



Partnership Meeting

Top of the South Marine Biosecurity Partnership

27 May 2016

Held in Port Nelson Visitor Centre, 10 Low Street, Port Nelson

1. Welcome and Introductions

Chair Dean Evans welcomed everyone to the meeting and introductions were made around the room.

2. Annual Report of Partnership Activities

Peter Lawless, TOS Marine Biosecurity Partnership Coordinator, presented the Partnership's annual report. The presentation and report are available on the TOS website.

3. Fiordland marine pathways management

Richard Bowman, Environment Southland

Note: Richard's presentation is available on the TOS website.

Underwater Fiordland has incredibly diverse unusual and unique marine ecosystems. There is a large fishing industry attached to it. It is a very special place.

Is Fiordland vulnerable to marine pests? Because it's very remote you'd think it is well protected, however in April 2010 *Undaria* was found on a mooring line on a barge in Sunday Cove. Since then approximately \$1M has been spent to date, involving 80+ trips to Sunday Cove to search the sea floor and remove any *Undaria* found. Eight hectares gets searched every month by teams of up to eight divers. If *Undaria* establishes it could change the marine ecology significantly. If we can stop it establishing, the learning will help us deal with other marine pests.

People are an important dynamic. Fiordland Marine Guardians protect the area. It operates under its own Act of Parliament. The Guardians represent the stakeholders and fishing industry, they have legal mandate to manage those values in Fiordland. Most important pest is marine pests. It comes down to dealing with the pathways of vessels.

In 2014 Council gave the go ahead to develop a proposed pathways plan. This is a partnership between Environment Southland, Fiordland Marine Guardians, MPI and DOC:

1. Steering Group formed - FMG cross agency/stakeholder;
2. Set objectives - to prevent marine pests from establishing in the Fiordland Marine Area;
3. Identified risks (i.e. vessels, gear, behaviours, source ports);
4. Established clean vessel standards;
5. Developed mechanisms to ensure operators maintain the standards;
6. Key stakeholders consulted informally;
7. Official consultation;

8. Implementation.

We are currently at official consultation stage.

Risks are vessels - massive ocean cruise ships (90+ go through Fiordland), canoeists, fishing industry, recreational boaties, tourism industry. Recreational are the biggest worry - Fiordland has become popular and accessible.

All vessels operating in Fiordland must meet the clean vessel, gear and residual seawater standards:

- Standard for vessels set as - Level of Fouling = 2 slime layer and goose barnacles. anything beyond that is unacceptable.
- Standard for gear set as - visibly clean, free of sediment and preferably dry.
- Standard for residual sea water set as - seawater has been treated and/or is visibly clean and free of sediment.

Pathways Plan Rules:

- Methods - It is strongly recommended that vessel operators must have a valid Fiordland Clean Vessel Pass when in the Fiordland Marine Area(FMA).
- Surveillance and inspection - as and when/targeted and ad hoc
- Authorised persons will have powers to act.
- Breaches of rules - will instigate: Notice of Direction - to exit FMA as soon as reasonably practicable and safe; not to return until rules are met; in situ cleaning at operators expense (<20m length) an option; offences - liable to fines from \$5,000 (individual)- \$15,000(corporate)

Clean vessel pass is strongly recommended. If you don't have it you are immediately treated as a risk vessel.

The pathway plan is regarded as the best way to ensure the goal of stopping marine pests getting into Fiordland Marine Area. The Fiordland Marine Pathway Plan needs to be workable in order to be effective.

We are hoping to implement plan in second half of this year.

Clean vessel pass is free and will be available on the internet.

The Bluff Vessel Survey is a monthly vessel check has been done for quite some time. Industry has bought into it.

Estimate \$140,000 to put plan into place. Annually about \$120,000.

For 99% of people who have clean vessels there won't be any issues. Those that don't will have to think about things before they come to the Fiordland Marine Area.

Where to from here?

1. Council notified the Proposed Pathways Plan in March 2016.

2. Around 12 submissions received.
3. A Hearing will be held if required.
4. The final proposal will be submitted to Council to make the plan operative - mid 2016.
5. Implementation of the Plan within a collaborative partnership between ES, DOC, MPI and the FMG in 2016-17.
6. This will commence with a major national communication/ public awareness campaign.

Questions:

The Biosecurity Act says you can't knowingly move a vessel with known pests? What can you do when you ask risk vessels to go?

Don: Northland Regional Council had a case of two vessels with fanworm on the hull. The only logical thing is to direct the vessel to a lifting point.

Richard: In practical terms you don't want a vessel there if it's shedding reproductive pests into the water. In Fiordland the freshwater layer should slow down reproduction. These are things we will have to deal with. If it's a 20 metre vessel we can treat it in situ. This would probably cost about \$10,000.

We couldn't you have regime where you have a hull inspection before you leave for Fiordland.

We can only use our powers within our boundaries. The onus is on you to have a clean vessel.

I agree it's not a 100% fix, maybe 95%. That's why we have the rules, surveillance and a network of people to alert us. We have intercepted a number of vessels on their way to Fiordland where we have been notified by interested parties.

4. Northland pathways management

Irene Middleton, Northland Regional Council

Note: Irene's presentation is available on the TOS website.

There are 14 harbours in Northland. We have a lot of international visitors, approximately 400 clearing customs every year and around 2,000 vessels in general.

Mediterranean fanworm has spread hugely in 2014. Most incursions in Northland are from within our country.

Several marine pests are present in Northland. To stop these from spreading within our region and around the country we need to deal with vectors of spread.

There is a big push this year to do a lot more surveillance. We have a good network of stakeholders who alert us of risk vessels. We also get a lot of vessels coming out for maintenance.

Hull surveillance programme:

- 2013 to 2014 just over 200 hulls checked by NRC divers.
- 2014 to 2015 approx 300 hulls checked.
- 2015 to 2016 between Dec and March this year, contract divers checked 1009 hulls.

Of the 1009 vessels checked, just under 10% had *Styela*, 5% had *Sabella*, 3% *Didenmum*.

Styela vessels had Notices of Direction issued, others got warning letters.

Sabella is most prevalent on moderately fouled vessels, often found in niche areas.

Awareness Campaign:

2014-2015 over 90% of the Auckland vessel owners were aware of fanworm. Only 40% of Northland vessel owners were aware of fanworm. In 2015-2016, 82% of ALL vessel owners aware of Northland marine pest rules.

Pathways Management Progress:

- February 2017 out for consultation.
- LOF description?
- Feedback from boat owners regarding costs to them.
- Research proposal for the effectiveness of comms and compliance of new rules.

Current research proposals to support pathways plan: Bubble diffuser - Monumental Plastics/Cawthron - assist structure owners, underwater hull scanning device - Lincoln agritech; Pile scourer - concept picked up by industry and in development.

Questions:

Peter: Do you use a Fab dock?

Irene: We have used them as a tool when a Notice of Direction has been put into place or a tool where we have no haul-out facilities.

5. Marine biosecurity from a marina manager's perspective

Peter Hart, Mana Marina

Note: Peter's presentation is available on the TOS website.

Mana Marina is situated in Porirua Harbour which consists of 200 square km of water.

Styela has been located recently in Porirua Harbour.

There are 305 wet berths. The marina is 92% full. The playground for most of these vessels is the Marlborough Sounds which is within 19 nautical miles.

Challenges: detection of marine pests, control/prevention of spreading pests, cost of eradication of marine pests, education of vessel owners, dealing with multiple parties.

We were notified by Peter of a boat visiting Marlborough from Mana with *Styela*. We put divers down and found approximately one *Styela* every 2-3 metres. It had spread throughout the entire marina.

Recent events:

Detection of *Styela clava* in Mana Marina in February 2016.

Detection of *Clavelina lepadiformis* (light bulb ascidian) in Mana (April 2016). Clustered across three berths on poles and on marina structure. Did wrapping process. Divers checked and found little pockets through entire marina.

Detection of *Ectopleura* in Onepoto Arm, Lower Porirua Harbour (May 2016). Vessel was moored on a jetty. The vessel transports people to Mana Island 3-4 times a week. It had been up on the hardstand and sandblasted and anti-fouled recently, but had considerable growth of on it. Growth was around the waterline, although the bottom was relatively clean.

For eradicating light bulb ascidian we did wrapping. Within a week it had gone.

Where to from here?

- Continued education of vessel owners.
- Monitoring of all new vessels to Mana Marina.
- Continued building of relationship with biosecurity partners.
- Monitoring of marina structures.

6. Are our bums clean? Results of the summer survey of recreational vessels

Note: Barrie's presentation and video is available on the TOS website.

Questions:

Mana Marina - Our practice is to anti-foul vessel, then go to travel lift and 20 minutes later it's done. Seems to be the practice around the country. Our travel lift operators weren't happy to change their practice.

Steve McKewon - Health and Safety is a focus around diving around marinas in terms of inwater cleaning. It's illegal for non-professional divers in marina. We are looking at getting dredging done and sampling seabed.

Bruce Polkinghorne: A paper is available - study between Mexico, Australia and New Zealand issued in 2007. Suggests that you never let the boat go even into heavy slime. Diver had micro fibre and went over the whole boat once a month. Demonstrated as most effective. Done in San Diego where there were several thousand boats. Done by professional divers.

Northland Regional Council: Feedback in regards to inactive boaties - boaties don't think about their behaviour after anti-fouling. Focus should be on education. People need to be using the right anti-foul for their situation.

7. Interactive session on the recreational vessel vector

Jono Underwood

Jono asked: Where do we want to be? Open discussion:

In TOS we effectively are not managing recreational vessels in terms of unitary authorities. We need to brainstorm effective ways of managing recreational vessels.

Barrie: Outcome we want is that vessels aren't carrying actual potential pests around, or the risk is minimal. Vessels with low fouling can still transport known pests. Fiordland Clean Vessel approach is ideal.

Jono: It's a combination of things - people operating in Marlborough need to be aware of issues, also doing something about it. Cleaning your boat is a means to do that. A whole bunch of things can be done to educate people to change their behaviours. We tend to throw awareness and communications at people but don't get a change of behaviour. I wonder if there's an opportunity to take a more social science approach and measuring what's most effective and modify different barriers in the process. You want clean boats but you want people to want to have clean boats. You need to overcome those barriers and people to know there is value in spending that money.

At the end of the day it's not rocket science and people look at what it costs rather than the benefit.

You need a WOF for a car, but there's nothing for boats.

There is a change of attitude depending on where they're going. Fiordland is seen as pristine, TOS already has things so they don't worry about it so much. It's about social responsibility.

Before you change their mindset you need to give them what their options are. You need to do more work on what are the best anti-fouling and get more technical information out there, maybe in the boating magazines.

Links to who we know as well. Informal information networks.

Dave Duncan: I don't want another boat from any other part of the country coming to Nelson and none of them are clean. It would be a phenomenal leap forward to change the mindset and to have people clean their boats. We have a marina with pontoons covered in crap, and they get cleaned, but it keeps coming back. Comes down to social awareness.

Reason why they clean it is important.

Peer pressure works well.

We need something like Fiordland here in the TOS. We need Council backing to be able to enforce that process. We have it in some bylaws, but not in others, have it in some marina policies, but not in others. The ideal is where everyone has a clean boat. One in four boats at the marina are live-aboards, they don't care how fast their boat goes or how clean it is. If cleaning in the water is the solution, then let's clean in the water.

Jono: Amazing how quickly as soon as you make them aware they have something on their boat they're happy to clean.

Fiordland pass is voluntary, is nothing compared to "prove it" in Northland. People give the easiest answer.

Jono: We follow all our responses through.

Bruce Polkinghorne: Berthholders Association have problems with NCC. There are pipes in Akersten Street we could use to do a freshwater flush into the marina. We've been trying for 10 years, but at a loss to get local bodies to act on this. We'd kill a lot of the pests.

Paul Sheldon: We did look at the pipes about 10 years ago. Cawthron crunched the numbers, localised effect, but wasn't going to make a change to the marina. If you manage to increase the amount of fresh water it may be effective but the pipes are not big enough. Unfortunately, the volume of fresh water in relation to the tidal interchange wasn't enough. Then you have to manage sediment control, with a lot of water you add to sedimentation rate in marina. That analysis hasn't been done, there are engineering solutions. Maybe Cawthron could redo the analysis.

Jono: In terms of management of recreational vessels what don't we know?

Liz: Do you know pathways? Northland have data on where vessels are coming from and if they are connected to other places in New Zealand.

Jono: Yes, we have good information on that.

Social Science is the stuff we need to be looking at. We all have opinions of what the barriers are to getting people to clean their boats. We need to get more science involved. We've been doing general communications for a long time but are we seeing changes in the vectors and owners of the vectors? We could do a lot more with some science behind it.

Peter: Queensland are doing that for the Great Barrier Reef. Segment the population, sample the population, where you can't sample people directly they generally know what the other 90% barriers are. But it's not cheap

Bruce Polkinghorne: Focussing on not spreading pests. How do we eliminate them? How do we deal with it from the source as well? Is the eradication still being looked at? You can clean your boat, but the marina isn't clean.

Brendon Gould: This is all about behaviour change. You need the science and practical environmental science to back the case you use to get people to change behaviour. Need things that will help to understand behaviour and behaviour change. Need people to see it's good, worthwhile, necessary to change.

Worth finding out what other obstacles they believe there are and why they're not doing it. Probably costs and time, but may be other things not yet identified.

Need to find out how effective technologies are.

Not really a great deal of understanding of the consequences. Getting *Styela* in Duncan Bay - what different does it make? It's out of sight out of mind. There's not a drive to clean it because people don't know the consequence. There's fuel efficiency and going faster, but ecological consequences are not understood.

Anjali Pande: One person mentioned diseases. That information should be out there. It's very rarely talked about being a vector for disease.

There are some communication stuff you can do about that, maybe broaden the messages.

Jono: Barriers for next steps. If agencies were to change what they are doing right now, what are some of those barriers?

Kathy Walls: There are a few tools that can be utilised to clean vessel hulls. Unfortunately, they are not able to be used effectively because there are barriers to their use. Use of biocides - chlorine and acetic acid. Also resource consenting part of it is a barrier, this can't be done under urgency.

In-water cleaning - most Councils have rules that don't allow it.

Jono: There has been an ease in terms of RMA context. There needs to be a lot more detail, not all in-water cleaning will result in discharge.

What are the cost benefits and impacts of these things? Decision-makers look at money. How do you communicate the impacts on a marine space to people?

Recent government funding has gone to NIWA and Cawthron to look at tangible impacts of marine pests. Ultimately to better understand the economic implications.

Mana Marina: Economics - 10% of boats are used regularly, but the majority of boats don't go anywhere. Economics is only for those people who use their boats. We haven't done enough to get other side of environmental impact s and cost.

Jono: in terms of TOS, what could agencies do to change the way we operate?

Enforcement of regulations.

Marinas and haul-outs are closely related. Marina fee to include free haul-out?

Jono: In TOS Moored vessels are a huge portion.

Put swing mooring fee up.

Dave Duncan: Here there is a Council maintenance fee of \$150 a year.

Has there been any communication as far as marine biosecurity goes?

We got information on 80-90% of vessels. First year they've had any communications.

NCC mooring consent has a condition that the vessel is maintained. But don't think it has been policed.

Legally how is "maintained" defined?

The vessels that are moving are the biggest vector risk.

12. Summing up and closure

Paul Sheldon, TOS Marine Biosecurity Committee

In 1996 *Undaria* appeared in Nelson. We went to MoF and scientists but no-one knew much about it. Two years later it was decided it may be a risk. Was very difficult engagement. It is now fully established.

TOS Marine Biosecurity Strategy was put underway.

Reflecting back on mid 1990s and the response we got. We now have people actively engaged to solve marine biosecurity in a positive and sustainable way.

We are seeing some light at the end of the tunnel, getting some engagement, legislation has changed. We had the Biosecurity Act amended to allow Pathway Management Plans, but they are fraught with development issues and legal challenges as we go forward, but they are there and there is potential. People are talking to each other. Great to see Peter from Mana here. If we control the vessels and gear the movement toward vector management has begun and it provides a good way forward and to future proof slightly things we don't know about coming this way. We've developed tools - fab docks, Bruce doing wrapping, Don and Richard working on reassessment of chlorine which is very promising. Various bits of work are coming together in terms of developing the tools available.

We still have challenges - internal borders is one of main challenges. We have problems stopping boats leaving Nelson and going to Northland and vice versa. Facilities have been referred to a number of times. We are trying to develop an area that catches the runoff and treats it - we've got a way to go. There are things that Councils could do.

There is a lot of engagement, a lot of energy, people from all over the country with different parts to play in the puzzle. New Zealand is doing alright in this regard.