

Proceedings of the National Marine Education Wananga – Conference, 8-10th October 2008

Presented by Experiencing Marine Reserves (EMR) of the Mountains to Sea Conservation Trust



Sponsors and Supporters



Department of Conservation
Te Papa Atawhai



EMR would like to acknowledge funding support from the Department of Conservation, the Tindall Foundation and the ASB Community Trust. EMR would also like to acknowledge the Whananaki (Whakapaumahara) marae committee & Dive! Tutukaka for supporting this wananga.

Thanks to the Mountains to Sea Conservation Trust – Trustees, Jo Scott for the local honey, the Noser's for the local olive oil and massive shout out to Karen & Craig Ferguson (Samara's parents) - our local great vegetarian cooks! Thanks for the assistance from Shane Nicholas too.

All the participants – ka pai!!

Location: Whakapaumahara marae, Whananaki, Northland, NZ.

Theme: Action for the marine environment

Purpose: Professional development and networking opportunity for all those with an interest in the marine environment & to ensure strong delivery of the EMR concept around NZ.

Objectives:

- Share stories about EMR delivery outcomes from around the country
- Provide a forum for marine educators to talk about marine education initiatives & projects
- To provide professional development (snorkeling, expert speakers)
- To provide a forum to discuss ideas for action for the marine environment.

Participant List 2008

Name	Organisation	Position	Contact email or website
Samara Nicholas	Mountains to Sea Conservation Trust (MTSCT) – Experiencing Marine Reserves	EMR director/seaweek coordinator/Wananga organiser	samara@emr.org.nz
Kim Boyle	MTSCT - EMR - Northland	EMR Coordinator/Whitebait Connection national coordinator	kim@emr.org.nz
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		Technician	
Sioux Campbell	MTSCT/DOC/Consultant	Trustee/Community Relations/Facilitator/Seaweek National Executive	chameleon.1@xtra.co.nz
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Julie Zanders	Kamo High School	Teacher	Julie.zanders@kamohigh.school.nz
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Peter Crabb	New Zealand Underwater	Educator	peter@nzunderwater.org.nz
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Kirstie Knowles	Forest & Bird	Conservation Advocate	k.knowles@forestandbird.org.nz
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Lucich, Diane Bell & Emily Powell	Intermediate		.net.nz
Shaun Tepania, Kegan, Summah & Ocean	Whananaki School	EMR participants	office@whananaki.schoolzone.net.nz
Desrae Waetford		Teacher/EMR volunteer	dtwaetford@yahoo.com
Ingrid Vissor	Orca Research Trust	Director	www.orcaresearch.org
Emma Hartley	DOC	Brand and Campaign Advisor	ehartley@doc.govt.nz
David Monro	Northland Conservation Board/Whangarei Harbour Marine reserve committee	Chair	davidmonro@igrin.co.nz
Kylie Sisley	Te Kohao Health	Iwi Health promoter	kylies@tekohaohealth.co.nz
Henry Haika	Whangaruru School/Tangata whenua	Board Member/educator	
Terry Baker	Kamo High School	Teacher	Terry.Baker@kamohigh.school.nz
Greer Mawdsley	Interested member of the public		mawdsley@slingshot.co.nz
Jiggs (Nupere) Ngawaka	Whakapaumahara Marae		
Ngaro Waetford	Whakapaumahara Marae		
Raiiha (Raii)	Te Kura Kaupapa Maori O Te Rawhitiroa	Student	
Adelaide (Adee)	Te Kura Kaupapa Maori O Te Rawhitiroa	Student	

Following powhiri - introductions

Introduction from wananga organiser – Samara Nicholas

Julie Zanders – Kamo High School – Interested in connections from mountains to the sea and landuse - wishes to be more informed on marine issues as well.

Emily Danby– EMR coordinator, Wellington. Interested in the Drains to Harbour programme for winter in Wellington.

Dave Monro – Conservation Board. Interested in networking

Liz – Aroha Island trust. Interested in setting up EMR programme or similar at Aroha Island, Kerikeri

Greer – Auckland. Heard Roger Grace talk at MERC. Concerned her friends and colleagues knew nothing about Great Barrier Marine Reserve.

Kelly Wihongi – Year 5 & 6 Auckland teacher. Interested in developing a forward thinking generation

Barrack – AUT marine science student. Snorkel instructor. Wishes to gain more perspectives from other people

Sue Dodd – Masters in Marine science. Interested in tools to help research to help conservation

Emma – AUT researching whale standings. Interested in EMR programme in Auckland

Jeremy – AUT research student. Interested in marine education. Wants to find out what's happening and meet people

Rachel Agnew – Personal and professional interests. Interested to meet people in conservation and marine education

Julia Alabaster – Junior Science teacher, member of Oceanswatch. Wishes to learn about marine education and networking

Barbara Breen – WWF, wished to install guardianship, AUT where she looks at ways to do marine research

Dezarae – EMR volunteer and teacher

Pete Crabb – marine biologist, film maker, marine education for young people. Interested in sharing ideas and meeting people

Terry Baker – Kamo High School. Wishes to learn more and make kids more aware

Vince Kerr – Meet and be inspired

Lynnie Gibson – Set up initiatives

Joe Palmer – EMR coordinator, Gisborne. Interested in improving skills and to learn and pass onto students

Kylie Sisley – go to Poor Knights. Wishes to learn more and meet people, pick brains

Victoria Travers – WWF, looking for action examples to pass on

Debbie Edlington – Education for Sustainability. Visit northland and get seaweek ideas, something different

Laura Shaft – share about coastcare, network and learn

Emma Hartley – learn what the issues are facing the marine environment, and plan for seaweek 09

Kristie – Forest and Bird, meet people and holiday

Buc Cullen – Wishes to see whole country full of life to make us self sufficient. Learn new laws to help protect environment for NZ and its visitors. Advocacy, networking and professional development.

Moea – Network

Kim Boyle – Learning from everyone – wants to become a big sponge – sucking all the info in from everyone

Nicki Wakefield – Filling Samaras boots for the term 4. Passionate about finding out more and passing it on

Henry Haika – representing Whangaruru School. Here to listen and learn and bounce ideas around

Ngaro Waetford – wants to continue living off the land like the mountains to sea concept. Learn how to get development happening differently in Whananaki

Allan Moore (Whananaki marae) – Good to hear all the views. All about talking to each other. Feels should be co-management in any marine reserve. Kaitiaki, Born on Great Barrier Island and interested in the Great Barrier Island Marine Reserve. Wishes to change legislation to allow to bring other people onboard or marine reserves will not happen

Kiri Cooper (Kuia for Whananaki) – Concerned about ferrel cats and dogs – brown teal area.

Sioux Campbell – DOC and trustee of Mountains to Sea Conservation Trust

Metiria Turei – Email her about what you think needs to happen next. Professional development and community environmental education that is getting lost, perhaps funding to fill the gap. The green party supports marine reserves along with a number of tools available. Disappointed about why marine conservation unit has been disassembled by DOC. Green party wishes to have the unit restored. Where do the next stages fit in, such as more funding for environmental education not just the practical work, e.g. Community Conservation fund. Building on EE framework in schools and community sector and the Green party would love to have ideas on how they can help. The CC fund administered by DOC is \$4 million over 2 years. It is not available for education. Issues include sewerage, Maori reserves or public lands. The Green Party places the environment at the top of the economic structure. Current value sets place the economy where the environment should be. The environment must take priority.

What is the Community Conservation Fund?

The Community Conservation fund has been established for 2 years and is available to fund community groups to undertake restoration projects on public land. The Funds section at DOC Head Office will be responsible for administering the fund.

Contact

Katrina Edwards is the Funds Adviser. Please contact her if you have any queries on 0800 862 020 or email her on kedwards@doc.govt.nz

Information

To find out more about the fund you can visit DOC's website at <http://www.doc.govt.nz/communityfund>. These pages include an outline of the fund and access to the application forms and guidelines.

Applications accepted now

The first funding round is currently open. Applications will close 3pm on Wednesday 5 November 2008.

Show and Tell

Laura Shaft – Northland Regional Council – Coast care

Why are dunes important? They form the narrow band between the land and the sea, buffering. Important for protection from flooding and storm surges. Sand dunes are transient and have been lost due to burning off vegetation, grazing, development, platforms and roads, people and vehicles and modification. Coastcare helps community groups restore the coastal environment for future generations. Coastcare projects are all community driven. Now totalling 24 groups. More in formation.

What is Coastcare about? Education and signage, learning by getting involved, plants, fencing to protect binding plants, beach access, pest control, maintenance of plants.

Pingao and spinifex keep sand on the dunes, they are native and fast growing.

Contact Laura on (09) 4701138 and lauras@nrc.govt.nz workshops and resources are available.

Peter Crabb – Oceanz 08/09 underwater photographic competition.

This competition has been resurrected and has a theme of traditional kiwi summer. Open dates are 25/10/08 – 13/04/09. Currently looking for funding or sponsorship for disposable cameras. Prize giving will be in June 09 in Wellington and hopes are to involve weekend workshops. The competition is only for amateurs. Contact peter@nzunderwater.org.nz

Debbie Eddington – Canterbury Regional Council – Seaweed Coordinator

Debbie facilitates coastal and marine environmental education and is looking for ideas for seaweed. Programmes delivered are aimed at primary age students and she distributes coastal wetlands, rocky shore and dune resources. Annual district focus changes, last year the focus was on Kaikoura. During a treasure hunt a student found a fluoro armband from Hamner Springs waterslides. The student wrote a letter to the operators at Hamner Springs, saying they were not impressed that their rubbish had travelled so far to Kaikoura and suggested they find a more environmentally friendly way of identifying waterslide clientele. Debbie then led everyone through the passenger transport system game.

Liz – Aroha Island Trust

The island, located in Kerikeri, gets 5000 visitors per year. The island is under the QEII trust and operated by Aroha Island charitable trust. Open to the public 6 days a week. The vision of the trust is to be a centre of environmental education excellence in Northland, and are keen to share the role with local Hapu. The aim is conserve flora and fauna, and to eco-educate. What is special about it? Location, cultural history as it is nestled among several pa and papakainga, ecological values. Facilities include a lodge and accommodation and are able to host school camps and one day visits by groups. Kayaks and boats are available. The location neighbours the Kerikeri inlet. At this time the trust is seeking to find out what the community wants from the facility to incorporate into their strategic plan.

The Experiencing Marine Reserves programme

Samara Nicholas – EMR director - to link to profile http://www.emr.org.nz/information.php?info_id=94&emrsid=f6e8d6df73ebbedb560ce8dfff82d559

The focus of this wananga has shifted from an EMR national hui to a conference open to all interested in marine education in general. The wananga also is an opportunity for schools and organisations to showcase their actions for the marine environment.

What is EMR?

Experiencing Marine Reserves (EMR) is a national programme of experiential learning about marine conservation. The programme is under the auspices of the Mountains to Sea Conservation Trust. EMR's independence, professional delivery, marine reserves focus and provision of a range of learning styles make it unique within New Zealand. Since its introduction in Northland in 2002, programme uptake has continued to increase throughout the country. The Department of Conservation (DOC) is a foundation partner of the Mountains to Sea Conservation Trust, and has supported the development of the EMR programme since 2002. The Tindall Foundation now also supports the programme's national expansion.

Our Offer

EMR coordinators offer guidance, direction and coordination of classroom exercises and field trips to the ocean. We also provide snorkel equipment, instruction, resources and snorkel risk management. For many students, it is their first time using snorkel gear. EMR snorkelling experiences require a 1:2 adult/student ratio for year 8's and below, with the result being the active involvement of many family and community members. Most aspects of the Northland delivery to schools is offered for free thanks to the sponsorship and support from a wide range of organisations. Please go to our website www.emr.org.nz for a list of current sponsors and for information on how you can support.

Where and when does EMR operate?

The EMR programme has been operational in Northland since 2002 and available to other parts of New Zealand since 2004. Go to www.emr.org.nz to find National contact details. Due to the seasonal nature of the programme, it is offered in terms 1 and 4 when the weather is warmer and more suitable for snorkelling. Contact EMR at info@emr.org.nz to find out more.

The Mountains to Sea Conservation Trust (MTSCT) – Ngā Maunga ki te Moana is a legal charitable entity based in Northland, and was formed in 2002 as an umbrella organisation for the Experiencing Marine Reserves (EMR - www.emr.org.nz) and Whitebait Connection (WBC - www.whitebaitconnection.co.nz) programmes.

Resources

EMR aims to continue to develop quality marine education resources and also to offer the many other services we have developed to date in Northland, such as community guided snorkel days, community events for Seaweed & Conservation Week, the interactive EMR CD & DVD, the EMR website (www.emr.org.nz), the MarineNZ website (www.marinenz.org.nz), marine education gatherings, Marine Conservation Supporter Groups and the Drains to Harbour and Mangrove Discovery programmes. All these activities add value to the sound programme we have already developed, and our current priorities are to continue to build on these activities in Northland while further developing the national delivery of the EMR programme.

EMR presentation

EMR provides snorkel gear to enable comparisons between protected and non protected marine areas to inspire participants. Students see what is possible. 1:2 ratio automatically requiring major involvement from the community. The programme utilise local marae and tangata whenua input where possible, embracing Maori culture. Key dimensions of EMR correspond to the EE guidelines, **in, about and for the environment**. The programme adds value to teachers work in class. The programme provides tangible experiential learning providing examples of what little is known about the marine environment with aim to excite students. Major threats to the marine environment is also included, along with the major tools available to help conserve the marine environment for the future. Safety components include pool snorkelling instruction lessons before open water snorkelling, especially for younger groups, always promoting safe snorkelling skills. Beach cleanups and other local work is incorporated into the programme. The overall programme is not only focussed on educating students. Parents are often enlightened as well. Results are learning by doing, increased support for marine reserves, enhanced community ownership in existing marine reserves resulting in less law enforcement required. There are opportunities for public events and overall the programme inspires action for the environment. Attitude change, media opportunities, empowerment to make difference in the management of our oceans. Northland EMR also host an annual competition within

each school where the winner(s) get a trip to the Poor Knights with an adult. The programme also promotes the ethic of kaitiakitanga. Other activities under the EMR heading include Marine reserve talks to schools and community groups, Drains to Harbour programme, Mangrove Discovery Programme, Community guided snorkel days, Northland trip to Whangara, and producing learning materials, EMR DVD etc. Feedback on the EMR DVD is welcome.

Hearing from EMR programme participants

Dargaville Intermediate – action examples presentation by Dianne & Brendan (teachers) and powerpoint presentations prepared by Madison (drains) and Emily (sand dunes). Deputy Principal Brendan told the story of a confidence change in one young student following participation in the EMR programme.

Whananaki School – EMR programme summary by Summah, Keegan and Ocean. Overall the EMR programme was well enjoyed, and the most powerful things were the comparisons. Shaun, Principal of Whananaki School highly commends the programme, and have incorporated the Environmental Kaitiaki award (a new EMR initiative) into their annual prize giving. These days children are often covered in cotton wool through all the RAMS etc. yet this programme provides a real interactive experience with the environment while also very safe. As a teacher he is very confident in the safety aspects of the programme. The entire school of 46 students made it and snorkelled at the Poor Knights where the water is very deep and there is no foot fall, hugely boosting the confidence of students.

Meet the Locals DVD of Whananaki Schools trip to the Poor Knights– available from DOC website www.doc.govt.nz

Due to technical difficulties another slideshow of Whananaki School's experience was not shown, please contact Samara if you wish to request a copy of this.

Keynote speaker – Dr. Ingrid Visser, Orca Research Trust

Ingrid has been working with orca for 15 years. Until her research ultimately leading to her PhD none had worked sufficiently on orca. The presentation shown is the same as delivered to postgraduate students and primary school students. Orca have many names across many cultures. They are animals of power wherever found. Names include killer whale, demon dolphin which is the translated Latin name *Orcinus orca*, fat chopper is the translation of the Russian name Katsatka, sword whale and blackfish. Surveys indicate 80% of New Zealanders call them orca. Orca are the largest of the delphinid/dolphin family. New Zealand waters are unique as here you can find the worlds largest and smallest dolphins, being the Maui and Hector's dolphins. Why study orca? Suggestions from the audience included: Because they are cool, they have a story to tell, there is limited information, they are traditional guardians of certain areas of the ocean, they are bioindicators. Orca are top predators in the oceans, they literally eat sharks for breakfast. Thus they are also susceptible to bioaccumulation. There have been changing perceptions to orca over the years, from their portrayal as vengeful man killers in Bo Derek's first movie titled "*Orca*" to "*Free willy*" where they are portrayed as friends, yet the actual relationship with people is not as predators, nor are they friends. Thus, education is important. Orca, like many other pelagic species are hard to study as they do not have a nest or leave a trail. Marine biologists use modified terrestrial ecology research techniques. Primarily, identification of individuals is by photographs. Orca have distinctive dorsal flukes and white markings on the ventral side of the tail and saddle patch. Behaviour research findings include that males do not mate until they are 40. They reach sexual maturity at 12-18, yet not social maturity until 40. Males play around with other young males until they reach social maturity. Behaviour varies from population to population around the world; in New Zealand spyhopping and feeding on rays are notable. Acoustic calls differ hugely between locales. While Antarctica orca sound squeaky, New Zealand calls are lower frequency and clicky. All research is highly dependent on public to report sightings by calling **0800 SEE ORCA**. A individual identification sheet is also available, including those individuals most easily distinguished. Ingrid's research is usually done on her own, unless she has a helper. As part of her research underwater observations are common, and over the years the

orca have become so accustomed to her presence that she has been able to sight interactions never documented before such as social interactions between individuals, share food in front of her, curious behaviour such as nibbling on her fins, leaving the least fit of a pod with her to babysit while the rest of the pod go hunting. Ingrid has a permit from DOC to snorkel within 50 m of the orca. There are less than 200 orca living around NZ. Before her research orca were classified as common in NZ even though no real surveys had been done, and now they are classified as nationally critical based on Ingrid's research. Hunting and prey is a social culture passed through generations. New Zealand orca eat sharks, rays and dolphins. Hunting strategy for rays is very careful and a group activity as to avoid getting stung by a ray's barb, which over time can cause allergic reactions. NZ orca hunt close to shore resulting in a high occurrence of strandings. In NZ there is one stranding a year as opposed to one every fourteen years in Australia. Most strandings in NZ are due to misjudgement while hunting, not illness. In the last 3 months there have been 4 strandings. History of strandings show valuable evidence that knowledge of orca has grown. In 1955 17 orca stranded at Paraparaumu. All were shot. Today, survival after strandings is near 100%, such as Rua, stranded 2003 and had a snapped pectoral fin from being washed on the shore. He is now alive and healthy. Another theory about orca has been debunked, the theory that strandings make females infertile due to crushing their internal organs. Miracle stranded in 1993 and gave birth to magic in 2001 after the stranding. Friendly behaviour with humans may also be passed down, as those mothers that have stranded and became friendly, then had very friendly offspring. Issues and threats to orca are pollution stormwater and polluted harbours that they feed in, floating refuse that entangles and cuts fins, fishing interactions where the orca pluck fish off longlines as the trawlers haul in, the orca also are shot at sometimes by fisher people, whaling which is not allowed in New Zealand waters yet we don't know where the New Zealand orca pods are much of the time, propellers from boats are a big threat as the orca are friendly and curious, many of New Zealand's orca show marks from propellers. Follow the guidelines of not driving close to orca; further guides are available on the website. In New Zealand only 3 boats may be around marine mammals at a time, at other places overseas there can be many. Another threat is captivity which is a big industry in Japan and other places. This is why we must promote seeing the animals in the wild. Habitat loss through aquaculture and other developments, especially marina and aqua farms as this would have been hunting ground. Other developments that threaten the orca are the large turbines that have been approved at the entrance of the Kaipara Harbour, these turbines could not only damage the orca, but they also produce noise pollution that would deafen an orca if it were to come within 20 meters of each turbine, and there will be 200 of them. The Kaipara harbour is a prominent part of New Zealand's orca's feeding grounds and these turbines effectively make the entire harbour inaccessible. Films shot involving New Zealand orca are BBC, TVNZ, Animal Planet, Discovery Channel, Ocean Futures Society. Books by Ingrid include I love Killer Whales, Orca Kids series. Another aspect to research that has shown up lately is Antarctic Orca which are grey rather than black showing up around the mainland. Also questioning how social culture has spread to Papua New Guinea where they also eat rays. At her research centre she hosts volunteers, PhD's, interns, long term studies. The website is www.orcaresearch.org

Questions/comments to Ingrid. - How are the individuals named? A: this varies, it may be a distinguishable feature like corkscrew who has a twisted dorsal fluke, or it may be circumstantial like miracle who has stranded and given birth.

Orca have been seen in Whangaruru harbour several times over the years and Henry Haika has swum with them while diving for scallops at 15-20 ft.

Antarctica orca hunting behaviour clip was then shown. Featuring a pod teaching a young pod member how to make a coordinated wave to wash McSeal off a ice floe. Once McSeal had been washed off he was carried to another ice floe and the entire thing was repeated for learning purposes. Roger shared a similar experience while in Antarctica a large male created a wave rocking the boat he was in with other researchers, meanwhile two females waited on the other side of the boat with mouths open to catch what would fall out. According to some, if the wave technique doesn't work, the orca will then launch themselves onto an ice floe to get the prey.



Panel Discussion

Theme: How do you market and promote marine conservation education? – Panellists: Henry Haika, Dr Roger Grace, Dr Barbara Breen, Vince Kerr. Each panellist had 5 minutes to state their answer.

1. Roger Grace – Interested in marine life from a young age ultimately gaining a PhD from Auckland University on the benthic ecology of the entrance to the Whangateau Harbour. He is a part of the Whangateau Harbour Care Group. Roger also followed in his fathers footsteps as a professional photographer who died when Roger was 16. He developed his first underwater housing at a young age and has always had an interest in marine photography. Roger has been working monitoring, mapping and establishing marine reserves for many years now, along with giving presentations to fishing clubs and any groups that will listen promoting marine conservation. Roger has been involved in the Poor Knights and Mimiwhangata marine protected areas from early years, and these sites include the surveying work he has been involved in. Since 1990 Roger has been photographer on 1-2 trips on Greenpeace boats per year, taking him around the world many times, always at the front documenting Greenpeace activities.
2. Barbara Breen – Barbara was born in the pacific northwest of the United States with a mother from the USA and father from Priongia in the Waikato. At a young age she spent a lot of time in the marine environment, including time at the San Juan Islands paddling amongst orca. Barbara gained her masters from Auckland University on marine physiology, yet found this involved too much killing and dissecting her research subjects. Since then she has been involved in New South Wales marine protection policies, rezoning of the Great Barrier Reef, mapping the social values of the environment. Since coming back to New Zealand she worked for DOC developing a marine education programme for the Auckland Conservancy where meeting and working with Samara and the EMR programme was a highlight. Research carried out investigated the relative effectiveness of mailing pamphlets, workshops with teachers, and involvement in the EMR model where the EMR model came out well ahead of the other methods tested. Barbara has also been involved in WWF's Maui dolphin education programme and is also now a GIS and marine conservation senior lecturer with AUT.
3. Vince Kerr – Vince's interest in education started with his mother, still in his regard the best teacher he has ever met, as she taught him the importance of only learning what was worth knowing. Vince studied biology at a University in the west coast of the USA in Oregon. A large impact on his learning was attending a junior school with no grades, no rules, no curriculum, where students and teachers developed programmes collaboratively, and where students worked very hard regardless of rules or grades. Vince spent 10 years developing the environmental management programme at NorthTec, and has also spent his time hunting the 'crusty old guys' that hold knowledge about the marine environment seeking their knowledge which is worth more than a PhD in his opinion, men such as Wade Doak and Roger Grace.
4. Henry Haika – Henry has been hands on learning about the marine environment for as long as he can remember. He is of Ngati Wai descent, meaning the people of the water. Henry

became interested in environmental science since commercial fishing. Once he got his quota he found it was a take take business, contradicting what he always believed in which is giving back to the ocean that has provided so much to him and his family for the future generations. He believes every individual is kaitiaki, yet the mana, tapu and mauri of the sea is being diminished by our activities. Henry has been an assistant tutor on the NorthTec environmental studies programme advocating the true value of what we have and that we should look after it. His eyes were recently opened to New Zealand ecology by working with Shane Nicholas (husband of Samara). Henry came to this wananga on behalf of Whangaruru School where he is on the board with hopes to share his knowledge with the school which is participating in the EMR programme this term 4.

Questions:

1. Kirstie Knowles of Forest & Bird to Henry – How do you believe is the most effective way to educate adults, as young people are well covered in her opinion. A: Especially in rural communities which he has experience, most parents will support the kaupapa of the tamariki (beliefs of the children). Approaching parents and offering them to be a part of learning alongside the children is the best in his opinion.
2. Shane Nicholas to Vince and Roger – Do you think marine parks will ever be a viable management tool with regards to Mimiwhangata? Roger's answer: He has been monitoring crays and some fish species since 1976. The area was established as a marine park in 1983 and went 16 years without monitoring until 2001. The trends of decline are still evident in the data. Big fish were abundant in 1976 and are no more. Crays have diminished to a state of no legal size crays. The marine park at present has no commercial take and some recreational take allowed and the park is a clear example of the effectiveness of controlled take. He believes no take for the long term is the only way.
2. Has there been any real investigations into the benefits of Mātaitai? Vince's A: There is not enough history and data on Mātaitai. Humans often response to problems of managing it away is not the answer to everything. Fishing has reduced biomass of some New Zealand's marine species to less than 10%. Whether from central or local government or local community groups the problem remains the same and in his opinion the answer remains the same, being no take.
3. How do you police widespread marine reserves? A from the whole panel: Community support is a valuable part of NZ culture, it is found that people will do each other in cause if they can't fish there, then why should others be able to? Without hard easy to understand rules many will not respect management attempts such as Mātaitai. The Philippines model of community management has been investigated and found to be successful. Illegal fishing in Te Matuku marine reserve off Waiheke island, where locals are not the people illegally fishing there. Policing is not the only answer. Education has made a huge effect on the whole community, not only the children in schools, and the effect has been made now, not in 15 years when the kids grow up. Research has shown for every 100 kids taught, 3000 adults are also exposed to the information taught in school.
4. Does your passion ever turn people off? Is your passion a passion killer? Barbara's A: If you begin with solid scientific knowledge you can progress through a debate or discussion with conviction. Vince's A: People generally respect those with genuine passion rather than dislike. It always varies between people. Henry's A: He deems himself as a passionate food gatherer, yet, with the obvious decline in kaimoana he is now even more passionate about making things sustainable for the future generations, and is willing to give up his passion for fishing in some areas for the sake of sustainability.
5. To Henry: When did you have a mind frame shift from commercial fisher with a take take take attitude to your now sustainable attitudes toward the sea? A: He went into commercial fishing to make money, yet all the while it cut at his heart and soul the whole time until he couldn't do it anymore. Roger's A: He was formerly a keen spearfisher, but became quite against it once he became aware it was very unsustainable and encouraged bad take practices. Shane's A: In living with the environment many that live rurally are always conservationists regardless of whether they think take or no take are the best methods. He believes it is obvious we need to restore the diminishing mauri of the seas.
6. To the panel from Victoria Travers: How do you stay optimistic and keep from getting

depressed about the never ending battle? Vince's A: do what makes you replenish your passion and what is important to you. Many battles have been lost yet being here at this hui is good evidence of success. He remains optimistic. Samara's A: Progress depends on how you measure your success. Her measure is having kids approach her on the street and sharing their newfound passion about the marine environment with her. " I always get what I want, but sometimes I need to work a bit harder to get it."

7. How do you battle the 'dead fish club' attitude? Vince's A: We continue to make change for the better. Children will outlive the dead fish club and then change will happen, such as in California where marine reserves are seen positively in dominant public perception. Comment: As and environmentalist passion is never a problem, yet there is huge frustration when an organisation with lots of money can overturn government decisions such as in the case of the Maui Dolphin set net ban. Vince's response: As environmentalists a part of our job is to remain positive in view of the public.

Panel session closing comments by Sioux, that there is excellent science supporting the way forward and this ground swell of support as seen at this wananga, thus we have good reasons to remain positive.

Show & Tell

Henry Haika – the Sustainability programme at Whangaruru school.

Students of the school have learnt about raised gardens, planted an orchard, the seasons to grow kai, recycling, using brown rock to make bricks. Issues surrounding his area of Mokau and Oakura, Whangaruru are development, especially the sewerage treatment problem where it enters the groundwater. Previously he has seen toilet paper and raw sewerage while diving for scallops in the Oakura bay and wishes the local council would investigate more sustainable ways of disposing of sewerage. We cannot ignore these issues as these land use problems will totally wreck all the efforts of marine conservation. Sustainable development is not always pretty, such as the wind turbines and tidal wave 'green' energy generation technologies which in turn destroy seabird and marine mammal habitats. For those missing or losing their passion for sustainability, just look into a child's eyes. Henry suggests that an action the group attending the conference is forming something to take to higher authorities.

Presentation by Roger Grace titled: Why do we need no take zones?

Over the last 100 years big snapper, kingfish and other top predators have been fished out. They have important effects on the entire ecology, due to removing top predators e.g. Hapuka used to be common when fishing off the rocks. In no-take zones everything is protected. Only by offering total protection can we restore the natural ecology state. One example of a changing fisheries model is that for snapper. They are so affected that their decline is altering ecology. Snapper are the most well studied fish in New Zealand. The largest loss of snapper was between the 1920s and 1940s when trawlers were commercial. Today we are at a small percentage of the previous abundance, from 270,000 tons to less than 30,000 tons. The fisheries management calculations select the lowest aged fish stock for the maximum sustainable Yield. Maximum sustainable yield is often calculated at 20 percent of the virgin biomass, this is where fish stocks are supposed to grow the fastest. It is on the knife's edge most of the time. One small mistake and the seemingly endemic poor management results in an overfished fish stock. The curve also produced by the maximum sustainable yield calculations take little account of the overall ecology. Roger recommends fishing around 50% of the virgin biomass for an overall more sustainable fishery, where the fish are larger. Another example of changing perceptions is that toward kina barrens. Kina barrens were formerly considered a normal feature of the north east coast until the total protection of the Goat Island marine reserve. What was found is that kina barrens are actually an artefact from fishing, where the large predators of kina being crayfish and snapper have been removed, allowing kina densities to increase so much that they out eat their primary food source which is kelp. Aerial photos can be valuable in indicating the change in kelp distribution that may be attributed to kina barrens. Fish numbers multiply rapidly following formation of a fully protected no take marine reserve. Kina barrens still abound at Mimiwhangata which is a marine park where recreational snapper take is uncontrolled. Removing large snapper may have un-researched social behaviour repercussions. Although Goat Island marine reserve is 30 years old, the recruitment age and abundance may not be

close to the natural structure. At the Tawharanui marine park the rules are similar to a no take marine reserve. Kina barrens have all been eliminated within the boundaries, while they are found immediately outside the boundaries. Establishment of Tawharanui made immediate and dramatic change on the prominence of kina barrens. Crayfish have also increased in abundance and show change in behaviour where they do not hide. A survey conducted by Roger and Vince Kerr on the east coast of the north island between Whananaki and Helena Bay showed the abundance of legal crayfish was at 1.75 kg/ha. This correlates to less than 1% of the natural abundance. Female crayfish have ten days to find a suitable large male to fertilise her eggs. If this time passes and she is unable to find a large male, she will reabsorb her eggs at the risk of becoming infertile.

DAY 2 – session 1 – OCEAN CAFE

The four stations were:

- The new curriculum – hosted by Julie Holt of Team Solutions.
- Kaitiakitanga – hosted by Buc Cullen
- Whats up? What's working and not working in marine education? And Hosted by Samara Nicholas & Kim Boyle
- Seaweek 09 – hosted by Sioux Campbell

The new NZ curriculum

New Zealand curriculum document

Vision

Value

Principles

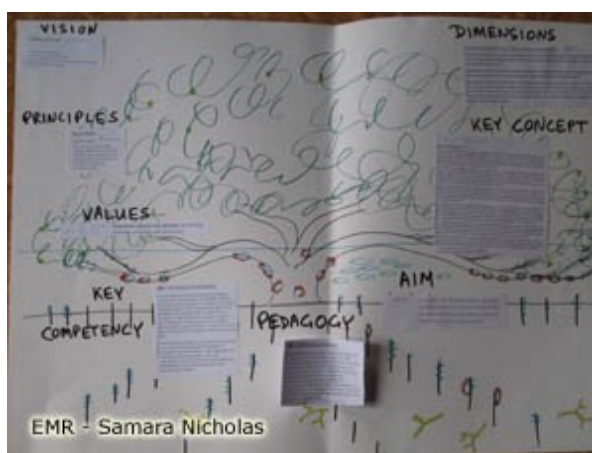
Key competencies, effective pedagogy (teaching practises)

EE Guidelines

Aims

Concepts – interdependence, biodiversity, sustainability, personal and social responsibility to others

Dimensions – In, about and for



Kaitiakitanga and incorporating Maori perspectives in EE

- Whakapapa – mountains, rivers, lands, oceans, lakes, streams, estuaries, harbours, birds, pigs, insects
- Interconnectiveness
- Mauri – essence force/life force of all things
- Foodchain , habitat
- Ecology
- Spiritual, cultural, physical, emotional – holistic view
- How the system interacts, inputs/outputs
- What happens in the mountains & rivers has a direct impact on the harbour
- Handing back guardianship to locals, everyone has ability to participate, empowerment
- Empowering communities

- Asking classes 'What do you think kaitiakitanga means?'
- Celebrate collaboration with many people to better understand cultural and historic significance
- Marrying kaitiakitanga with today's views – kaitiakitanga is your own personal view of whakapapa
- Represent Treaty of Waitangi practically in marine conservation – different interpretations
- Not necessarily at community level – ensuring decision makers work collaboratively but lack of understanding at government level? – 'tick a box' mentality to consultation. Consulting with the right people. Proposed NPS – freshwater management
- Get mana from taking action on the ground
- Show difference between areas that are being restored vs. areas that aren't
- Guardianship – not ownership – need to get away from the concept of us 'owning' the environment
- Taking ownership of the issue and our role in the environment – stewardship – highlighting the connections
- Matapiko – resources (natural) dwindling. Need to restore Mauri – restore and put resources on the table for manuhiri
- Looking @ our environment as a source of sustenance/life-giving – we need to look after it
- Guardianship – lack of power to protect connections e.g. certain parts of species lifecycles – governed by legislation & not living sustainably
- Community working together! Work together for a common goal
- Perceived threat of marine reserves – food source being taken away
- Mimiwhangata – community food basket – starting to see the negative impacts

Summary

Kaitiakitanga – Restoring the Mauri (spirit, what gives life) of the environment, this includes stones, water, air as well as living things. Giving guardianship back to the community, yet this has the challenge of maintaining tradition while remaining adaptable to the changing environment and its threats.

Marine education - What's working? What's not? WHY?

What's working & why

- Media exposure – social marketing
- Promoting good GLOBAL citizenship and relating to local – can assess big picture-
- Giving tools & new skills – something special, more than learning (holistic)
- Experiential learning – connection – fun experience
- Expertise/new research, having the facts, credibility – the truth
- Enabling ACTION, examples & making it easy – it makes happen change
- Being positive – enables better communication- offers solutions – achievable
- Keeping it local – relevant & doable & their solutions
- New curriculum – engaging learning- participant contribution – child-driven – thinking skills
- Experiencing Marine Reserves (EMR) programme
- Water experience
- Offering expertise – safety procedures and gear
- LOTCR – connection inspiration – experiential learning – hands on – learning methods covered, visual, audio, kinesthetic
- Sharing experience- parents/tamariki
- Creating action
- Recreational orgs coming together
- Marine reserves
- Collaboration – sharing of info, stay connected, engage community
- Other org support
- Community org – NGO – dune support – building in capacity
- Sharing & finding gaps & filling
- Investigations – marine reserve own back yard

- New initiatives
- Kids can articulate for themselves
- Marine is coming to the FORE – issues, media exposure, level of awareness
- Bringing in community , schools, parents, teacher BUY IN
- Action resources
- Educating kids
- Getting people in the environment
- Passionate educators
- Finally having relevant standards – conservation management
- Opportunities to share with other educators
- More focus and funding for marine conservation
- Seed you plant today will grow tomorrow
- # of established reserves – more access for students
- Poor Knights more accessible
- Kids go there – gets to the parents
- Some fishing shows have positive conservation messages
- Community guided snorkel days - involve whole family
- Kids get it
- Until they see protected site vs. unprotected – they don't
- Kids see positive
- They take action
- Focus on all ages – follow on effect
- Life long learning – get them involved early
- Using extreme contrast to illustrate the point – gets message across
- They make own judgements based on all facts
- Older people get it
- Having a bank of unit (achievement) standards
- Marine educator forum on www.marinenz.org.nz
- Involvement of team solutions
- Getting out there – EMR
- Squid sex sells (for adult interest)
- Guest speakers – Ingrid Vissor “Charismatic mega fauna”
- Big business sponsorship- \$ for green
- Complementing education – recreation – taking less – increasing size limit 300 instead of 270
- Star media - well informed with marine education

What's not working, Why?

- Accessibility of resources – not sharing ideas
- Education for teachers
- Number of marine reserves – we need more
- Fishers
- Public overwhelmed with conservation issues
- Marine ed – not in my back yard
- Visual images
- Adults
- Keeping message positive – negative media
- People – head in the sand
- Funding/priorities
- Other social issues
- Sharing knowledge
- Not sharing ideas – recognition of how people do it
- Weather in Wellington
- People thinking this don't make a difference personally

- Spoon-feeding
- Cultural knowledge missing – connection lost
- Common goals
- Dumping resources
- Accessing resources - \$\$ - expertise – time
- Doom & gloom – overwhelmed – hopelessness
- Not enough sharing
- More competition for funding
- Reaching the adults
- Negative behaviours still exist in a marine reserve e.g. breaking open kina – not all providers have the same standard
- Work with other organizations that use the marine reserve – educate
- ‘Gone Fishing Show’ – showed fish feeding in the reserve
- Other priorities
- Timing weather conditions
- Need to communicate
- Teaching relief time – costs money
- ‘Meet the Locals’ take control, some key messages lost
- Gap - information reaching middle aged plus community groups – kayaking, fast growing sport =great target group
- Encouraging responsible fishing – release – take need not all – awareness
- More education with spearfishing – need fact sheets – brochures/pamphlets – DVD
- Middle ground – responsible fishing practises – take a kid fishing – fishing clubs

Seaweek 2009

Success

- Good publicity
- Resources – schools, adult, family, community, can use newspapers to promote
- Support from major TV networks esp., nationally
- Kids nagging parents
- “Mascot” for each year, logo/theme – “it starts with me works”
- Raise interest/involvement away from schools, e.g. UNIs assist with activities like community days, monitoring activities, beach walks.
- Introducing the locals to their own environment
- Adult focus with a purpose
- Competitions with a purpose /result
- One national event e.g. beach clean ups/project aware link – website e.g. NZ math week
- Fantastic website
- Resource packs – well pitched info – lots of fun activities – easy to develop own resources from\
- Use existing resources from archive
- “treasure chest” to borrow – multi copies
- Parade idea – extend outside of schools – into communities
- Children advocating to adults
- Poster that not just for schools – wide promotion/presence
- Regular activities/repetition/physical activities/In the environment Immersion
- Theme not so important. Esp. if local work doesn’t fit the theme
- Connectivity – knowing who does what, where to set info, jobs etc
- Using others info and distribution networks
- Experiential learning – adults esp.
- More adult focus
- Marine ‘costumes “theatre” (Perils play) e.g. DOC & F&B
- Website with calendar

- Launch activities @ national or regional level
- Groups networking /collaborating
- Strong media coverage
- Beach clean ups and recordings info and feeding back (Sir Peter Blake Trust)
- 'Show & Tell' fr4om your own coastline/beach with experts
- Children presenting to adults/wider community
- Theme is important/focus person – ambassador
- Week focus allows planning ahead & link to world oceans day June 8
- Resource kits is important esp. for schools
- Letter/flyer to principals even b4 resources come out – needs to be bright and obvious
- University market to assist/promote
- Media exposure and theme helps
- New audiences – people who haven't experienced the marine environment
- Younger audiences/pre school etc
- Seaweek logo great
- Marketing, but not necessarily posters
- Timing – early
- Posters – need to fit theme/generate interest
- Promote ownership & connectivity
- Some like creature feature/some don't
- local relevance/local values
- \$ used regionally to develop posters
- Iwi engagement
- Determine age group focus and make resources appropriate
- Extending focus outside schools
- National media coverage
- National spokesperson – loudly – catch attention – TV personality – use TV to raise awareness of what children doing at school – Sports CAFÉ
- 'Mascot' – Cyril Seahorse
- Doing crazy publicity stunts

Regional coordinators

- Awareness raising
- Liaise with regional coordinators and other coordinators
- Input to website
- Inspire groups to get involved
- Feedback to national coordinator
- Evaluating seaweek
- How to kit/guide, including records from previous years e.g. Tanya's guidelines
- Incorp iwi initiatives/encouraging
- Encouraging local action/ideas
- Connecting people – Auckland issue – one coordinator not enough
- Wicked @ delegation collaborative/inclusive 'committee'
- Local launch
- Pre-planning/guidance on what to do ahead of time
- Advise how much time things will take
- Publicity at a local level
- Use existing networks
- Advising dates & activities early
- Usefulness – events on the website
- Communication with in coordinator group no matter how remote
- Know what's expected of me/detail/timing/tasks
- Communication with other coordinators and other interest groups

- Ideas for activities
- ID local interest/ relevance
- Develop organization committee

Events

- Big launch event/closing event
- Big party
- oceanNZ photo competition
- Surf life saving events
- Leigh talk – type events
- Community based event – culminating in a product
- Community beach clean ups – results e.g. Sir Peter Blake Trust records
- University project
- Marine parades
- Marine sustainability expo
- Presentations from students @ Kelly Tarltons for example
- Involving universities – facilities/dive gear (AUT)/beach clean ups
- Prizes
- Action
- Iwi/hapu driven initiatives
- Community snorkel days
- Undersea ‘Creature Ball’
- “weird things from the sea’ expo displays
- Photographic comp
- Roadshows
- Ask operators for discounts during seaweek
- Feature local images
- Use existing events for leverage, e.g. Ocean swim series and other local activities
- Region wide campaigns
- Snorkel days
- Surfing seahorse
- Forum on www.marinenz.org.nz for seaweek
- Corporate lunches or brunches for business people with special guest speakers, proceeds go towards youth leadership prize e.g. in Northland student could win a SCUBA course or sail adventure with the proceeds from the lunch and local sponsorship

NEXT SESSION: Actions activity led by Barbara Breen – individual actions and Vince Kerr – group actions. Fifteen minute brainstorm on actions for the marine environment.

Collective realistic ideas (organisations/groups)
(Host – Vince Kerr)

MinFish – make a shared vision – find out!!

Make a message – one for everyone

Review Fisheries Act

Take Minister of Fisheries on EMR programme

Request current catch information

Media press conference outlining alternative fisheries management to the public

Policy – lobby for revitalization of Oceans Act document or alternative legislation

Politics – support Green Party

Fisheries – have 2 months where we don’t eat fish

DOC – more marine staff – say it's important – bring back education rangers
Go with winning formulas
Go with EMR
Go with local groups
Lobby for return of marine unit

Results – Vince's Group actions shared with group

To rewrite the Fisheries Act – Roger Grace nominated to do this
Develop a shared fisheries vision where all New Zealanders are involved in the development
Publish an annual alternative state of the environment report
Restore a dedicated marine unit within DOC
Have DOC write all the important parts of the fisheries management plan
Use what works, and cease the “reinventing the wheel” type discussions
Raise awareness of programmes such as EMR within central government, such as getting the minister of fisheries in the programme
Expand DOC's role in environmental education so they are in every school
Lobby as a group to key political parties about what is working and what is not working

Making action happen

Sticky note exercise in two groups of 15 mins each, then swap.

Individual realistic ideas (me)

(Host – Barbara Breen)

Goals

- Don't sell out, keep working for the environment
- Drive less, bike more
- Support local businesses that support marine reserves & conservation - buy less stuff
- Be self sufficient, raise family in better environment
- Create a buzz – get people excited about marine conservation
- Get involved with coastal planning issues to influence positive outcomes
- Ooze enthusiasm

Personal/Family

- Raise sustainable kids
- Teach my son to snorkel this summer
- Get my kids switched on to marine conservation
- Take a stand for my family to be aware of the issues facing the marine environment
- I can live sustainably by making informed choices and be a role model to my family
- Teach my children sustainable recreational fishing practises
- I can support marine conservation initiatives
- Write lots of magazine articles on marine conservation
- Not wash cars by the drain
- Pick up litter/fish gear on dive/snorkel
- Donate to marine conservation courses/volunteer
- Shower with a friend
- Reduce runoff from home section to reduce stormwater – impact on sea
- Only catch enough for a feed
- Take my grand kid fishing
- Take part in volunteer activities to support EE activities
- Enjoy the ocean – learning to love and respect the marine environment
- Stop or cut down eating fish
- Only buy sustainable sea food (if it exists)
- Ask my children what sustainable practice they have done this week
- Locally focused energy production

- Reduce personal wastage, e.g. power & water – impact on resource use and demand to use coastal/sea resources
- Volunteer at marine ed centre
- Show friends /flatmates how to preserve water and what to put down the drain
- Live (as much as poss.) off own land
- Look after my space small or large – sustainable management
- Shop for products sustainable
- Support local organizations
- Remove all plastic from the sea
- Public intervention of illegal taking of seafood
- Beach clean ups
- Teach someone how to snorkel
- Experience marine projects and get involved wherever possible so I can better relate to and share that experience with others

Advocacy/networking

- Continue to expose marine related issues through local, national and international media
- Engage community in marine conservation activities
- Talk to MP's more – tell them why/care
- Ask for better product labelling
- Continue to develop connections with those involved in marine conservation and include their work in SEA OUR FUTURE (my course)

General Environmental

- Turn off lights
- Don't support industries that aren't sustainable i.e. buy smart
- Compost
- Don't buy fish from the supermarket
- NEVER buy bottled water
- Op shop
- Take batteries to be disposed of safely
- Attempt to have no plastic weeks
- Recycle
- Use less fossil fuels
- Eco recycle computers and cell phones
- Re-use water
- Buy all set nets and destroy them
- Composting toilets
- Question suppliers when purchasing point /sprays as to effect on the environment
- Take plastic bags back to the super market
- Pick up litter
- Support sustainable businesses
- Paperless offices
- PowerPoint's switched off when not in use
- Biodegradable products
- Use consumer dollar to make eco choices – e.g. bad packaging, food miles etc
- Car pool

Communications

- Spread the word
- Use photography to publicise marine environmental issues
- Have marine education topic on our organization forum
- I will create a contact list that I can use to access people power
- Take time to smell the roses

- Discuss issues more on my blog
- I can take photos of marine life and distribute them to get people intrigued
- Inform people where reserves are and the benefits of them
- Present my PowerPoint on – no-take zones to lots of fishing clubs
- Explain different values of marine protection tools
- Share photo's/ stories
- Provide easy science examples
- Tell one person per week about marine conservation
- Sponsor/encourage art exhibitions with marine conservation themes
- Use my online diving discussion forum to gauge opinion and publicise marine conservation actions and encourage participation
- Spread the message

Research

- Research effects of introduced marine species
- Survey water environs, dive and snorkel, survey beach life, survey, dune life
- Re-start up AUR field club- beach clean ups – dive research
- Need the science to provide the correct info
- Participate I marine research – produce scientific conclusive results
- Conduct valuable research
- Monitor changes in marine environment

Education

- Request (demand) more environmental community education courses
- Encourage wider school community to spend time at marine reserve Take people out snorkelling in new marine reserve in Wellington
- Link up schools/teach at with marine conservation organisations
- Teach young people in schools about marine reserves and their importance
- Pairing schools in NZ with schools in the pacific to learn about their marine reserves
- Pair North island / sth island schools to spread the word about their unique area
- Create a Te Papapa School marine conservation club leading up to EMR
- Create achievement standard around marine monitoring
- Teach/pass down good habits
- Get really organized early this year for next years class programmes
- Take student to beach regularly for 'working bee'
- Teach children more cultural activities around fish, bird, and insects
- Keep encouraging our harbour care group
- Contact spearfishing shops to include an education brochure on sustainable spearfishing with each purchase
- Organise an environmental ed. Hui for youth of my hapu
- Learn more about Maori kaitiakitanga – teach students (urban Maori) about this and the importance of their role
- Use science/ technology - promote action for marine environment
- Have students write letters to various people/organizations and papers

In the environment

- Learn more about the marine environment
- Go overseas and snorkel to learn
- Spend more time in the sea
- Learn something new every day especially the ocean environment

On land

- Grow more natives
- Less pine forests

- Re-plant rivers/streams – sea- coast
 - Replanting eroding river banks
 - Plant more natives
 - Fence and plant riparian zones
 - Advocate 10 whakapapa – korowai, garden of Eden, split flax and plant seed, collect and propagate, work with others, plant trees, gather food from the environment, grow plants for others for preservation of sites
- Barbara's selected individual actions shared with group
- Discuss issues more on my blog – Christy Ralphs
 - Use the consumer power and make choices to influence producers and manufacturers – Pete Crabb. For example stop buying takeaways where bad packaging is used
 - Ask for better product labelling – Kirstie Knowles
 - Raise sustainable kids – Victoria Travers. Her two children are highly aware of the link between what we do on land and how it affects the marine environment
 - Shower with a friend – Pete Crabb who showers with his son.

Reflections on last year's resolutions in this activity that have been acted upon,
 Research MPA policy and make submissions
 Make marine habitat maps for all of Northland
 Keep collecting signatures for the WWF set net ban
 Get the dude (Hone Taumaunu) from Whangara to talk on our programme

All agreed that small things add up collectively. Other ideas raised were;
 Campaign New Zealanders to boycott the fishing industry for 2 months
 Go night diving and slash set nets, form a fish liberation group
 Take photographs of improper activities and send them to the media

FIELD TRIPS

Option 1

Professional development – gain snorkel unit standards – 4383 – Snorkel Dive with Safety and 8296 - instruct clients in Snorkel Diving (7 credits total). For more info contact samara@emr.org.nz



Option 2

Learn about two fantastic environmental education initiatives – the Drains to Harbour stormwater education programme, get wet with the Whitebait Connection programme in the river and stencil a drain or two. Visit and learn about the He Kakano community nursery. Buc explains below some of the traditional uses of natives. For more info contact kim@emr.org.nz



Gourmet BEACH BARBEQUE AND WAIATA

One example of a waiata from around the fire

Leader – Nga iwi e

Everyone- Nga iwi e e karanga e te iwi e,

Leader – Kua eke mai nei

Everyone- Kua eke mai nei ki runga te marae e,

Leader – Mauria mai ra

Everyone- Mauria mai ra e nga mate o te motu e,

Leader - Me nga tini roimata

Everyone- Me nga tini roimata e maringi whanui e,

Leader – Titiro e nga iwi

Everyone- Titiro e nga iwi i nga mahi o te motu hei ora ake nei e,

Leader – Ru ana te whenua

Everyone- Ru ana te whenua whatiwhati te moana

Leader – Aue to aroha

Everyone- Aue te aroha te mamae hi aue



Show and tell

Julia Alabaster – Oceanswatch, www.oceanswatch.org

This is a new organisation established in the last 2 years stemming from the wish to make a difference in the world, starting in the Pacific. OceansWatch is enrolling the yachting community to give something back to the locals, while they are cruising the Pacific. One problem in the Pacific, that needs support, is the damage being done to the coral reefs that the locals rely on for their source of protein. These reefs are threatened by factors including over fishing, sedimentation, climate change and pollution; OceansWatch sees that one solution is to work with the locals and fisheries departments to educate them and monitor the reefs to provide them with data. Tabu areas are a traditional way of managing the fisheries across the Pacific, and so assisting in the setting up of these will support the reefs. Oceanswatch members have and will continue to be trained in the Reef Check Monitoring system and locals are also being trained. In early 2008 Oceanswatch was gifted the use of yacht: Magic Roundabout and an expedition departed for its first season in the Pacific in May, 2008. On board were Reef Check trainers, a marine scientist and a divemaster. Wetsuits were gifted by Dive! Tutukaka to give to the locals. The expedition went to Vanuatu and Papua New Guinea and successfully completed many Reef Check transects and made many connections. OceansWatch now has members all over the world and a branch in North America which has a 90' Schooner. Plans are underway for a solar powered, eco friendly catamaran designed by James Wharran of the UK. Ways you can get involved in OceansWatch are listed on their website. Membership includes newsletters, stickers, education and training opportunities, access to the member's forum and more. The projects for 2009 include more Reef Check surveys, transporting people and materials around the islands, helping fix water and sewerage systems and also looking into the possibility of educational partnerships between Pacific and New Zealand schools.

Vince Kerr – Journey to the remotest places in the Pacific

While starting to learn about coral reefs it is great to start on the Phoenix Islands, a part of the Pacific that has only recently been explored underwater and located in unfished waters. Here in New Zealand we study altered habitats, yet it is still possible in the Pacific to study highly productive, unaffected marine environments. Basic ecology has taught us that biomass and trophic levels adhere to the laws of thermodynamics, and that the greatest biomass will be found at the lowest trophic level, yet this is turned on its head in these undisturbed ecosystems where there are many large fish at the top of the food chain. Coral islands are like a miracle anyway, with the high visibility and low nutrient levels. One species often found in these unfished locales is the Napoleon Wrasse. But, what do the large fish eat? Large old fish have a low metabolism and live for long periods of time while the lower trophic levels have a small biomass and high turnover. Behaviour is also very different; Manta rays and sharks come to get you out of curiosity. These environments urge you to think about all these relationships we don't yet know about and have been lost. Much of the Cook Islands group are highly affected by fishing such as Rarotonga, yet there are still some islands rarely visited within the group such as Suwarro. It is a national park only inhabited in the tourist season. The area is completely protected and includes a 90x36 m lagoon. Visibility is extremely good. Tom Neill wrote a book about his 7 year solitary stay on Suwarro. There are resident mantas in the lagoon. West of Suwarro is Palmerston Atoll, settled by two Europeans in the 1880's who took islander wives. When one of these men died the other, named Bill Masters, took on the widower and her children. Now all the 69 descendants that are found on the island have the last name Masters. The biodiversity of all these islands was extremely high above and below water. Another site studied was on the northern, less visited western part of New Caledonia, the site of the second biggest coral reef on the planet.

By comparing ecosystems that are found in New Zealand waters with these undisturbed areas, it becomes evident that intact ecosystems have less disease and recover the quickest from disturbance.

Day 3

Poor Knights Island Marine Reserve trip on board Perfect Day – Dive Tutukaka



Some parts of the Poor Knights have been protected by Marine Reserve status since 1981, in 1998, all waters surrounding the Knights to 800m were protected by no take status and the results are outstanding, you not only see large snapper and other marine life, but you have the sub-tropical influence of the East Auckland Current. The marine biodiversity encountered at the Knights is hard to match anywhere else. The wonders of the Poor Knights never cease to delight! To organise your trip with Dive! Tutukaka go to www.diving.co.nz

Manta boarding with Vince Kerr and participants test their snorkel instruction skills on real students!



Jeremy & Kelly's snorkel instructor skills are tested with our lovely novice snorkeler – Karen Ferguson, looking very worried in the beginning, but had a great positive experience at the Knights!.



Show & Tell

Kirstie Knowls – Forest & Bird

Screened the new DVD about no-take marine reserves – FISH for the Future – enquiries to Kirstie k.knowles@forestandbird.org.nz

Victoria Travers – Maui dolphin

www.stoptheirextinction.org.nz

Rachel Agnew – **SEA our Future**

Get inspired – Get Motivated – Take Action

SEA our Future is a fun, interactive and educational course designed for divers and snorkelers visiting a New Zealand marine reserve.

Developed by Northland-based diver, Rachel Agnew, and adopted by *The Mountains to Sea Conservation Trust*, the three-hour evening course is designed to help you make the most of your marine reserve experience.

SEA our Future exists to provide you with information about the marine environment you'll experience: what will you see and why, when and how the marine reserve was established, who was involved and what part you will play as visitors to New Zealand waters and in the future.

The course features:

- Presentation from marine conservationists and educators
- Workshops and discussion:
 - o What is a marine reserve?
 - o Why do we need them?
 - o Who's involved?
 - o What do we need to consider for a marine reserve proposal?
 - o How do we propose a marine reserve?
- DVD clips
- Dive in and take action:

- This part of the course is optional but highly recommended. Get involved with marine monitoring at the marine reserve by collecting data on your trip. Ask your course co-ordinator for details.

Learn about marine reserves, engage with those involved in marine conservation, experience it for yourself and then take action!

SEA our Future is a non-profit organisation which supports marine education and conservation initiatives in New Zealand – like Experiencing Marine Reserves so just by coming along, you are helping to grow the accessibility of marine education in New Zealand.

The course is run every Friday night, from 6 – 9pm, at the Dive! Tutukaka training office on Tutukaka Marina and costs just \$25 per person. Additional times and / or group bookings can be scheduled upon request.

Sea our Future – Po Box 5013 Whangarei – 09 433 2729 – 021 922 622 – info@seaourfuture.org.nz

Utopia (ideas on the wall)

- Excellent, captivating and comprehensive understanding of the marine environment and their relationship with it by everyone in the world
- Complaints that the whales are keeping people awake (as in the old days in wellington)
- Rogers crayfish counts grow from 1% to 50%
- Marine reserves cover 50% of our seas
- Our jobs are supporting existing initiatives
- A new ocean ethic
- Network of no-take marine reserves (community led and supported)
- Mermaids?
- Maui's & Hector's dolphins sighted all around the coasts of NZ regularly

Wananga closed with a karakia from Henry Haika, followed by hot chips at Schnappa Rock Café.

For more information and to find out about the 2009 wananga – conference contact info@emr.org.nz

