasman	Vessel Slice of Life identified on AIS as present in Kaiteriteri and potential risk due to origin from Opua. Targeted during summer survey while still in Kaiteriteri (-41.070724, 173.046867) and found 3 fanworm 15-40mm on bottom of keel. Fanworm were removed. However, due to small tubes still being present, the owner was asked to arrange for haulout in Nelson, as he planned to go to Pelorus Sound. Had been antifouled 11 months earlier and cleaned by hardstand water blast 1 month earlier in Opua. Boat was LOF2 with only fouling was on keel (i.e. assumed missed during waterblast).	Vessel was hauled and cleaned the following day in Nelson.	Vessel risk mitigated inside TOS

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5 March 2022	Organism on vessel	Fanworm	Nelson	**Email received from Bruce, Diving Services NZ:** We were diving on the vessel 'Mahoenui' today to assist with a repair to a propeller shaft seal. During this dive we spotted Mediterranean fan worm (*Sabella spallanzanii*). The divers suggested worms looked to be from 15mm-60mm tube length and throughout the vessels hull. Noticeably in the niche areas such as Bow thruster and intakes. The vessel also has a 80% cover of acorn barnacles. The vessel had come from Opua Marina where it had been treated on 29 December 2021.	Bruce talked with slipway managers , vessel managers and it was decided the best plan of action is to undertake a full hull encapsulation with DICHLOR treatment. As Diving Services hold a consent in Nelson and do this work it's the fastest method to treat the vessel. Date for treatment 6 March 2022. **Update 31 March 2022:** Email from Kaeden Leonard, Northland Regional Council regarding vessel. NRC dive contractors did dive Mohoenui as part of our hull surveillance, the vessel was on anchor in Putakokota bay in the Bay of islands and was inspected on 29th Dec 2021, the overall level of foul of the vessel was 2 (macrofouling on less than 10% of the hull) which is compliant with our Pathways plan. Divers did detect juvenile fanworm in the thrusters and removed these, divers notes are as follows "Approximately 30 fanworm (avg tube length 60mm) in bow thruster and 7 in stern thruster. Removed by dive team, some small <15mm TL likely remain. Vessel claimed to have had an antifoul and lift an wash in the last 3 months, but some lathes of fouling remained". We do allow our divers to remove fanworm if the densities are low and the vessel has been seen to be doing the right thing (e.g. on an otherwise clean vessel). If the vessel owner is present the divers are supposed to inform the owners that the vessel still represents a	Vessel risk mitigated inside TOS

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					biosecurity risk, staff call the owner if no one is onboard. Our divers are currently on Great Barrier working on the Caulerpa response but I will contact them ASAP to get more information on what was conveyed to the crew at the time. Understandably situations like this are frustrating and this does highlight the need for us to improve how we treat vessels like Mohoenui to formally inform them they still represent a risk.	
17 May 2022	Organism on vessel	Fanworm	Picton	Liam Falconer, MDC reported: Bruce Lines' dive crew located and removed 4 Fanworm on a vessel Kotare in the Picton marina. We previously removed one small Fanworm on it on snorkel in late January just after the boat arrived, it appears we didn't see the others as they were quite small. The ones removed range from 80mm to 120mm. The two large tubes were dead. The majority of the vessel was very clean with one small area that hadn't been antifouled very well likely where the lifting strap or block was. The vessel was bought down from the Auckland area to be sold in Marlborough, subsequently the vessel will be remaining in Picton permanently.	The vessel will be hauled in the next week while and will be antifouled.	Vessel risk mitigated inside TOS

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16 Dec 2022	Organism on vessel	Fanworm	Wellington	**Reported by Tony Kelly, Seaview Marina:** On Friday 16th December a yacht was lifted out of the water for a quickslip [Lifted out, cleaned and put back in the water]. The hardstand supervisor [Mike Croft] was concerned the bio-organisms on the hull looked like fanworm. I photographed them and sent it off to Louis Olsen from NIWA [Louis is conducting the annual biosecurity survey in mid January 2023] Louis advised that I contact MPI, which I did. MPI believe the organism is fanworm. They have told us that the length of the worms at over 200mm would suggest an age of two years.	Seaview sent out an email to advise boat owners that fanworm has been found so they are aware when travelling regionally. Kathy Walls from MPI has passed on Bruce Lines number to contact about discussing removal and NIWA are going to be conducting the annual Biosecurity survey.	Vessel risk mitigated outside TOS
29 Dec 2022	Organism on vessel	Fanworm	Picton	**Reported by Peter Lawless:** Fanworm on the vessel Waverider from Lyttleton. Eight fanworm, some over 150mm found amongst hard fouling on the keel. Vessel was in Tory Channel.	It was requested the vessel proceed to Waikawa directly and be lifted and cleaned. We arranged for a priority on the travel lift and the vessel was cleaned that day. Registered with BNZ through their online tool and it responded indicating we would be in contact within 48 hours. Still waiting on that. Barrie has the samples.	Vessel risk mitigated inside TOS

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30 Dec 2022	Organism on vessel	Fanworm	Queen Charlotte Sound, Picton	**Reported by Peter Lawless:** Fanworm in the stern thruster of the super yacht Duchessa.	It had a certificate of inspection from Glenn Hunter Salt Services 2018 LTD 022 517 9590 dated 12/12/22. I am following up with Salt Services to discuss inspection procedures. The fanworm were less than 30mm and could not be reached by divers. We advised sealing the thruster and threatening it with chlorine granules. Followed up with Mark Woodmore - Picton Marina Service Manager, Marlborough Sounds Marinas, PO Box 111 Picton 7250 – 14 Auckland St Picton 7220 New Zealand, Ph 03 520 3390 l Cell 021 704920 | Email: picton@msmarinas.co.nz so he could check this was done. Referred to MDC for follow up.	Vessel risk mitigated inside TOS
5 Jan 2023	Suspect vessel		Queen Charlotte Sound, Picton	**Reported by Peter Lawless:** Vessel Denize III ex-Fiji via Opua LOF 5 but no pests. Unaware of 6 or 1 rule until refused entry to Chaffers marina.	They said they were going to Nelson for a haul out and antifoul in one week. Have been tracking them on AIS. Currently approaching French Pass so on track for that. Nigel Skeggs or Richard Frizzell could follow up and make sure that has happened.	No risk

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18 Jan 2023	Organism in place	Asian date mussel	Nelson	Salt Ecology undertook core sampling of Nelson Haven macrofauna on 18 January 2023, as part of routine State of Environment monitoring contracted to NCC. Among the macrofauna in the cores, a single small unknown bivalve was sent for ID to Bruce Marshall at Te Papa, and was recently (July 2023) confirmed as the Asian date mussel *Arcuatula senhousia*. This species has been present in NE New Zealand for decades, but this is the first South Island record. It is one of the secondary targets in the National Marine High Risk Site Surveillance programme. In total Salt Ecology has collected 90 cores from Nelson Haven over the last 3 years, so one suspects the date mussel is uncommon at present, at least at the 3 sites surveyed. Elsewhere in New Zealand it can form conspicuous extensive mats that alter the ecology of estuaries.	MPI were notified. Despite being a surveillance secondary target, MPI have closed the investigation. Barrie Forrest has offered to Richard Frizzell (NCC) to attend a follow-up meeting that he plans to arrange with MPI.	No risk