

Group 1 - Question 1
Benthic ecosystem health
Knowledge

What do we know? Certainties	What do we need to know? Uncertainties
<ul style="list-style-type: none"> • We have a problem! 	<ul style="list-style-type: none"> • What it is - identify specific industry.
<ul style="list-style-type: none"> • Way out of balance. 	<ul style="list-style-type: none"> • Independent research. • Most aquaculture research focused on production.
<ul style="list-style-type: none"> • Increased sedimentation, habitats smothered. 	<ul style="list-style-type: none"> • Adverse effects.
<ul style="list-style-type: none"> • GDP driven. 	<ul style="list-style-type: none"> • Where is the wall - history of no real action until wall is hit. • Need to know better precaution limits.
<ul style="list-style-type: none"> • Problem - mountains to the sea. 	<ul style="list-style-type: none"> • Catchment base activities.
<ul style="list-style-type: none"> • Extraction competition. 	<ul style="list-style-type: none"> • Accumulative impacts.
<ul style="list-style-type: none"> • Filter feeding by mussels - effects not well studied. 	<ul style="list-style-type: none"> • Extraction of key elements.
<ul style="list-style-type: none"> • MPA and effects. 	<ul style="list-style-type: none"> • How wide spread/benefits (shell).
<ul style="list-style-type: none"> • If we always do what we have always done, we will always get what we have always got - less. 	<ul style="list-style-type: none"> • Refined QMS - micro management.
<ul style="list-style-type: none"> • We could be taking too much. 	<ul style="list-style-type: none"> • Baseline information. • Extraction rates and productivity/ potential.

Group 1 - Question 2
Benthic ecosystem health
Roles

Who can help?	What are they responsible for?
Science providers	Technical data presentation.
Educators and leaders	Getting message and changing attitude.
This generation, community	Our future and future generations.
Legislators	Can cut through slow process. Legal protection and funding. Implementation support.
Participants	Social action.
Council/Business	Support.
Utilizers	Enhancement.
MMF	Plan development and implementation.
Iwi	Treaty of Waitangi obligation, cultural support.

Group 1 - Question 3 Benthic ecosystem health Actions		
Immediate actions		
What needs to happen?	Why is this important?	Who needs to be involved?
Stop the rot!	Stop further degradation.	Everyone.
Stop dredging and bottom trawling.	Habitat destruction.	MPI.
Action on independent research and analysis and transparency.	Information buried and conflicts of interest commercial and political.	Regulators and environment NGOs, and other stakeholders.
QMS reviews and refinement (smaller paddocks).	Users can focus take on small areas.	MPI and broad stakeholders.
Kotahitanga	Unified direction.	Everyone.
NPS/NES. Good ones!	Poor industry focused NES-PF.	Government and community.
Longer term actions		
What needs to happen?	Why is this important?	Who needs to be involved?
QMS reviews.	Increased knowledge.	MPI, science, users.
Habitat and stock rebuild.	Very degraded and opportunity loss.	Everyone.
Rebalance ecosystem/food chain.	QMS - primitive and influences of land based activities.	Science and regulators, and users/sectors.
Cultural change and education.	Narrow views and lack of community knowledge.	Everyone, but with leadership.

Group 2 - Question 1
Benthic ecosystem health
Knowledge

What do we know? Certainties	What do we need to know? Uncertainties
<ul style="list-style-type: none"> • Sounds Planning Study - late 70's. Mike Weir. • Significant Marine Sites - 1995 and BOC guide to location of marine farms. • Steav - 1969 - Mussel beds, Pelorus. • Ken Grange - Worm communities. • Scallop companies - annual surveys. • Marine farm surveys. • NIWA studies generally. • Cawthron studies generally. • Long Island Marine Reserve monitoring. • MBC studies - planning documents. • MDC bibliography/library. 	<ul style="list-style-type: none"> • Climate change - effects! • A detailed bio-physical model • Effects of recreational harvesting. • Effects of commercial harvesting. • Effects of land-based harvesting. • Effects of land-based utilisation. • Benthic community mapping. • Historic denitrification levels. • Attempt to identify undisturbed areas of benthic environment.

Group 2 - Question 2
Benthic ecosystem health
Roles

Who can help?	What are they responsible for?
DOC	Everything - biodiversity, marine protected areas, marine significant sites.
MDC	Nearly everything - planning.
MPI	Fisheries Act - biosecurity.
Port companies	Marinas, transport.
Ferry companies	Transport - disturbance.
Communities, marine farming, fisheries companies, recreational users, land users	Disturbance.
Iwi	Cultural values, use, customary fishing, Treaty rights.
Research institutions - NIWA, Cawthron etc	Independent science, education.
Communities	Owner of the 'commons' - use and protection, engaged in process.
Philanthropists	\$\$\$
Trustees	Information distribution, education, leadership.

Group 2 - Question 3
Benthic ecosystem health
Actions

Immediate actions

What needs to happen?	Why is this important?	Who needs to be involved?
Ranking issues (consensus).	Knowledge, awareness.	Community.
Buy-in by all.	Good decisions.	Research institutes.
Agencies 'on board'.	Funding, physical support.	

Longer term actions

What needs to happen?	Why is this important?	Who needs to be involved?
Baseline measurement.	Goal posts.	Research, MBC, communities.
Spatial management.	Utilisation and protection.	Communities, stakeholders.

Group 3 - Question 1
Benthic ecosystem health
Knowledge

What do we know? Certainties	What do we need to know? Uncertainties
<ul style="list-style-type: none"> • Marlborough Sounds is nursery ground. • Vast knowledge, ie. Davidson Report and many others. • Certain fishing methods. • Communities knowing their own environment. • Many groups have tried to achieve goals without success. 	<ul style="list-style-type: none"> • Protect the nursery ground. • What is going to happen with this knowledge: agencies, regulators, commitment. • Need to fully understand the extent of damage. • How do we extract the knowledge? • How does MMF not follow the same path?

Group 3 - Question 2
Benthic ecosystem health

Roles

Who can help?	What are they responsible for?
MPI	Fisheries data/management.
DOC	?
MDC	Planning/resource consent.
Commercial fishing	Data collection.
Recreational	Information/education/communication.
Science institutes	Providing data/assessments - setting bench marks.
Land users	What happens on land and impacting on marine environment.
Marine farming	Water monitoring, maintaining a healthy environment.

**Group 3 - Question 3
Benthic ecosystem health**

Actions

Immediate actions

What needs to happen?	Why is this important?	Who needs to be involved?
MMF needs to gain credibility.	To get support to move forward.	Key community people and groups.
Stop destructive fishing methods.	Leaving seabed intact.	Those that participate in the activity.
Community buy-in.	Success.	MMF.

Longer term actions

What needs to happen?	Why is this important?	Who needs to be involved?
Learn from past experiences.	To succeed.	MMF.
Need to study “log books” of the past, fishing, diving.	Set benchmarks, understand past to set the future strategy.	Committee.

Group 4 - Question 1
Benthic ecosystem health
Knowledge

What do we know? Certainties	What do we need to know? Uncertainties
<ul style="list-style-type: none"> • Forestry is here to stay. • Industries are here to stay, but parameters may be different over time. • Gravity - benthic environment is a 'sink' for everything. • Unique and dynamic environment. • Heavily modified environment - historical. • Easy place to get to - access. • Sheltered environment which is heavily used. • Some knowledge and some gaps in knowledge. • Developing awareness about looking after the environment. 	<ul style="list-style-type: none"> • Bring studies together - social/ environmental/ climate etc. • Knowledge gaps - hydrographics, wider ecosystems, importance of Cook Strait. • Time required for restoration - inter relationships, changes, drivers. • Majority of resource users come from outside district. • Cumulative affects. • Social structure. • How to influence negative behaviour.

Group 4 - Question 2
Benthic ecosystem health
Roles

Who can help?	What are they responsible for?
People who work here - leading from the front.	Environmentally sustainable practices. Perceptions.
Recreating locals and public.	Act responsibly. Open to new and different ideas and views.
Education providers - diverse range.	Educating for sustainability. Immersing people in the environment they are utilizing. Knowledge delivery.
Broad range of science providers. Institutional knowledge holders.	Interpreting correctly, without bias and presenting.
Industry and various environmental groups.	Conviction to not use advocates to get their way.
Wider iwi of Te tau ihu.	A cultural perspective (kaitiakitanga/history).
Local user groups, eg. boating clubs, tourism operators.	Wider perspective which may not have a habitat focus.
Young people.	Great ambassadors. Fresh approach. Interesting views and perspective. Future leaders.
Dedicated politicians (central and local).	Support for community initiatives and aspirations. Legislation and wider whole of Government.
Territorial authorities. Government organisations - include health.	Legislation/planning/knowledge. Health and wellbeing.

Group 4 - Question 3 Benthic ecosystem health Actions		
Immediate actions		
What needs to happen?	Why is this important?	Who needs to be involved?
Priority list of issues.	Direction.	See sheet 2 - all parties and contributors from a range of perspectives.
Alignment with present law.	To have an effect we have to follow laws and policies.	All parties.
Generate 'the story'.	Capturing hearts and minds.	Skilled journalists and advocates. Effective leadership. Bipartisan.
Coordinated approach - no blame.	We all need to be part of the solution. A 'gifts and gains' approach.	All parties.
Longer term actions		
What needs to happen?	Why is this important?	Who needs to be involved?
Work within gravity.	What goes into the marine environment needs to have acceptable long-term outcomes.	Everyone.
Some time bound objectives.	Demonstrate effectiveness.	Stakeholder working group.
On-going funding (non rateable).	To continue focus on working collaboratively.	Stakeholder working group and Trust.
What mechanisms and conduits do we have to bring about effective change.	How do we "give effect to"? Need to guide and direct in an open and transparent manner.	Plans, strategies, policies, legislation.

Group 5 - Question 1
Benthic ecosystem health
Knowledge

What do we know? Certainties	What do we need to know? Uncertainties
<ul style="list-style-type: none"> • Hydrology reasonably well known - current sets. • Benthic environment not as healthy as previously, at least in some areas. • Paua fishers believe Tory Channel still healthy - very productive. • Land-based activities affect benthic environment. • Long Island provides example of 20 year recovery. • Sources of sediment - NIWA study coming late 2016. • Sediment load from forest and pasture vs native forest.* • Anchors damage some benthic habitats. • Location of recreational boating/fishing (MPI). 	<ul style="list-style-type: none"> • What is the value that benthic environment provides to 4x wellbeing of Marlborough communities? • More detail - spatially - on benthic environment health. • Which areas are of significance/importance to various groups? • What habitats are critical for life-stages of fish and birds? What condition is it in? • How long does it take for different habitats to recover? • Degree of turbidity of near-bottom water, and how varies with time. • *Need MS data? • Techniques to reduce sediment loss. • Why have green shell mussel beds in inner Pelorus not regenerated? • What habitats are being damaged by anchoring? • Cumulative effects of multiple disturbances.

Group 5 - Question 2
Benthic ecosystem health
Roles

Who can help?	What are they responsible for?
Scientists	Gathering and communicating information and knowledge - impartial. Synthesizing uncertainties/gaps.
Social scientists	Changing people's attitudes and behaviour.
MDC	Anchoring, mooring rules and facilities. Reg. bottom trawling and dredging. Land use practice. Community education/awareness.
MPI	Community education/awareness. Marine biosecurity. Fisheries management. TAC and fishing effects.
DOC	Marine reserves and MPAs. RMA restricted coastal activities. Management of DOC land.
Iwi	Kaitiakitanga. Mataitai and taiapure. Co-governance of Wairau Lagoon.
Industry - commercial fishing, forestry, farming, tourism, retail.	Good management practice. Contributing to research.
Recreationalists	Respect bag limits. Monitoring each other. Good practice - avoid impacts: fishing, anchoring, discharge, fouling.
Everyone!	We all play a part!

Group 5 - Question 3
Benthic ecosystem health
Actions

Immediate actions

What needs to happen?	Why is this important?	Who needs to be involved?
Spatially explicit management.	Protect sensitive areas.	MPI, MDC, Scientists.
ID and characterize benthic habitats.	So we know what we need to protect - critical habitats.	MDC, DOC, MPI, science with industry and community support.
Public education.	To get 80% (at least) of community behind us.	Schools, MDC, DOC, science.

Longer term actions

What needs to happen?	Why is this important?	Who needs to be involved?
Protect critical areas.		All! Implemented by agencies.
Restore ecosystems.		MDC, DOC, MPI, industry.
Monitor effectiveness of actions.		MDC, MPI, DOC.