

Communicating Science for Marine and Freshwater Conservation Action

National Marine and Freshwater Wānanga Conference, 2014

Communicating Science for Marine & Freshwater Conservation Action

Saturday, 26th April − Monday, 28th April ◆ Wellington ◆ Te Whanganui-ā-Tara

Kuratini Marae, Massey University







www.whitebaitconnection.co.nz

An inspirational professional development and networking opportunity for all those involved with or interested in freshwater and marine conservation.

Objectives:

- To provide a forum for marine and freshwater educators to network about education for sustainability initiatives and projects around science communication
- To provide professional development opportunities
- To provide a forum to discuss the effectiveness of existing and potential partnerships that foster action for marine and freshwater conservation
- To ensure strong delivery of the Experiencing Marine Reserves (EMR) and Whitebait Connection (WBC) concepts around New Zealand
- To raise the profile and value of conservation action "engagement" with a wide range of stakeholders

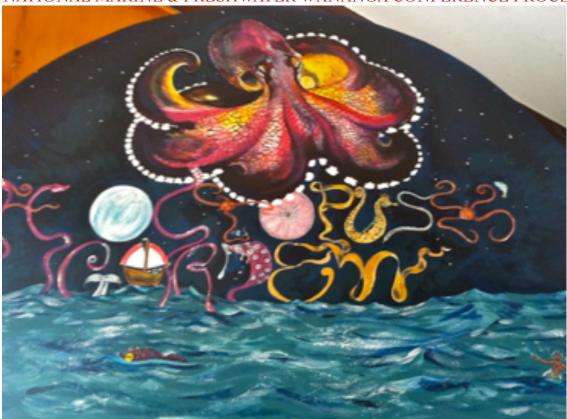


In partnership with the Island Bay Marine Education Centre, with special thanks to:









The Octopuses' Garden, Island Bay Marine Education Centre Surf Club (Sydney Harris)

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Baby leatherjackets at the Island Bay Marine Education Centre (Sydney Harris)

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Overview & Summary: Wānanga Conference Theme, Purpose, Objectives and Highlights

Theme:

Communicating science for marine and freshwater conservation action

Purpose:

An inspirational professional development and networking opportunity for all those involved with or interested in freshwater and marine conservation

Objectives:

- To provide a forum for marine and freshwater educators to network about education for sustainability initiatives and projects around science communication
- To provide professional development opportunities
- To provide a forum to discuss the effectiveness of existing and potential partnerships that foster action for marine and freshwater conservation
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Previous Wānanga (2013) Proceedings: click here

Mountains to Sea Conservation Trust would like to thank

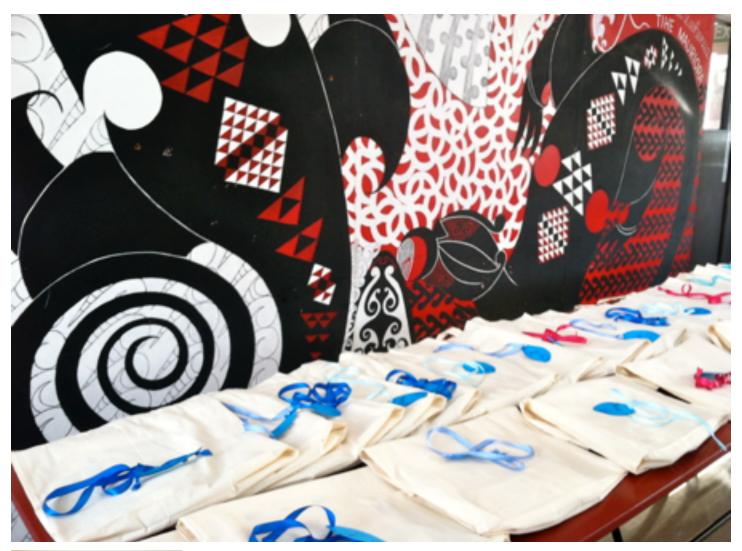
the Tindall Foundation and the Department of Conservation for funding support. Also, the organisers would like to extend special thanks to Good Chemistry Catering, Tranzit Coachlines, the Island Bay Marine Education Centre, Massey University Kuratini Marae and Dive Wellington.

Overview and Highlights:

- Powhiri at 11am on Saturday, 26th April
- Marine & freshwater keynote presentations, including Green Party MP Eugenie Sage and Dr. Alison MacDiarmid of NIWA
- Fresh, wholesome meals and Marae-style accommodation
- An opportunity to share personal projects during "Show 'n Tell"
- Displays and facilitated workshops
- Inclusion of local residents, tangata whenua, and conservation groups throughout the programme
- Opening address at conference dinner by the Minister of Conservation, Hon. Dr. Nick Smith
- Conference dinner entertainment by Black Spider Stomp
- Poroporoake and official closing at midday on Monday, 28th April
- An additional day of specialist training workshops for Experiencing Marine Reserves and Whitebait Connection coordinators following the Wānanga



Conference Pack Contents





Conference packs and mural (Sydney Harris)

The organisers would like to give thanks for all donations made towards the conference pack.

- · Reusable canvas bag
- How to Check, Clean, Dry pocket guide
- "Check, Clean, Dry" lollipop and sticker
- Whitebait Connection brochure and sticker
- Whitebait Conservation brochure
- Department of Conservation Whitebait brochure
- Notebook and pen
- Island Bay Marine Education Centre rocky shore identification wheel
- Island Bay Marine Education Centre sticker
- Experiencing Marine Reserves brochure and sticker
- Contact list of all conference participants
- Conference programme



Introductions: Participant Check-Ins and Contact Information

Participants took turns stating their favourite freshwater and/or marine species and what they hoped to get out of the Wānanga. Below are the notes from these check-ins as well as participants' contact emails.

PARTICIPANT	ORGANISATION	FAVOURITE MARINE/ FRESHWATER SPECIES	GOALS FOR THE WĀNANGA	EMAIL
Akehurst, Tawera	EMR	snapper; pukeko	To get involved; see what people have to offer	tawera.akehurst@gmail. com
Amaya-Perilla, Catalina	DoC, Turangi/Taupo Region	redfin bully, giant kokopu; dolphins, especially pink dolphin		camayap@doc.govt.nz
Anderson, Shauntahj	Student- Te Kura Kaupapa Maori O Te Tonga O Hokianga	sperm whale	Wants to become a marine biologist; here for the experience	shaunee@kurahokianga. co.nz
Barrie, Charles	DoC, Wellington Region	platypus	Networking around freshwater issues, integrated community projects & development management	cbarrie@doc.govt.nz
Baxter, Matt	Student- Polytech, Bay of Plenty; also a music teacher	clown nudibranch; eels	Wants to inspire connections with nature; looking for collaboration in the context of social science and also wants to watch conservation expand	baxterdrums@gmail.co m

PARTICIPANT	ORGANISATION	FAVOURITE MARINE/ FRESHWATER SPECIES	GOALS FOR THE WĀNANGA	EMAIL
Berman, Alan	Island Bay Marine Education Centre; WBC & EMR	this month: box jellyfish	To meet dedicated people and communicate that Wellington can be a hub for conservation, especially in the marine context	alanruizberman@gmail.c om
Cullen, Buck	Mountains to Sea Conservation Trust: WBC	mayfly; mullet	ayfly; mullet	
Dean, Ripley	Student- University of Otago; EMR	mayfly, callabriscus; sponges	To gain clarity towards the end of BSc. Interested in how EMR & WBC work and in gaining some insight into how they can be practically applied to share knowledge	ripleywd@gmail.com
Fagan, Jo	Greater Wellington Regional Council	giant squid	To learn about current initiatives	jo.fagan@gw.govt.nz
Gibson, Liz	Island Bay Marine Education Centre; WBC & EMR	immortal jellyfish	To learn about current initiatives and get some new inspiration	lizgib@hotmail.com
Hardy, Lucy	DoC, Dunedin Region	NZ sea lion	To be inspired and find out what's happening in freshwater/marine education; to see what can be brought to DoC in Dunedin	lhardy@doc.govt.nz
Harris, Sydney	EMR	octopus	Hopes to become a marine educator; here to be inspired, to absorb ideas and to make connections	sydneyaharris@gmail.co m
Hefford, Lorna	EMR	blue eye triplefin	Networking, meeting new faces	lorna.hefford@gmail.co m
Heke, Pat	Teacher- Te Kura Kaupapa Maori O Te Tonga O Hokianga	longfin eel, freshwater crayfish, native kokopu	To pick up practical applications for teaching about the Wānanga; hasn't been able to do an action project yet, hoping to get proactive after this conference	

PARTICIPANT	ORGANISATION	FAVOURITE MARINE/ FRESHWATER SPECIES	GOALS FOR THE WĀNANGA	EMAIL
Hodge, Jules (Julian)	Island Bay Marine Education Centre; WBC & EMR	right now: hagfish	To hear what everyone has to say, get new ideas, take things back to work and showcase the Taputeranga Marine Reserve	julianhodge@octopus.or g.nz
Hornivius, Saskia	Sustainable Coastlines	whale shark	To make connections for the national Sustainable Coastlines road show	saskia@sustainablecoas tlines.org.nz
Howard, Denise	Te Heru Trust, New Environment Centre	sharks	Here for daughter because she's in the U.S.; to make new connections, especially in the education field	dl.howard@xtra.co.nz
Jones, Kim	Mountains to Sea Conservation Trust: National Coordinator, WBC	inanga; seahorse	Reinvigoration after a busy summer; to learn from everyone and absorb everyone's good energy	kim@whitebaitconnectio n.co.nz
Kettles, Helen	DoC	seagrass; eel	To learn how to share best practices, make connections and hear about current initiatives	hkettles@doc.govt.nz
Lawson, Brenda	DoC Partnerships Ranger, Taupo Region	blue cod, paua	To broaden conservation horizons by learning about what else is being protected by DoC, especially in a marine context	blawson@doc.govt.nz
Leith, Hilton	Chairperson, Mountains to Sea Conservation Trust	longfin eel; bronze whaler shark	Interested in ways that anyone has used conservation knowledge to create employment	handm@xtra.co.nz
Lorena, Claudia	Island Bay Marine Education Centre			
McIntyre, Soozee	WBC; Sustainable rural development on a remote campus for Polytech	eels, dragonflies	Really enjoyed last year's presentations, hoping to see some similar ones this year	awasoo108@gmail.com

PARTICIPANT	ORGANISATION	FAVOURITE MARINE/ FRESHWATER SPECIES	GOALS FOR THE WĀNANGA	EMAIL
McLean, Lydia	Student- University of Otago: Centre for Science Communication	adelie penguin; galaxiids	Interested in connections between NZ and the Southern Ocean	lydiamclean@gmail.com
Mohi Gina	Te Maru O Ngati Rangiwewehi lwi Authority	eels	els Reconnecting and sharing community initiatives	
Neighbours, Sarah	Island Bay Marine Education Centre; WBC & EMR	nudibranchs	To meet new people and learn what everyone has to share	intrepid.sarah@gmail.co m
Neilson, Camellia	EMR & WBC, Northland	dragonfly nymph; dolphins	Here in a freshwater capacity- to get ideas and pick fresh brains	camellia@emr.org.nz
Nicholas, Samara	EMR	pet longfin eel Kong; pipefish	Organising the conference! Wants people to have a professional, fun, emotive experience	samara@emr.org.nz
Pham, Lan	Working Waters Trust	banded kokopu	To learn about everyone and get feedback on a new campaign	lan@workingwaters.org
Pirini, Jasmine	WBC	inanga	To feed off of the positive energy and bring it back home!	owhainga@xtra.co.nz
Pirini, Mariana	Jasmine's mother	mullet	Sees environmental destruction at home; wants to be inspired to do something about it!	
Reading, Pip	Primary school teacher; Fish Forever; EMR	octopus	To learn about current initiatives and network	pip.reading@gmail.com
Robertson, Stewart	Golden Future Environmental Ltd, Conservation Tours	blue cod; short-jaw kokopu	To learn more to help inform conservation tours	stew@abeltasmangolde nfuture.co.nz
Sima, Ellen	Student- University of Otago: Centre for Science Communication	purple-spotted gudgeon; <i>Emiliania</i> <i>huxleyi</i>	To learn how to spread knowledge and excitement about remote & inaccessible marine settings and to gain perspectives on local programmes	sima.ellen@gmail.com

PARTICIPANT	ORGANISATION	FAVOURITE MARINE/ FRESHWATER SPECIES	GOALS FOR THE WĀNANGA	EMAIL
Studd, Zoe	Island Bay Marine Education Centre; WBC & EMR	giant kokopu	To meet people and learn about what they're doing	zeespud@yahoo.com.au
Swanson, Pat	EMR, Taranaki			patanddebs@xtra.co.nz
Tai, Aubrey	DoC Biodiversity Ranger, Marlborough Sounds Region	sharks; longfin eels	To soak up knowledge on marine species and management	atai@doc.govt.nz
Tamanui, Mere	Student- Te Mana Ao Tu Roa Nga Mahi Te Taiao			meretamanui@hotmail.c om
Thomas, Harriet	EMR & WBC, Northland	roundhead galaxiid	Looking for connections (and jobs!)	harriet.thomas64@hotm ail.com
Vella-King, Rebecca	NZAEE, Otago	any sort of sponge	To learn about snorkel programme delivery	rebecca@king.net.nz
Vervoorn, Cornelia	DoC, Franz Josef Region	blue duck; fiordland crested penguin	Reinvigoration after a hard year at DoC; here to get new ideas and innovations	cvervoorn@doc.govt.nz
Wells, Tania	Outreach & Education, DoC			twells@doc.govt.nz
Wilson, Megan	EMR; Nelson Environment Centre	baby fur seals; eels	To come away inspired to grow programme delivery	meganw@parklands.sch ool.nz

SPECIAL PARTICIPANT	DETAILS	FAVOURITE MARINE/ FRESHWATER SPECIES	EMAIL
Proctor, Tia	Jasmine's daughter, age 6		
Bruce	Soozee's partner	eels	
Neilson, Ella	Camellia's daugher, age 6		
Johnson, Zayne	Kim's son, age 11		
MacDiarmid, Alison	NIWA; delivering Keynote Address		alison.macdiarmid@niwa.co.nz
Sage, Eugenie	Green Party MP, delivering Keynote Address		eugenie.sage@parliament.govt.nz
Harré, Niki	University of Auckland; Facilitating Infinite Game Workshops		n.harre@auckland.ac.nz
Collins, Kimberly	Zealandia		kimberly.collins@visitzealandia.com
Lum, Sue	Zealandia		sue.lum@visitzealandia.com

SATURDAY, 26TH APRIL- PROGRAMME & NOTES 1) Powbiri 4) Orientation from our Local Kuratini Marae: Te Whanganui-a-Tara Hosts: Island Bay Marine orientation and welcome ceremony Education Centre 11:00am 4:15pm 5) Freshwater Keynote Aддress: 2) Mountains to Sea Conservation Trust Opening Green Party MP Eugenie Sage Remarks 2:20pm 4:45pm 6) Marine Keynote Address: Dr. 3) Short Presentations: Alison MacDiarmid Communicating Marine & 6:00pm Freshwater Science 7) Official Close of Day One

(Optional Activities)



Mountains to Sea Conservation Trust Opening Remarks

Experiencing Marine Reserves (EMR): Samara Nicholas

Samara delivered an overview of the structure of the Mountains to Sea Conservation Trust, an introduction to the trustees and sponsors and a summary of the general goals of EMR. The full programme overview, as well as some history, is available in the PowerPoint. There was an emphasis on the safety of the programme, as new safety developments have been made this year: "No matter where we go, we make it safe." EMR is now fully established in seven regions and is hoping to expand into Dunedin as an eighth next year. The programme is not just about kids but about the whole community, especially due to the automatic community participation (because of high adult-student ratio requirements); thus, EMR is not just inspiring kids but parents as well, and these participants can continue to be

involved in marine conservation after the programme has ended. EMR is an excellent medium for communicating science. One of the best ways for participants to tell stories is through an action project. For an example, see Riley and the Young Ocean Explorers in the PowerPoint. The long-term benefits of EMR are harder to measure but they're becoming increasingly visible, especially with past participants getting and staying active in marine conservation through adulthood and schools engaging in long-term programmes. Samara gave an overview of the structure of EMR and its regional umbrella organisations, as well as the motivations for including training in the Wananga, and then discussed the effectiveness of the programme at bringing people together for the common cause of marine conservation. EMR Gisborne provided a great example of

collaboration between different stakeholders in the Te Tapuae o Rongokako marine reserve. EMR Taranaki was mentioned as another example, albeit an unusual one in that the teachers are the coordinators. This is a good model for programming because all funding can go towards experiences in more accessible marine reserves such as Goat Island or Taputeranga. Finally, Samara described once-off snorkel experiences, which promote more work for coordinators, and how EMR is filling a gap at the annual boat show in Auckland by "selling knowledge" about biosecurity, conservation and the marine environment. The presentation ended with a video of the EMR trip to the Kermadecs, which provided a solid example of one way to get people excited about remote marine environments.

Whitebait Connection (WBC): Kim Jones

Kim described the significance of Whitebait as inspiration for freshwater conservation in New Zealand: whitebait is important as a food source for people and also as a part of the freshwater and marine food chains. Whitebait was chosen for the name of the organisation because it's something everyone can connect to on at least one level (fritters!), and a tangible connection is easier to digest initially than the larger picture of freshwater conservation. Riparian planting is extra important for freshwater species like whitebait, especially during the egg phase of their life cycle. WBC is injecting some science into people's pre-existing cultural practices around water quality assessment to support and reinforce these traditions. Kim discussed key

partnerships between WBC and other organisations (details in the PowerPoint), enabling expansion of the program and other great things in freshwater conservation. Sometimes it's good to focus on the smaller things and pan out from there so as to not be too overwhelmed by the big picture from the start, especially when communicating science.

See Samara's Presentation

HERE
See Kim's Presentation HERE

Short Presentations: Communicating Marine & Freshwater Science

Communicating Marine Science: Lydia Mclean & Ellen Sima See powerpoint here

How do we excite people about marine science (or anything) when it's physically remote and inaccessible? We need to translate facts into stories; in other words, we need to rearrange our facts in a narrative order that people can engage with rather than using the "empty vessel model" and trying to fill people with pure facts. Stories allow us to see connections between causes and effects, the future and the past. Applying typical story types as well as Paul Zak's ideas on the future of storytelling to science to create scientific narratives is a great place to start, but you must make sure you know your audience so you can frame your message appropriately. Using stories can produce actions and changes in people's behaviour. For best results, we need to frame marine conservation positively so we don't overwhelm people's "finite pool of worry."



Lan and others on the Freshwater Field Trip at Zealandia (Kim Jones)

Communicating Freshwater Science: Spreading Galaxiid Love: Lan Pham See powerpoint <u>here</u>

Lan discussed the Working Waters Trust (WWT), which works on freshwater conservation and education with a focus on the most endangered species: "Loving water bodies is our business." Over 80% of native galaxiid species are on private land! This means that partnerships with locals are essential to freshwater conservation success. Growing Otago's Galaxiids, funded by DoC, was created to engage the community in freshwater conservation and then grew into WWT. Over 87% of galaxiid species are endangered in the South Island, but WWT maintains a focus on a positive, exciting future, encouraging people to celebrate and take ownership of their local galaxiid species, then think about how to value them as a community. Legislation-wise, there's no national or regional obligation to protect these species, so it all comes down to community and local motivation and action. Despite everything that WWT has achieved, there is an underlying tension between mobilising communities to make positive change at a local level and the ever-present issue of increasing development on a larger scale. For the future, therefore, WWT wants to foster a national conversation about a new relationship between Kiwis and our rivers- it's currently called "Nobodies Rivers," to communicate freshwater values. Lan is hoping to create a 'river of stories' wall on the campaign website to engage people all over the country to drive policy, legislation and action that protects rivers and fairly manages their resources. "We want to let our politicians know that we have rivers and lakes on our minds this election."

Orientation from our Local Hosts: Island Bay Marine Education Centre

Introduction to Local Marine and Freshwater Initiatives: Jules, Zoe & Liz

Since the Island Bay Marine Education Centre (IBMEC) became involved with EMR it has been developing additional programmes, such as the "healthy harbours" programme, that are aligned with getting kids involved with everything that's happening in current conservation efforts. After last year's Wānanga IBMEC wanted to take on WBC as well, so it started delivering the programme in three schools. Outside of working with schools, IBMEC has been working with the local community (with Iwi and DoC). The Cook Strait region is a biodiversity "hotspot within a hotspot," with over 400 different types of algae alone! Because of this rich diversity and the pressing need to protect it, "we try and get people to go, 'WOW, that's cool, I want to find out more." If people are thinking about the marine environment, they're more likely to make wise decisions about it in the future. Engaging all interest groups and all types of people is the key to achieving success. IBMEC has been frustrated with the fact that DoC doesn't have the resources to effectively monitor marine reserves, so it has set up a community watch group to fill that gap. The aquarium is particularly inspiring, especially when people can see eggs (like the current carpet shark and octopus eggs) as they develop. People understand that if they're inspired, other people are likely to be as well. Current initiatives and concerns include a mystery orange (but also green, or purple, or another colour) pollutant washing into the marine reserve from the storm water drains. Is it paint? It lasts for up to an hour and a half before dispersing and usually occurs after rainfall. IBMEC is running into difficulties trying to figure out what it is, especially given the cost and logistics of tracing its source, taking samples, and testing those samples at proper facilities. It should be noted that this can be turned into a teaching moment by showing pictures to kids, engaging them in the mystery and getting them interested in being part of the solution – starting a conservation ethos in a marine context. Other current initiatives include the turtle project: people don't know what to do if they run into turtles loose in the community, and they often get tired of having them as pets and want to get rid of them. The centre takes them in and uses them to talk about invasive species, pet selection, etc. There needs to be more public awareness about turtles and the implications of releasing them into the wild here where they aren't native.



Hagfish at Island Bay Marine Education Centre (Samara Nicholas)

Freshwater Keynote Address: Green Party MP Eugenie Sage

Communicating Science for Freshwater and Marine Action- The Political Context

Getting students and adults from communities out into nature to experience it first hand is really the way to affect change. Changing people's relationships with nature is at the base of changing policies and attitudes. Scientists provide snapshots of where we are and where we're heading- our job is to convince the public of the realities we're facing; it's then the policy-makers' job to steer us in the right direction based on those realities. We're at a critical turning point for water in New Zealand- who gets to navigate will greatly influence the present and the future health of our waterways. National government is trying to dramatically increase dairy production through the Crown Irrigation Company, which will result in expansion into marginal, more erosion-prone lands and areas with thinner, stonier soils. All of this leads to increases in nitrate run-off into the streams and waterways, which is the major cause of increasing pollution and decreasing water quality. Our system is "financially and environmentally brittle"- at risk of collapsing because it's unsustainable. Dairy farmers in New Zealand are the most debt-laden in the world: the dairy sector owes \$30.5 million currently. Toxic E Coli in riverbanks is ill fitted with New Zealand's "100% Pure" image- it doesn't mesh with how we define ourselves. Even if all farmers adopt mitigation practices, it won't be

enough to stop environmental degradation in fresh waterways: the scale of dairy production is simply too great. Nitrate levels in Canterbury are increasing to the point where midwives are being told to warn pregnant mothers about "blue baby syndrome." The Green Party believes we need much stricter limits on pollutants and a regulatory regime that maintains and enhances water quality in accordance with the Resource Management Act (RMA). This is the motivation behind the recent campaign from summer for "rivers you can swim in" (i.e., rivers that are suitable for immersion, not just for wading and boating). We also need more robust policies to say where dairy farming shouldn't happen. You can reduce nitrate leeching on farms by 20% without much impact to the farms themselves- a slight cost to industry with a huge advantage for our streams. Currently, the Ministry of Primary Industries does no audit of the Clean Streams Accord- we need to hold ourselves accountable by following international standards and best practices for freshwater protection. With healthy water, we have a more sustainable and resilient agricultural industry on top of a healthier population. As for the marine context, we are likely to see more marine reserves soon but they won't be making the most of the opportunity to create real marine protection. There are opportunities for full protection that are being compromised for the fishing industry. Questions of scale are coming into play in the ocean just as

they are on land-government is expanding oil drilling on a much more massive scale than marine protected zones. Economic policy must recognise that we depend on a healthy environment. We can't create more whales, rivers, kauri forests- we need to limit our use of these resources through rules and law. Education needs the law to stand alongside it and to support our shared values. Regional Councils are the major regulatory body when it comes to water quality issues. As a citizen who cares for the health of our environmental resources, you need to make sure the people on your regional councils represent you by participating in local (not just national) elections!

See Eugenie's Presentation HERE

Marine Keynote Address: Dr. Alison MacDiarmid

Potential Positive and Negative Effects of Marine Reserves on Fish Stocks- a New Zealand Perspective

Establishment of marine reserves is controversial, and this controversy tends to revolve around their effects on fisheries and fish stocks. Marine reserves are not and cannot be pristine because of all the activities going on around them. They're really just areas of minimised impact. Fundamental differences in life histories of harvested land vs. marine species can illustrate the complexity involved when we try to evaluate effectiveness of marine reserves compared to conservation efforts on land: land species have simple life cycles with few young that are cared for by a mother, usually with good survival rates. Most marine species are more complex in their life cycles, with broadcasting, larval dispersal, high larval mortality, no parental care, etc. Overviews of larval dispersal and principles of species connectivity are available in the PowerPoint. Dr. MacDiarmid outlined both positive and negative potential effects of marine reserves (listed in the PowerPoint), and concluded that we must consider the area covered by marine reserves and their boundaries in terms of species movement, their placement in relation to stock distribution on a speciesspecific basis, and their age when we are considering their effectiveness. Results of marine reserves will be most pronounced on stocks that are heavily exploited and least pronounced on stocks that are under low fishing pressure. If we can help

people understand these things, we could cut through a lot of the clutter surrounding debate over the implementation of marine reserves.

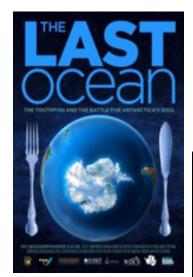


Dr. MacDiarmid discussing management solutions for marine reserves (Samara Nicholas)

See Alison's Presentation **HERE**

1) Night Tour, Zealandia

2) The Last Ocean screening



The Last Ocean



Buck Cullen as a Weta at Zealandia (Sydney Harris)

Official Close of Day One: Optional Activities



Left: Entrance to Zealandia (Sydney Harris); Right: An Adelie Penguin; featured in The Last Ocean

SUNDAY, 27TH APRIL- PROGRAMME & NOTES 4) Sunset Gourmet Buffet 1) Show e3 Tell Presentations Dinner at the Island Bay Marine Education Centre Surf Club With opening address by Hon. Dr. Nick Smith 7:10pm 8:00am 2) Field Trips 5) Conference Social Featuring Black Spider Stomp and 2:00pm Group Skits 3) Brief Bus Tour of Wellington Special thanks to Ray the driver for being an excellent tour guide

6:00pm



8:30pm

Show & Tell Presentations

Sydney Harris: Marine Soundscape Ecology

Soundscape Ecology is an emerging field in which ecologists use the collection of sounds produced within a given area or habitat to gain valuable information about its composition, diversity and other ecological properties. It has many applications already and it's just getting started! People are all impacted by soundscapes; we find them valuable and we're starting to take action to conserve them as their own natural resource. Animals need soundscapes, too, to survive, communicate, mate, hunt, etc. People are also having a serious impact on soundscapes and we are beginning to recognise this impact and try to mitigate it. Then of course, we can gain information about a habitat by the sounds it produces. We can use sounds to track or count specific species, to scan large-scale environments for biological and geographical features, and to measure biodiversity. For my Masters research at the University of Auckland, I am trying to show for the first time that the wavs we use sound to measure biodiversity in terrestrial habitats can be replicated in coastal marine settings.

See Sydney's Presentation HERE

Saskia Hornivius: Sustainable Coastlines Road Show

Sustainable Coastlines is planning a Road Show!

Saskia gave a brief overview of their planned activities and events.

Alan Berman: Taputeranga Marine Reserve Video Project

A brief overview of how the Island Bay Marine Education Centre has been delivering Mountains to Sea programmes: We've started the healthy harbours programme, which is essentially EMR in an urban environment. As far as WBC goes, kids have been renaming their local streams, learning all about their local waterways and how they're affected by what they flow through (e.g. landfills). Alan is personally working on a video project to capture the species of the Taputeranga marine reserve.

See Alan's Video Project HERE

Stewart Robertson: Golden Future Conservation Tours

I began working as a skipper in the Abel Tasman National Park years ago. Following that, I studied Marine Studies at the Bay of Plenty Polytechnic; finishing off with a BSc in Biological Sciences through UoW. My special topic involved running a dive team surveying fish aggregations around two artificial reefs. which was handed into the Bay of Plenty Regional Council. I learned awesome skills, got re-inspired to work in the marine environment, and was

involved in the Rena response in Tauranga. I worked on and around the Rena, doing biological and structural surveys. Most recently, I came back to Abel Tasman and set up my own business communicating science in "paradise" with Golden Future Conservation Tours. I work with tourists, schools and the wider community as well as scientific diving and other projects.

See Stew's Presentation HERE

Gina Mohi: Koaro Restoration Project-Hamurana Springs Recreation Reserve, Rotorua

Trout are killing all the koaro in the Rotorua catchment. We are undergoing trout extraction and monitoring (bi-annually) to involve kids. Engaging youth is the biggest challenge and the most important mission for the future.

See Gina's Presentation HERE

Denise Howard: A New Environment Centre

I am involved in environmental education on the west coast, at Tai Heru. We have owned the Tai farm for almost 30 years. Along the back boundary is Paparoa National Park, and the farm contains the southernmost breeding colony of the Westland Black Petrel! I currently plan to offer immersive learning experiences in the National

Park and its surroundings to get kids in there because many of them have never been though and it's in their backyard. I want to support the establishment of the west coast's five new marine reserves by encouraging university students to study in them. I want to restore farm waterways and establish monitoring regimes with students. Finally, I want to support Westland Black Petrel conservation.

See Denise's Presentation HERE

Samara Nicholas: EMR Community Guided Snorkel Days Models

Snorkel days at the Whangarei Harbour marine reserve have been growing in popularity- we had almost 600 participants last summer! They've become a real part of the local culture in Whangarei. EMR is looking at evaluating the economic impact of the Whangarei Harbour Marine Reserve on the town. The model for community snorkel days has also been expanded to other areas like Tāwharanui Marine Reserve in Auckland, in partnership with DoC. We've been expanding to lakes as well, through WBC. We're also hosting kayak days to reach a different audience. There's now a template for running **EMR's Community Guided** Snorkel Days, so it's easy for EMR to implement anywhere.

See Samara's Presentation HERE

Show & Tell Presentations, cont'd

Ellen Sima: What Questions do we ask to Get Answers about the Ocean?

For my Masters research, I am designing a film survey to get a picture of how Kiwis feel about the ocean. Traditionally, the ocean is represented as an aggressive force and as something that can take care of itself. It's also seen as endless, unchanging and life giving, which ties back to it not needing any help or protection. As conservationists we want to challenge these perceptions, but to do that effectively we need to know where they come from. We also need to gain insight into a more diverse set of contemporary feelings about the ocean. I will be conducting video interviews of people to get to the bottom of these questions. To gain insight into what to ask people, Ellen led us in an arts & crafts activity! We each drew a picture of the ocean, then wrote five words to describe the ocean, then got together with the people next to us and brainstormed questions that we might ask others to figure out how they truly feel about the ocean.

Kim Jones: Inanga Spawning

Inanga typically spawn in a small area and they're one of the more resilient whitebait species, so helping their spawning habitat stay pristine makes a big impact on their population. Only one Inanga

spawning site has been identified in all of the Auckland area so far. We need to identify where these areas are and get that information out. Kim showed a video depicting a workshop she attended for learning about Inanga spawning and looking for where they spawn. Participants in the video checked, cleaned, and dried all equipment between sites! The video will be turned into a more polished presentation in the future aimed at encouraging people to find and create suitable Inanga spawning habitats.

See Kim's Presentation HERE

Camellia Neilson: Rubbish Timeline

The Drains to Harbours Programme teaches kids about storm water and wastewater, following the same structure as EMR & WBC. We clean up local areas by picking up rubbish, which gives kids instant gratification and makes them feel better about their role in the community. Then we investigate the rubbish! Where does it come from? Who is throwing it out? To add value to the rubbish clean-ups (especially for the participating parents), we have created a rubbish timeline activity. We use dates hanging along a piece of string to assess how long each piece of trash will take to biodegrade. First the kids have to guess, and when the truth is revealed there are many surprises about

how long different materials actually take. We also create art with the rubbish to display in the community, and the first group to participate in the rubbish timeline created a YouTube video with interviews of the kids during the process. This is a great idea because it keeps them engaged, spreads the message to a wider audience, and gives them something to "keep" after their experience.

See Camellia's Presentation HERE

Lydia McLean: Beneath the Blooming Ice: an Immersive Exhibition on Plankton in the Ross Sea

The creative component to my Masters project with Ellen involves an exhibition of Antarctic algae. We chose this species because they're a fundamental component of the whole ecosystem there. We will be presenting at Icefest in Christchurch in September, inside a 20 square meter food-shipping container! We're aiming to be the Antarctic version of EMR- we want to re-create the Southern Ocean inside the container using lights and mist to produce an underwater feel and showcase a one year cycle of plankton. This is one way we've come up with to give people some kind of connection to physically remote marine environments so they will be more inclined to think about protecting them.

See Lydia's Presentation HERE

Megan Wilson: Experiencing Marine Reserves in Nelson and Tasman

I'm going to talk to you

about a student group's action project from 2012. The Muddy Buddy Adventure Run is a local event sponsored by Sport Tasman where people pay to go for a run alongside the estuary. The school was getting some environmental backlash against the event, so they decided to monitor the recovery of the estuary after the Muddy Buddy. They examined the bank along a transect before and after the run, and again once a month for the next 6 months. The habitat did partially begin to recover. though the plants didn't seem to be coming back. The action project created awareness about the estuary environment and the impact that local people can have on it. Students made recommendations to the organising committee about how to reduce the impact of the event. Rumour has it they'll find a new location for the run next year that's not along the estuary! It's great to partner with sport-focused groups because they're already skilled at safety and fun but may miss out on potential environmental messages.

See Megan's Presentation HERE

Field Trips

Freshwater Field Trip: Zealandia, The Karori Sanctuary Experience- Te Māra A Tāne

Participants on the Freshwater Field Trip learned about Zealandia's Brown Trout eradication programme as well as other current freshwater research projects in the Visitor
Centre, including how
Zealandia
communicates
freshwater science in
sometimescontroversial
circumstances (e.g. the

Lan showing everyone the catch! (Kim Jones)



Rotenone in the Kaiwharawhara Stream to eradicate Brown Trout). We toured the sanctuary's lower areas to see banded kokopu and eels and to talk with other researchers around the lower valley.



Galaxiids Galore! (Kim Jones)

Marine Field Trip: Snorkel Adventure in the Taputeranga Marine Reserve & Visit to the Island Bay Marine Education Centre Aquarium



The marine-focused field trip took place at the Taputeranga Marine Reserve. Weather did not allow us to snorkel behind the island, but we were able to snorkel from shore within the reserve to observe local fauna and flora, including Colin, the resident conger eel! Since the marine reserve was featured in the Gazette approximately five years ago, the increase in range of species, abundance and

individual size has been spectacular. The Island Bay Marine Education Centre teaching staff members, who also comprise the Wellington EMR team, led this field trip and were very familiar with the area and its inhabitants.





Marine Field Trip with Dive Wellington: Diving in the Taputeranga Marine Reserve



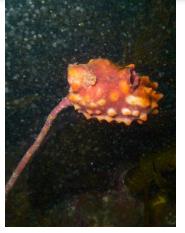
Top: Colonial Sea Squirt (Stew Robertson); Bottom: Yellow finger sponge (Helen Kettles)



Above: Stew and Helen enjoying their dive. (Stew Robertson)

Six lucky Wānanga attendees were able to enjoy a SCUBA dive with Dive Wellington within the Taputeranga Marine Reserve!

Despite high winds and choppy waves, they descended past the surf to explore the watery depths.



Sea Tulip (Helen Kettles)



Scorpionfish (Stew Robertson)

Sunset Gourmet Buffet Dinner at the Island Bay Marine Education Centre Surf Club

with Opening Address by Hon. Dr. Nick Smith

Hon. Dr. Nick Smith began by acknowledging the work that marine, freshwater and other environmental educators do and also discussing some of the challenges to conservation from a political context. He gave a special shout-out to the Island Bay Marine Education Centre as a world leader in conservation and education.

My roles as Minister of Conservation and Education are the two portfolios of mine that are focused on the future of the country and that "get me out of bed in the morning." The area of conservation that most excites me and is my biggest endeavour is marine conservation. It's the new frontier of conservation not iust in New Zealand but internationally. We are responsible for about 34% of the land area of New Zealand, but now we need an equivalent area of ocean space. We need to reflect on those calls we've made on land and ask, "Have we got it all right? What might we learn from those arguments we've had as we look to the sea?" Only 1.2% of the great kauri forests of the north are left standing: about 70% of the beech forests: 3.5% of the wetlands and a very small proportion of the

grasslands. It's good that we've conserved some areas, but if we could re-live the last 150 years, we might have a different idea of where to strategically focus conservation. Let's see if we can be more strategic about which areas to set aside for protection as we turn to the sea. We need a "Blue-Green perspective"- there must be a balance, combining policies providing good jobs, incomes and standards of living with protecting and serving that which makes our country special. We can't be all conservation or all economic- the future of the century will be in people who can work out how to marry those two things together. For example, the recent sea lion exclusion devices to help sea lion survival in fisheries in the South Island have begun to show some success in both conservation and economic areas.

How do we get people out of a polarised space and working together on practical solutions, accepting that there's a legitimate role for fishermen but at the same time there needs to be protection for all species? My current priority is making progress with marine reserves- my ambition has been to launch ten more this year, and some of these have already

been established in the sub-Antarctic islands and on the west coast (larger than any other marine reserve on mainland New Zealand and with 100% consensus between stakeholders). Communities can come together and take ownership of their marine resources and it has to happen with everyone involved from the start, pulling in all groups with effective communication rather than allowing anyone to feel that the process or the results are being imposed on them. A good example is the Marine Protection Forum in Otago, which has been bringing everyone together for a greater level of consensus.

I also want to re-write the marine reserves legislation and upgrade it because it's out-dated, making four key changes:

- Marine reserves need to be created for purposes other than scientific study, such as to conserve marine life!
- The process for creating a marine reserve is currently divisive. Many need to be created through special legislation. This should be fixed to make it easier!
- There's no mention at all of the Treaty of Waitangi, which must be changed.
- At the moment it only makes provision for absolute no-take areas.

There are also areas where we want to make Marine Parks with no commercial take, where local communities can be in charge of a local fishing area. We also need to have special sanctions for specific species. There need to be sanctuaries for species like great white sharks and albatrosses. but right now there are only sanctuaries for marine mammals. Furthermore, we need to be able to create seabed reserves to protect benthic communities such as underwater volcano habitats.

I am currently also trying to establish a Ross Sea Marine Reserve, working closely with Australia, but it's a gruelling and complicated process. Diplomacy, rather than protest, will lead to the end of whaling in the southern ocean- it needs to be handled delicately. Lastly, my biggest concern is about the area beyond the exclusive economic zone (EEZ): there's no control in international waters, but fishing is having a huge impact there. If we're serious about improving the management of the ocean environment we need to go beyond the EEZ- we need a new treaty as a family of nations that will responsibly manage that ocean space.

Conference Social Featuring Black Spider Stomp and Group Skits





EACH FIELD TRIP GROUP PRESENTED A SKIT:

- 1. Click <u>here</u> to watch the first skit, from the Freshwater Field Trip Group
- 2. Click <u>here</u> to watch the second skit, from Snorkel Field Trip Group
- 3. Click <u>here</u> to watch Part 1 of the third skit, from SCUBA Field Trip Group; click here for Part 2

Top: View of Taputeranga Marine Reserve from the Surf Club (Sydney Harris); Bottom: Dancing at the social (Samara Nicholas)

MONDAY, 28TH APRIL- PROGRAMME & NOTES 4) EMR/WBC Coordinator 1) The Infinite Game: How to Meeting Live Well Together 7:10pm 8:30am 2) Final Reflections/ Evaluations, plus Poroporoake 5) Dinner and Official Close of Wananga With special presentation by Oliver Bone about Permaculture in Wellington 12:00pm 8:30pm 3) Specialised Coordinator Field 6) Specialised Coordinator Presentation and Resource Use Trip Training Training 3:00pm 10:00pm

Wandering Anemone in Taputeranga Marine Reserve (Stew Robertson)

The Infinite Game

How to Live Well Together: Niki Harré



The Infinite and Finite Values Poems (Sydney Harris)

Session One: The Infinite Game

We first learned that the only thing we bring to the Infinite Game is our names- we leave all our trophies at the door. This game is an invitation to think about our own lives and the lives around us, and about what we're trying to do in creating a better world in a different way. Participants spent 10 minutes discussing the differences between infinite and finite games. For example, rules change all the

time in an infinite game, whereas the idea of changing the rules during a finite game is utterly absurd- how would we know who won? In finite games, the winners are everything- they've acquired some magical quality that sets them apart and the losers are silenced. Finite games are conservative- players try to replicate winning strategies of the past so that they can win. They want to know the end of the

game before it begins, and they do everything to control that outcome. In the infinite game, players are responsive to the conditions of the present- it's inherently creative, responsive and inclusive. When finite games are contained within the infinite game, they can add to the fun and the structure and keep people engaged. When they're the primary way in which people live, they're problematic.

The Infinite Game, cont'd

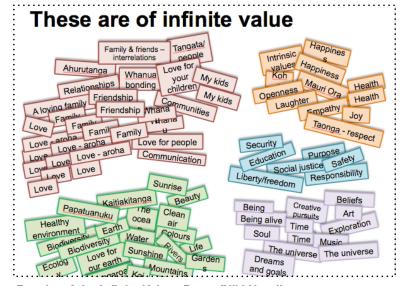
Activities Following the Introduction:

- 1. The Infinite Values
 Poem. Participants
 each wrote down two
 things of infinite value
 and we read them
 aloud as a group.
- 2. Dart Game 1: an infinite game!
 Participants created paper airplanes ("darts") to represent things of infinite value.
 The purpose was to include everyone and keep the play going.
- 3. The Finite Values
 Poem. Participants
 wrote down two things
 each of finite value and
 we read them aloud as
 a group.
- 4. Discussion after the Finite Values Poem:
 The currency of finite games is that which is of finite value- because of what it signifies or enables, and/or because a group of
- people have decided it's of value. There followed a conversation about how things of finite value are not all necessarily negativewe can appreciate and use them to support the infinite sphere as well. There may be a natural tendency within the "things of finite value" exercise to focus on negative things, but in reality it's more complicated.
- 5. Dart Game 2: a finite game in which the paper darts now represented objects of finite value and participants tried to end with as many as possible. Kim was the winner with 28 darts!
- 6. Dart Game 3: another finite game. In this iteration, a team was allowed to win. Kim,

- Ella and Tia were the winners!
- 7. Discussion of the Dart Games- in finite games you must literally clutch to the "pieces" of the game-the darts became things of finite value instead of just something to play with. Nothing physically changed about them, but their value did. During the infinite game, people commented on the structure and engineering of the darts, whereas in the finite games nobody paid attention to the form of the darts at all. People became pawns in the finite games (using the "cute factor" of the kids to get more darts, for example). Niki: "I've only ever seen one game where the winner of the first game wasn't in the winning team in the
 - second game- wealth creates wealth. When the rules are set up to win, it's hard to think outside that box." In the second game, individuals gave up their darts, but in the third game those with darts didn't want to give them up- maybe because they were responsible for a team instead of just themselves? When Kim had to decide on a team. it was obvious that she was truly struggling to please

everyone when she couldn't. because she hadn't necessarily chosen to have all the darts, and now she had the responsibility of her winnings. Niki: "I've never seen a game that didn't end up with a winner- there haven't been instances of an entire group deciding not to play the game." Does this phenomenon change within different cultural contexts? In the last game, there is always at least one, maybe multiple groups of people with their backs to the rest of the group. This is how we organise life, and we often get sucked in to the things of finite value.

When we do our work. such as in organising events like SeaWeek and World Wetlands Dav. we need to try to keep the infinite values in play and trust that others hold these values too. When we work with people, do we treat them as pawns and make them play our (finite) games, or do we invite them into the infinite game? Do we assume the past will re-occur, or do we try to create a new future together?



Results of the Infinite Values Poem (Niki Harré)

The Infinite Game, cont'd

Session Two: The Four Principles of Creating Positive Social Change

Niki outlined that the infinite and finite values we had discussed in Session One are ever-present, but as drivers of positive social change we need to actively seek them out and nourish them. Creating change is not about overcoming barriers; it's about looking for opportunities and working with them. There may ultimately be no permanent solutions to the complex problems facing the world, but a lot of creative people are working together to ameliorate them in the present. We need to stay aware of that present rather than continually focusing on some abstract future goal (i.e., a complete solution to all the world's problems) that may or may not ever be reached. Working with our individual "trophies" - our accomplishments, degrees, qualifications, etc. - and our specific locations is helpful- we need to work with what we've got rather than against it. When we're working for the future we must remember that the present also matters. The idea that we must sacrifice the present for the future is problematic, because it breeds a never-ending cycle. As seekers of social change, it's helpful to keep in mind four principles that define human behaviour- Niki had time to discuss two of these.

Principle 1: People are Happiness Seekers – we *feel* the world. When things feel good to us we're attracted to them and want to repeat them. If people feel like you are an attractive person to be around, that you don't make them fearful, and that you make them a part of something that creates joy, they will want to help you and will be drawn to your work. Boredom doesn't breed creativity-

inspiration does. Conference participants completed a role-play activity about cooperation, then discussed what they had observed and experienced: When people are being completely un-constructive, the energy drains out of a working group almost immediately. Also, it was noted that if one person is highly negative, he/she receives much more attention. If the group is relentlessly positive, however, it's also unlikely to end up with a constructive plan. We need to be practical and realistic as well as positive. According to recent research in psychology, to achieve results in a group context there must be more positivity than negativity. In one study the researchers concluded that the ratio of positive to negative comments should be up to 11:1, but shouldn't go below 3:1. It seems about 75% of the conversation should be positive and 25% should be negative. This negativity not only ensures practicality; it reminds people of the urgency of the situation at hand. In another study, when people who were feeling strongly and positively about themselves were presented with a health threat, they were prepared to look into it further. People who were feeling neutral, when presented with the same threat, weren't prepared to research it. We are naturally open to change, but we need to be feeling positively first. In summary, people are attracted to positivity, warmth, connectedness and generosity- all of these make people more open to change.

Principle 2: People are social – we are constantly using other people to guide us in how to *be*. When we're in certain situations in particular, we look to other people. Everybody copies everybody, which maintains a

status quo. When we have conflicting channels of information we get confused - what we see someone doing is more compelling than what someone tells us to do. People change behaviour to blend in with their surroundings, e.g. with body language. Behavioural traces cause us to exhibit different behaviours ourselves- even how we show our psychological distress is influenced heavily by stories that are told to us by the world, and sometimes entirely learned from the cultural stories that surround us. A common example of this is in mental illnesses: as society increasingly publicises the behaviour of individuals with mental illnesses, we are giving others experiencing distress behaviours to live into that they might not have otherwise considered. In her book on stress. Dana Becker concludes that simply knowing about the negative effects of stress makes us worry about being stressed, which in turn makes us stressed. To work with people as imitators, we need to tell them tales of joy instead of tales of terror. We need to produce images of ourselves living in a sustainable future, and to be visibly sustainable in our personal practices (which also increases our credibility). We need to leave behavioural traces. You are never just one person-you're always in a social environment and you're a model that people can imitate.

We cannot underestimate people's desire to be part of something. People *want* to be good. Children learn early in life to protect innocent others and to allow fairness for all. We can work with these principles and with people's desire to be good to achieve the positive social change we want to see in the world.

Group Brainstorming Session

Planning SeaWeek and World Wetlands Day within the context of the Infinite Game and the Four Principles of Social Change

Participants formed small groups to brainstorm ideas for SeaWeek and **World Wetlands Day** activities. Overall, there was a very strong common theme of bringing the whole country together and spreading joy and positivity.

World Wetlands Day Group One presented the following ideas:

- Planting
- · Choosing a positive location
- Holding a song writing competition
- · Conducting activities at the national level

freshwater-themed day to

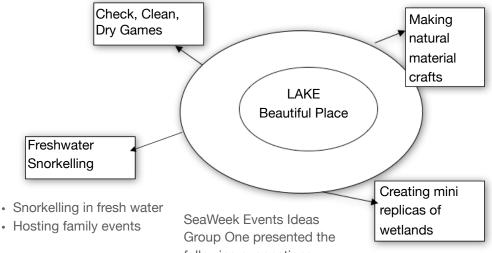
- · Keeping things openended
- Hosting catch-and-release
- · Playing soundscapes games
- Organising a Guided Night Walk
- · Discussing lung and kidney related issues, purification
- Playing a Human Wetlands Game
- · Telling Iwi history and stories to emphasize the cultural significance of freshwater and whakapapa taiao

- Celebrate sustainable activities from the past, e.g. Maori fishing practices
- Feature positive innovations for the future at the local, national and international levels that showcase principles of reusing, recycling, creativity and opportunity
- · Create joy and happiness at all events with positive energy, food and fun activities.
- Tell positive stories of the future; have artists in residence create artworks representing a positive future and get children involved in these crafts.

create fairy tales, especially around artists' creations.

Finally, SeaWeek Events Ideas Group Two had these recommendations:

- Have an activity day (fete) with hands-on activities, a storytelling corner, artwork that people can buy/see as well as create, games, face painting, an ideas box, photos from previous SeaWeek days and marine animals.
- Host a national event that different regions could promote together to reach new audiences, e.g. a network of community guided snorkel/kayak/ rocky shore/cleanup - aka combing for treasures and art creation days. Draw connections between events. share experiences, stories and photos on a website or at a Sea Creatures Ball.
- · Create a calendar of national events



World Wetlands Day Group Two expanded on these ideas as follows:

 Using World Fish Migration Day (24 May 2014) as another

following suggestions:

- · A bio blitz
- · Share good stories from various events via YouTube, Facebook, Twitter, Instagram, etc.

This could include exhibitions, murals, urban art, sculpture, drama, short movies, music and storytelling. Kids could

Diagram: World Wetlands Day Group One: A flowchart representing possible activities



Please follow **this link** to view the results of participants' feedback on the Wānanga. Categories include:

- · How to improve the Wananga,
- · Time of year in which the Wananga is held,
- · Aha! moments and/or highlights,
- Effectiveness of the Wānanga in creating community engagement and fostering effective partnerships,
- · Effectiveness of the Wananga for networking,
- Whether or not it would be a good idea to locate the Wānanga away from Northland every second year, and
- Overall ratings of the food, venue, organization, value for the money, timeframe and contents of the conference pack.

Highlights from Aha! Moments and Comments:

 "Concentrate first on the positive stuff before addressing barriers to participation. Showing people successful stories first rather than negatives to encourage them. The importance of sharing messages positively."

- "The field trips! Night Tour/Zealandia. Amazing snorkel! Seeing the native fish!! Feeling the large paua and wandering anemone."
- "Realizing the importance of being well-informed about current issues after hearing politicians."
- "Understanding how great the work of EMR/WBC is!"
- "How to communicate science! Story telling! Communicating- getting creative with ideas to connect people."
- "Great for networking and hearing other people's storiesinspiration, motivation, positivity. Awesome to hear work
 of enthusiastic young scientists- our future! Great
 connections made and follow up actions. Awesome lots
 of great discussions, project ideas, collaborations formed.
 Good for helping to create ideas and meeting the people
 who can help/inspire to act on them. Great way to meet
 new people from different departments/involvements to
 see their perspective. Wānanga are always great at
 building relationships."

Specialised Training & EMR/WBC Coordinator Meeting





Left: Buck, Ellen, Sydney, Matt, Helen and Stew enjoying the ride back to land after their dives (Helen Kettles); Above: Pukeko enjoying an afternoon snack at Zealandia! (Kim Jones)

Coordinator Field Trip Training Sessions were held at the Island Bay Marine Education Centre Surf Club in late afternoon, after non-participating conference attendees had departed. These consisted of stream and snorkel workshops, also covering new requirements under the Adventure Activity Regulations for 2011.

expectations on permission slips and who is responsible for each activity; suggested tools for WBC activities; and Action Planners for EMR and WBC.

For the full notes from the coordinator meeting, click <u>HERE</u>

The EMR/WBC Coordinator Meeting

was held in early evening. During this meeting, Samara discussed the new Drug and Alcohol Policy and updates to the overall Health & Safety Plan, as well as the EMR Sanitisation Policy. Ideas for the creation of a WBC Sanitisation Policy were also discussed. Other topics included incident reports; the role of adults as "supervisors," especially with regards to setting

TUESDAY, 29TH APRIL- PROGRAMME & NOTES

1) Coordinator Field Trip Training Sessions (Snorkel Instructor Training)

Pool session for Snorkel Instructors covering EMR pool Session procedures and rescue techniques. Held in the Freyberg indoor pool facility due to adverse weather conditions.

8:00-11:00 am

