



## Partnership Meeting

Top of the South Marine Biosecurity Partnership

22 May 2015

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

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### 1. Welcome and Introductions

Chair Lindsay Vaughan 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 Annual Report is available on the TOS website.

### 3. Cutting edge approaches to marine biosecurity in Northland

*Don McKenzie and Irene Middleton, Northland Regional Council.*

**Irene:**

Irene presented a video of Mediterranean fanworm showing what the densities can get to.

The enemy in Northland is fanworm. They are not just growing on pilings and mussel buoys, but we are starting to see them on reefs and natural substrate now.

Current problem areas - vectors, ballast water, sea chests, movement of aquaculture gear, domestic and international traffic.

Management tools include: Biosecurity Act - Regional Pest Management Strategy, scope of pathway plans; and Resource Management Act - rules in Northland Regional Coastal Plan.

We can issue fines under our Coastal Plan for knowingly spreading exotic organisms. Most of the fanworm in the Northland harbours have come from domestic vessels.

Current work: Summer hull survey, continued vigilance, tougher restrictions on structure owners.

Notices of Direction are issued to reduce the number of fanworm to a point where it isn't an infectious node.

**Current successes:** Use of RMA for instant fines, collaboration between regions, Notice of Directions.

## Options for future management:

- Option 1: Interim measures.
- Option 2: Pathways plan.
- Option 3: RMA alignment.
- Option 4: RPMP alignment.

## Don:

Where to from here?

- Surveillance - more widespread.
- Easy access to data and information.
- Adaptive management - novel control tools tested by the Regional Council, supported by MPI/NIWA/Cawthron.

We weren't getting anywhere until we started using rules. Council has been insistent that rules are applied in a very reasonable way. Enforcement works.

Northland could have solved their fanworm problem back in 2008 if we had looked for it. There was a single vessel that brought fanworm to Northland. If you don't look, you're not going to see. It is heartening to see other regions looking, having response plans, and when you find something, doing something about it.

Response - there is a wide opportunity for control tools, we as a region are putting more money into the development of response tools. We are heavily into surveillance and when we find something, we want to respond.

Question: Do you have rules on movements of heavily fouled vessels?

We don't have a pathways plan at the moment, but our rules cover that. If we are aware of a fouled vessel in Whangarei that has come from a risk area and there is reasonable risk it may carry fanworm, then we can detain it and search it, and then if it's found, it's out.

Survey is a random hull survey, regardless of tenure.

## 4. Bay of Plenty approach to *Sabella* incursion

***Hamish Lass, BoP Regional Council***

Fanworm is also the enemy in Bay of Plenty.

In 2013, we found a single specimen of fanworm. It was found in Pilot Bay, we were fortunate that it was found and this spurred us into action to do something about it. We had never formulated a formal plan, so we developed the Bay of Plenty Marine Biosecurity Management Plan. The document is being added to as we learn things. It includes the Incursion Response Plan for *Styela* and *Sabella*.

Work we have done:

- Getting the message out at the Auckland Boat Show.
- Targeted surveillance - swing moorings, marinas and piles are all areas we looked at, along with the sea floor within a marina containing around 540 boats.
- Created small-scale management programmes for both *Sabella* and *Styela*. This meant we had particular powers under the Biosecurity Act. It's the first time this has been done in NZ. It is being publically notified today. For boat owners that don't want to do anything about their fouling, we will have ability to take the boat out, get it cleaned and send them the bill.
- Numbers of fanworm are declining, we got in early enough to do something about it.

## 5. New biosecurity developments

### *Grant Hopkins, Cawthron*

Rebecca Stafford-Smith and Lauren Fletcher - have been looking at bilge water risks. Bilge water could contain a lot of organisms. Sampled 50 vessels in the top of the south, 64% had bilge water ranging from small amounts up to 250 litres (catamaran came to NZ from overseas). Examined under microscope and found a diverse range of critters present: larvae, spores, small bivalves, crustaceans, macroalgae, live fish. Genetic analyses still to come.

Propagules are largely unharmed by pumping process.

Encapsulation (wrapping). Lab trials have been done to find out how long it takes organisms to die.

Other relevant projects:

- Biofouling translocation risk.
- Native biocontrol agents to control biofouling.
- New technologies to keep hubs 'fouling free'.
- Tropical desiccation trials.
- Improved biofouling management on salmon farms.
- Molecular tools for detecting marine pests and diseases.

Question: What do you mean by desiccation?

Just taking them out of the water, air exposure.

## 6. MPI's work on national marine pathways

*Rose Bird, MPI*

Risks: threat of invasive marine organisms.

Current system - biosecurity pressures on the border, pre-border and border measures, post border measures - Biosecurity Act, Pest Management National Plan of Action, Biosecurity Science Strategy, Biosecurity Surveillance Strategy.

Challenges - *ad hoc* management of infested vectors, established pests continuing to invade new areas, reliance on reactive management.

Opportunities: Pathways Management Plan, 2013 NIWA and Cawthron reports, less leaky border, willingness to act collectively.

To meet needs - Forming a Domestic Marine Pathways Management Project which will give collective, coordinated and effective domestic marine pathway management.

How we get there:

- Building the case for change
- Prioritisation and development
- Operational planning and agreements.

## 7. Approaches to pathways management

*Peter Lawless and Barrie Forrest*

**Barrie:**

Context: natural vs human mediated spread:

Most invasive species have limits to their natural spread: They may encounter unsuitable habitat; reproductive life stages have finite time drifting with water currents.

Human activities have exacerbated spread - international shipping, domestic shipping.

Domestic risk pathways and mechanisms - ballast water, recreational boat fouling, aquaculture, sea chests, bilge water, biofouling, sediment.

Rationale for pathway management:

- Prevention preferable to cure - once a pest becomes established, it's hard to eradicate.
- Inclusive of a broad suite of species and life-stages and risk mechanisms, e.g. fouling, bilge, infected gear/stock.
- Inclusive of known and potential pests, irrespective of their geographic origins, e.g. some key aquaculture pests are native.
- Benefits - protection of regional endemism and biodiversity (internal border management).
- Has benefits even for exotic pests that are well established.

Asian kelp *Undaria* - in the top of the South, MPI have enabled aquaculture of *Undaria* in certain parts of the Marlborough Sounds. However, in other parts of the Marlborough Sounds, you can still dive amongst native kelp forest - some of those locations are not likely to get *Undaria* until some vessel takes it there. Even with a pest that is established, there are benefits from pathway management.

We have the tools, resources and expertise to manage vessels and other pathways - cleaning, plastic wrapping, inspection, effective antifouling, wet-dry docks, in-water cleaning tools.

Intensive population control can reduce vessel infection.

Do the benefits justify the costs/effort?

- Risk model applied to recreational boat biofouling.
- Based on managing the 15% or 30% of most heavily fouled boats.
- Reduce rate of pest incursion by ca. 30-80% = incursion rate changes from ca. 1 pest per 4 years at present to 1 per 6-20 years.
- Benefit: cost ratio ranging from 2 to 30.

I'm talking about risk reduction and not prevention, but there are examples where, if we had the tools we have now to deal with the heavily fouled vessels or other risk vectors, we'd have been able to prevent pests spreading.

How do we measure success?

- Occurrence of pest incursions.
- Extent of vessel risk reduction.

Conclusions and directions:

- Have good understanding of risk pathways.
- Have a good toolbox of management tools.
- Can demonstrate that pathways management is worth the effort.
- Have methods for measuring success.
- Challenge is to identify and implement effective and acceptable management practices, ideally in a consistent and coordinated way nationally.

**Peter:**

Annual spend on incursions is continuing to exceed \$100,000 per year.

I think we need four things:

- Confidence in the border
- Stopping risk vectors entering our region undetected and untreated
- Slowing spread of the harmful organisms within the region
- Ceasing to be a source of risk to other regions.

Hull fouling remains our biggest risk vector.

Recreational vessels are a huge challenge. They are not licensed and not concentrated in easily managed locations. We have 4,000 moored vessels in the region and 2,000 coming into ports; unknown numbers are coming into other hubs without coming into ports. There is currently no comprehensive inspection regime.

Effective public campaign includes awareness, we need to look at all avenues - not just a pathways plan, we need marina berth agreements to include biosecurity provisions, RMA rules, consents - provisions for biofouling on mooring consents. We need to explore the provisions of the Biosecurity Act further.

Preventing spread of what has already arrived is critical.

In summary:

- We are getting more confident about the border and the next step is assurance about implementation of the craft risk management standard.
- We can reduce the chance of most risk vectors entering our region undetected and untreated. The technology is there but we need to become effective in all aspects of changing behaviour from awareness to regulation.
- We can at least slow the spread of the harmful organisms within the region and, in doing so, will have real benefits in risk reduction but we will have to get the cooperation of all sectors that contribute to the risk.
- And once we have done the above, we can feel virtuous because we will have ceased to be a source of risk to other regions.

## 8. Marine transport perspectives on pathways

*Annabel Young, NZ Shipping Federation*

There are different kinds of shipping with quite different behaviours.

My role is in coastal shipping - Anatoki, Inter islander, NIWA, Pacifica, Silver Fern Shipping, Strait Shipping.

Coastal bulk shipping is an environmentally efficient method of transport. We share your interests in keeping ships clean. For ship operators, even light marine fouling adds significant costs to fuel and the speed of the ship. This could be in the order of tonnes of fuel per day - light fouling can cost \$365,000 a year. Onboard marine system is affected by sea chest fouling. Sea chest water is recirculated, so the need for that kind of water to be clean is vital.

Ships are routinely inspected in dry docks. Passenger ships are dry docked more frequently.

In-water inspections are done yearly. This is all part of the owner/operator maintaining the operating efficiency of their ship.

One of my members operates out of Westport so their ship often sits in fresh water as well as salt. What lives in saltwater often cannot handle fresh water and vice versa so this helps keep the ship clean. Nonetheless they also put significant effort into anti-fouling as it is such a driver of cost.

## 9. Recreational boaties perspective on pathways

### *John Hellstrom*

I live in the Marlborough Sounds, I have two boats including a 110 year old fishing boat. I keep them both in good order - every 24 months they have their antifoul redone - this costs about \$3,500. A lot of antifoul work is not well maintained, and it is worse at the swing moorings.

Boats come here from all over NZ. Trailer boats are a smaller risk - they have been responsive to the *Didymo* campaign. The recreational boating sector who have boats in the water all the time is much more complex. Less than half the people belong to a club. Of those, only 10-20% are active members, so there is not a community of recreational boaties to have a dialogue with.

Most don't think about biosecurity and don't even know what it is. I don't think we'll get far with inducements, information and encouragement. Enforcement is the path to follow. Most people don't know they have a problem and don't want to know they have a problem. About 85% of people live elsewhere and just want to come and fish and have a good time and then go home. They're not Sounds residents and don't have the same dedication or knowledge of the risks.

MDC does not require any information about biosecurity effects, there is nothing in the resource application about biosecurity. With club moorings, it becomes a big issue - several hundred boats a year visit. There are nodes in Port Hardy, Ship Cove, Alligator Head - these have very high use with boats tying up together on a regular basis and none of them thinking of biosecurity.

I feel it's long past the time we had boat registration. Most countries have already done that, but I don't think we'll get the sort of disciplines we need until we go down that path.

Conclusion: Recreational boaties are hard to engage with; working through clubs isn't going to work; most people don't want to know about it. We need enforcement to make things happen.

## 10. Aquaculture perspectives on pathways

### *Rebecca Clarkson, Aquaculture NZ*

We are a \$470 million sector. We have a growth target of \$1 billion by 2025.

In many ways, marine farming is similar to farming on the land. The health and integrity of our farm environment directly impacts the quality and value of our products.

There are a number of marine pests that have been identified as being particularly significant. These include *Styela* (already here) and the Northern Pacific seastar. However the real risks probably come from pests and diseases that are as yet unknown or that seem innocuous.

International pathways - aquaculture in NZ does not have any of its own international pathways. But risks to our industry are significant from pests hitchhiking on vessels from overseas waters. We actively support initiatives to manage risks.

Management of regional pathways can significantly reduce the risk of spread of pests that have already arrived in NZ waters. Most of these pathways are non-aquaculture related.

Just as we look to a range of marine exacerbators to manage their risks, the aquaculture industry is mindful of the need to manage its own. Biosecurity initiatives in the aquaculture industry include prevention, readiness, and response. Particular pathways of interest within aquaculture are vessel movements, gear movements, stock movements.

Currently we have a new Sustainable Management Framework which is to be launched at the aquaculture conference in September. This will include antifouling, vessel maintenance, good farm maintenance, surveillance and awareness of what's in the water and on the farm, MPI hotline awareness, stock and gear movement protocols, education, training and communication.

Future initiatives: MPI and Aquaculture NZ have been collaborating on a project entitled Identification of On-Farm Aquaculture Biosecurity Management Options

## 11. Interactive session on pathways management

The attendees were divided into groups. Each group was given a different task and invited to develop ideas on next steps for pathways management. Below are their summaries:

### **Advantages of regulating pathways**

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#### ***Who was at the table?***

David Duncan  
Jane Stevens  
Don McKenzie  
Jeannine Fischer  
Megan Carter

#### ***Key Points:***

- RPMP - Pathways Plan.
- Authorised persons.
- Regional Councils as Regulatory Authorities.
- MPI as overarching authority (set up framework/facilitate).



- S122 Notice of Direction.
- Sets out intentions and objectives. ‘No surprises’ to vessel owners.
- Collective responsibility.
- Allows cost sharing approach (responsibility on exacerbators).

## **Perils of regulating pathways**

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### ***Who was at the table?***

Jim Sinner  
 Dirk de Vries  
 Rose Bird  
 Brian McGurk  
 Jono Underwood  
 Graeme Coates

### ***Key Points:***

- Costs of compliance (users and agencies).
- Inconsistent rules between regions.
- Lack of understanding about sectors, ie. Impractical rules result.
- Creates “us” versus “them” mentality instead of cooperative.
- Could be seen as precursor to vessel licensing (though this could assist compliance and lower cost).
- More aversion/evasion behaviour.
- More informal cleaning on beaches (made worse by lack of facilities).
- Public/Political backlash.
- “Bags not us” - MPI vs RCs - multiple sectors.

### ***Highlights - most important:***

- Cost of implementation and political buy-in, public backlash.
- Risk of inconsistency between regions.

## **Incentives for good pathways behaviour**

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### ***Who was at the table?***

John Hellstrom  
 Liz Jones  
 Grant Hopkins  
 Ken Wright  
 Annabel Young  
 Dean Evans

### ***Key Points:***

- Different incentives for different sectors (recreation sector hard to connect with).
- Two different things - incentives for good behaviour, disincentives for bad.
- Elevate to business owner/marina owner rather than individual boaties.
- Registration for identifying owners.

### ***Areas of agreement:***

- All.

## **Getting more effective with public awareness for pathways management**

### ***Who was at the table?***

Victor Jacobson  
Dan Cairney  
Kelly Leonard  
Hamish Lass  
Kathy Walls

### ***Key Points:***

- Television advertisements.
- Newsletters.
- Social media.
- Movie?

### ***Areas of agreement:***

1. Identify key audiences.
  2. Identify key messages for each.
  3. Identify best way to deliver messages for each.
  4. Prioritise.
  5. Deliver
- Share good ideas/examples that seem to work, eg. Bay of Plenty Regional Council - *Is your bum clean* + tee-shirts.
  - Share links on websites/web pages.
  - Using network people to sell the messages.
  - GET THE KIDS!
  - Rewards?

## How can we better engage with industries?

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### ***Who was at our table:***

Steffan Browning  
Lindsay Vaughan  
Don Morrissey  
Bruce Lines  
Irene Middleton  
Mike Taylor

### ***Who is at the industry table?***

Aquaculture  
Slipways  
Shipping  
Marina operators  
Charter/Commercial  
Fishing/Rec  
Recreational users  
Tourism  
Indirect exacerbators (outfalls etc)

### ***Key Points:***

- Engagement toolbox.
- Government Industry Agreements.
- Build understanding of what the various industries do.
- Correcting through relevant forums (e.g. industry newsletters, forums, media, attend meetings).
- Transparency in what and why management options give results - communication.
- Education “at the waterline”.
- Creating forums; opportunities (e.g. sectoral conferences).
- Culture of “Freedom of the sea”. Can we/should we/would we change it?
- Genuine incentives.
- Positive praise (eg. oil rigs, “good news” newslines).

### ***Areas of agreement:***

- Willingness to engage constructively among all parties.
- Otherwise “engage” in court.
- Innovative.
- Cultures.
- Toolbox.

## 12. Summing up and closure

*Jono Underwood*

It is amazing seeing how things change over the years. I think it's all drifting towards pathways. This is a very big learning curve we are on - learning more about pathways and feasibility in a way that everybody can see the positives. No one can argue about the values we are trying to protect.

Barrie's discussion makes it very clear there are benefits in doing something. Northland is pushing in terms of what they're doing and being very progressive, along with Bay of Plenty, so "doing" is already happening. At the top level, MPI are also trying to grapple with what can be done. It's a very complex system.

Summing up - there has been plenty of talk on the benefits, and then there's the "doing". What's the stuff in the middle that will make it happen? We are trying to figure out a way to break down the barriers. So all ideas are welcome.

It's great to have the different viewpoints - there are those shared concerns. Collaboration is the mainstay - no finger pointing, a problem shared is a problem halved.

Thank you for coming along and thanks to the coordination team.

We need to keep moving forward - that's all we can do.