

Landcare in Action

New Zealand

National Landcare and Catchment Management Conference

February 28-1 March 2012

Trip Report from Australian Landcare Council Attendees

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Rosemary Hill, Kate Andrews, Keelen Mailman and Andrew Stewart

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Report Photos: R. Hill and A. Stewart. From left: Keelen, Kate, Rosemary, Andrew and Jill Stewart



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Key findings

1. New Zealand is investing strongly in collaborative governance of natural resources:

- The [Land and Water Forum](#) is a collaborative approach to sustainable management of water quality and quantity (allocations). The Forum brings together 53 industry, environment, Maori and other non-government organizations, with government involved as observers. Government is committed to implementing solutions that find consensus in the Forum.
- New Zealand has three arms of elected government: Local Government (City/District/Territory Councils); Regional Councils (formed in 1989 by amalgamation of numerous elected boards) and the National Government. Regional Councils' primary roles are in environmental management, and particularly implementation of the *Resource Management Act 1991* (RMA). Provisions for community engagement and legal appeal rights in the RMA led to expensive decade-long adversarial court processes—the LWF is essentially an attempt to break through this approach. LWF is viewed so far as succeeding whereas all believe the previous approach failed.
- Current consideration being given to amalgamating Regional and Local governments, which has already happened in a few places.
- The [NZ Landcare Trust](#), which hosted this Inaugural Landcare in Action Conference, is itself a collaboration between seven industry, environment and Maori organizations that each have representatives on the Board as Trustees. This structure provides for ongoing engagement between farmers, conservationists and recreational users who founded Landcare, both at the senior policy and on-ground action levels—a missing element from our Australian structures. The Landcare Trust attracts substantial government funding support, and was acknowledged by the Environment Minister during the conference as the trail-blazer for the Forum.
- The [Waikato River Authority](#) (this river passes through Hamilton, where the Conference was held) is a newly-established co-governance arrangement between the government (5 representatives) and Iwi (Maori people with custodial rights over the River) (5 representatives). The WRA is a statutory body formed under the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 and the Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010. Settlement includes \$7 million a year for 30 years for river restoration. The WRA oversees implementation of Vision for the Waikato, working broadly across the community. Waikato Regional Council is charged with implementation on a day-to-day basis, in partnership with Iwi.
- Local farmers have now established cooperative rather than private ownership approach to water allocation (see Geoff Crutchley presentation)

2. Landcare in New Zealand is strongly focused on sustainable farming systems:

- Priority to supporting farming innovation and solution generation for social, economic and environmental sustainability, with recognition of vital need for economic outcomes.
- Collaboration was a key theme here too, summarized by one farmer as “key is all working together with practical common sense mixed with science”. Another pointed to the need to move from the “stoic independent” character to a more inter-dependent character.
- Interesting sustainability innovations on display at the Conference included:
 - Transformation of a failing farm through partnerships with Landcare NZ and scientists to introduce a lucerne-based, whole-farm system model, with chain-of-supply, multiple products (see Doug Avery's presentation).
 - Catching farm effluents, using as annual fertilizer across farm, educational function of sustainable farm systems (see Andrew Hayes presentation).
 - Use of native tussock grasses as centre-piece of a sustainable system (see Grant and Bernie Weller presentation).
 - Use of waste from the food production system to produce stock feed (see Andrew Fisher presentation).
- Maori organizations hold a substantial area of farming land – for example, ~15% of New Zealand's milk is produced from Maori-owned lands. Maori farmers are involved in local Landcare initiatives (see Rob McGowan's presentation).

- At the Conference the Minister for Environment acknowledged the trail-blazing collaborative endeavours of Landcare Trust as enabling the creation of the Land and Water Forum

3. Farmers and fishers are working together on ecological restoration with cross-catchment benefits:

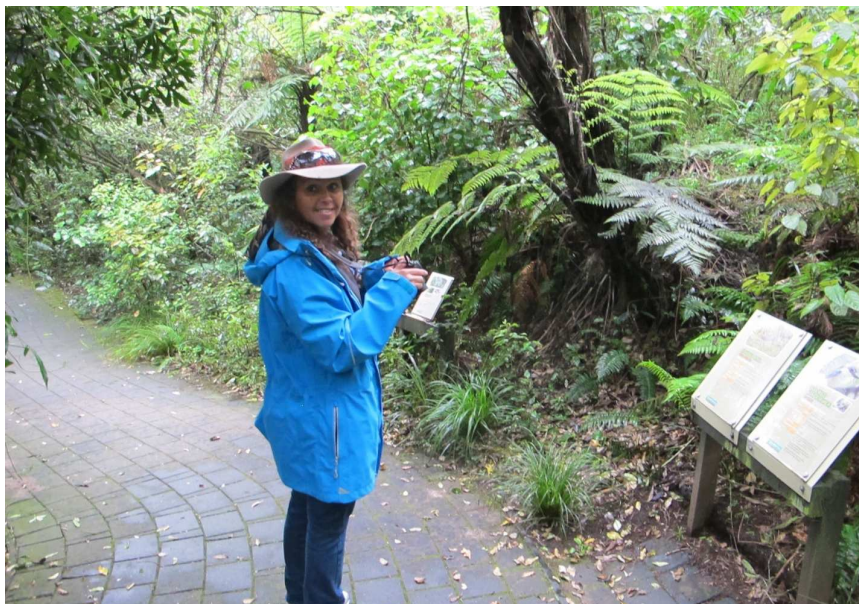
- Appeared to be working more closely than in Australia, partly triggered by Fish & Game NZ running a “dirty dairy” campaign.
- The geographical smallness of New Zealand has meant impacts such as Nitrogen and bacteria effluent from dairy farmers has impacted on both wild-catch and farm-fishers in the same social community.
- Good examples of effluent management have resulted from farmers who acknowledged been forced to confront what they did not want to believe (.e.g their farms were the major source of contaminants, see Sue Brown and Mike Barton presentations)
- Nevertheless, N regulations are in place and seen to play an important role (see Mike Barton presentation)
- Fencing stock out of waterways leading to big recovery in fish stocks (see Fred Litchwark presentation)

4. Ecological restoration focuses on both environment/social aspects, collaboration:

- Some emphasis on returning former conditions Ecologically-sourced seeds with local provenance
- Also mixed uses e.g. bringing back kiwis onto farmland through predator control – chick survival up from 5% to 67% - gradually peer-pressure making uncontrolled dogs unacceptable, shown how they track and kill kiwis (see Todd Hamilton/Helen Moodie presentation)
- Some interest in starting in “novel ecosystems” – for example, [the Northland Totara Working Group gave a presentation](#) about establishment of a sustainable industry from a native tree widely regarded as a weed, the totara
- Simple monitoring of ecological restoration important, primary school kids should be able to do it (see Andrew Sinclair)
- Great story of how people came together to fight a local dump proposal and created a community, now working together to restore local environment (see Rob McGowan)

5. Recognition of Maori rights and interests has stimulated a very strong and growing Maori environmental management presence underpinned by land and financial resources.

- Waikato-Tanui have substantial lands returned to their ownership and financial resources; the Hotel Ibis where we stayed was partially owned by their Corporation, partially by Hamilton City Council and partly by Accor!
- Maori own about half the farms in the Lake Taupo district (see Mike Barton presentation); anecdotally about 15% of NZ milk production comes from Maori-owned farms.



Keelen checking out the birds at the Hamilton Zoo

Field Trip 28 February

Our first afternoon in Hamilton was a delightful Urban Restoration Field Trip organized by NZ Landcare Trust and their partners. We visited six different sites across the city. Lots of interesting ideas and discussions were shared.

Hamilton Halo

The Hamilton Halo is a great community and government initiative bringing people together to create a pest-free twenty kilometer halo around the city to bring back the tui and other native birds and bats. The tui is beautiful nectar-eating bird has been hit hard by rats eating it before it grows up, and by lack of suitable flowering plants. The [Hamilton Halo facebook page](#) has lots of people posting photos of native birds moving back into the city as the native plants expand and the pests decline.

Waikato Regional Council

The [Waikato Regional Council](#) supports Hamilton Halo and lots of other community environment initiatives. This is a third tier of government, sitting in between Local Councils (City/District/Territory Councils) and the



NZ Government. Regional Councils were created in 1989 (under the Local Government Act) by amalgamation of hundreds of elected roads boards, catchment boards, drainage boards, pest control boards, harbour boards, domain and reserve boards. Regional Councils are primarily responsible for environmental management, and have specific functions under the [Resource Management Act 1991](#). In some places, local and regional levels have amalgamated to form “unitary authorities”. Regional and local governments are both funded through rates – two separate rates. For example, one of the people on our trip paid \$2000 to local council and \$250 to regional council on a house worth about \$400,000. Regional and local council elections are held every three years on the same day.

Restoration issues

Lots of great projects are underway to bring back a “pre-European vegetation” with the native fauna.

Bird breeding: Our first stop was at the Hamilton Zoo Free Flight Sanctuary where they were breeding very threatened birds for release. We saw the kokako (type of wattlebird), which now has 700 pairs left, brought back from 400 pairs just a few years ago. We also saw the keruru, (huge native pigeon), the kaka (parrot with a large hooked bill), whio (blue duck) and other birds



Whio (blue duck)

Feral animal control: Poisoning rats with bait in traps was a prime restoration activity. Hares in the parks were killed with a bow and arrow, as firearms are not allowed.

Local provenance: Ecological seed source collected locally for plantings was emphasised.

Andrew and Jill experience what the Kiwis call "slightly overcast"



Poison bait traps for rats made by the Mangaiti Gully Restoration Group.

Peat lake restoration: We saw a peat lake restoration project where they were bringing back five different community types e.g. bog, wetland, semi-swamp, hill forest, and kauri ridge forest. Lots of peat lakes have been drained, and many that are left have been poisoned from too much nitrogen and phosphorous in-flows from surrounding farmlands. The peat lake restoration was started with a Millennium Grant from the NZ Government, and is now supported by City and Regional Council as well as community groups e.g. Waikato Biodiversity Forum holds educational field days there. Local schools also get involved. 400 volunteers from the Latter Day Saints Church helped remove a lot of willow tree weeds.



Peat lake restoration 2004-2011:
bog, wetland, semi-swamp, hill
forest and kauri ridge

Gullies: Four major gully systems dominate Hamilton, and community groups are gradually restoring them. We visited Mangaiti Gully, where local community members had some impressive wetland and forest restoration results after only eighteen months. Mangaiti Gully group had put a lot of effort into making paths by laying down old rubber industrial matting and putting gravel on top; they had also laid wooden walkways and bridges through the bog so they could remove weeds and replant.

Remnants: Jubilee Forest, 5.5 ha remnant forest surrounded by houses, is kept free of weeds by hand-control methods, visitation encouraged with board walks (fenced), buffer plantings around the edges.



Bridge made by the Mangaiti Gully Restoration Group.

Brett at the Mangaiti Gully Restoration site.



Podocarp tree in the Jubilee Forest.



Rain stopped and the sun came out just as soon as we finished the trip and hopped off the bus!!.



Landcare are in Action Conference Day One

29 February

Presentations from the Conference have been posted to the web (<http://www.landcare.org.nz/Conference-followup>). This section of the report contains brief notes taken about the presentations by the attendees.

Welcome George Matthews, Trustee for the Federated Maori Authorities

We are born into the shadow of our parents. We are nurtured in that shadow. We're in the shadow of the people who belong to the land and water, to the Waikato River. We are welcomed into that shadow. We welcome the male and female heads of the Chiefly families that have come here today. Welcome. Especially welcome to the Professor whose facilities we are in. We ask the spirit of god to come amongst us. We are here to do right for the environment from the generosity in your mind. We are here to have a generous, stable open mind with the help of our father.

Prof Roy Crawford VC Hamilton University

Importance of land management, important relationship with science. Focus on sustainability and sustainable development. With Prof Chris Battersley, others, have started a Sustainability Research Institute. Science partnerships with end users are critical. Landcare Trust has a bridging function between people and scientist. Maori reminds people of sustainable legacy and loss. The face of farming is changing. Good to have Ministers here, policy makers need to understand that business as usual is not sustainable either economically, socially or environmentally. We must change.

Richard Thomson. Chair of NZ Landcare Trust Board of Trustees

NZ Landcare Trust started in 1996. A history of acrimony between conservationists and farmers led to Federated Farmers together with Fish and Game suggesting a way people could work together. Landcare Trust was established with 7 trustee organizations, a mixture of environment, farmers, fishers and other groups (see Appendix One). We have the debates, but focus also on what we can do together. Collaboration is now popular. We've been doing it for 16 years. Acknowledge how all the organizations support the Landcare Trust. We do great work on the ground. As trustees we want to do more of this and do it better. Conferences like this are a good way to do it. Acknowledge the support of Ministers over the year, bipartisan, many sided. Not easy for Ministers, they need to know about the organizations, negotiate with their officials, and sell the concept to their colleagues. Major sponsor support is critical. We greatly value and honor our staff.

Nick Edgar. CEO of NZ Landcare Trust

This is our Inaugural Conference., lots of interesting material, including a fashion parade. Our head office is based here on campus. Please visit us. Day one is about achievements at various scales. Day two is about the future. Start with farm scale. Then landcare group scale. Then catchment scale. Then look at how Australian regional bodies work. Round the day off with international perspective. Landcare is now in 16 countries across the globe. Day two looks at nexus between environmental sustainability and economic success. The talks are about collaboration, collaborative partners. Workshops in the afternoon of day two.

Bruce McNab. Session One Chair Federated Farmers representative on the Landcare Trust Board.

- Bruce introduced the three stories from innovative, solutions-focused people.

Doug Avery. Beyond reasonable drought – the transformational story of Bonavaree farm

- Farm location poses some challenges, next door neighbors make salt.
- Ran into drought, 17 years with below average rain by 2004 terrible land degradation. In 1998 value leaving farm 320k, costs 320k to produce. Farmers are not the problem, we are the solution.
- Turned around to focus on sustainability NZ Landcare trust helped us. Challenged to develop a new farming system that delivers sustainability.
- Divided year into 3 sections. Dec to Feb is high risk; recovery period follows, then harvest.
- Used summer fallow, changed plants and the genetic of the stock. Spray land in middle of spring, save 80 % of the water and planted crops like Lucerne.
- Lucerne brought fast animal growth, natural N fixation, early rumen development, deep water storage, new levels of fertility. Preferred pasture mix of lucerne, plantain and prairie grass. Tagasaste established for fodder and to attract bumble bees to pollinate lucerne.
- Salt bush planted on some of the hills, brought bees that then pollinate the Lucerne. Have areas set aside for biodiversity.
- Involved in the Farm IQ model, creating value chains and links from the consumer back to the farm.
- Bonavaree mixed earning now total more than \$2 million, on the way to putting 59 ha aside for conservation. Keys to our success
 - Manage soil and water
 - Plant crops/pastures selected for site
 - Collaborate with others and scientists
 - Start with the man in the mirror.
 - Vision and action together can change the world.
- Doug struggled with he and his wife working very long hours to implement lucerne-based farming system, wasn't until Landcare NZ Trust came along to help them they were able to implement transformational farm.

Andrew Hayes. Restoring peat lakes

- Waikato. Prime sheep area, more than 39 farms.
- Lakeland farms, bought in 1981. 3 lakes. Lakes choked with silt and willows.
- 1981 was 4 meters deep, by 1998 down to 1 m, mainly from sands off other properties.
- Formed a Landcare group. Dropped willows, poisoned stumps. Took us about 200 hours a year to maintain at first, now down to 30. Willow seed only lasts 5 hours on the ground, not too hard to eliminate.
- Now 16 ha of buffer zones around lakes sediments traps on the inflows. Now have floating wetlands. Wildlife has come back, ducks, birds, common and uncommon species, insects, fish.
- People side - lots of people have come to the farm to learn, farmers field days, uni students, politicians, David Bellamy.
- Farm now under whole farm management and environment plan. Truckloads of silt trap taken from the silt trap every year.
- Managing nutrients. Test 3 times a year.
- Effluent goes over the farm, effluent spreader takes one year to cover the farm.
- Precision decisions. Long pasture rotations. Healthy soils. Used to be no earthworms, now have lots. Only drench cattle once a year. Getting less use of fertilizer and better refunds.
- Key is all working together with practical common sense mixed with science.

Grant and Bernie Weller. A family's commitment and attachment to the land.

- Winners of the Balance Farm Environment Award.
- 890ha given to their dad as a returned soldier. Fencing sympathetically with stock. Forests were large, now gone but we have some regenerated bush area with some big tree. Have put covenants on some of the bush blocks. Became involved with DEC and Landcare Trust identifying plants.
- Open tussock land is the centre of our farming system. We had a skink field day. Found many skinks and geckos. Ordinarity combined with respect for the business.
- Stock classes, high pasture cover, retaining tussock and rocks allows us to hold water and nutrients. Tussocks protect clovers from hot winds. Tussocks have played a vital role in resilience in the face of climate change.
- Worked together with professional farm advisors, was crucial in achieving our goals.
- Communication is and was the key.
- Every generation has challenges in owning and running a farm, but the family farm will remain the backbone of farming throughout New Zealand.
-

Discussion from the first session

Bruce McNab: as a farmer myself I was secretive; we need to change the mindset from this stoic independent model, and communicate to other what you are doing on the farm. First change is to change farmers' mindset and get them to engage willingly with their local community. Farmers were subsidized for many years, removed in 1987, very difficult years. Some people are not up to the cut, brightest people haven't stayed on the farm, you need to have that open door so people can start learning from it. We open our farm, talk about the integrated farm system.

Some other points made: People respond to success, farmers nearby will notice. Environment awards are a good way of getting people involved, sharing their farm. It's about working all together, don't use the big stick too much. Doesn't work where farmers alienate themselves, need to collaborate. Need to get all parties together and engage. Need solution-enquiry. Green NGOs sometimes use emotive language, need factual cases and being open to the other view.



Peak Lake restoration project near Hamilton

Helen Moodie and Todd Hamilton. Whangerie Heads Landcare Forum.

- 6000 ha, sheep, beef, lifestyle, seaside villages. Network of groups doing lots of sustainability stuff.
- Lots of work in bringing kiwis back from 80 to more than 400 through predator management.
- Stoats only worry kiwi chicks. Put out a predator trap network.
- Majority of kiwis are on private land. Up to 69% of chicks now surviving, up from about 5%.
- Now bringing in and releasing kiwis. Great because people get to see an alive wild kiwi.
- Monitoring was one of the conditions on the transfer permit.
- Found out that the kiwi moved a lot, tens of kilometers. They use the exotic forest, farmland and gorse bush. Dogs track and kill kiwis.
- One-on-one with owners of the land on dog control. Put out signs to get the whole district involved, find out there are kiwi there, they came in droves.
- Kiwi release engages people, seeing is believing. Talking to the regional council and district council.
- Kiwis can't sustain all farmland being chopped up with dogs.
- Future subdivisions need to be dog free.
- Landcare Forum acts as a distiller of lessons
- Credibility - science, common sense, longevity, monitoring and reporting.
- Got a report of how to do it done first. Now have a Biodiversity Advice Fund
- Funding - multiple sources. Challenging. Many just want to seed projects. Sponsorships, sales.
- Partnerships - northland kiwi groups, friend-raising, not just fund raising. Agencies
- Engage the people - he tangata, so people are involved and caring.
- Hundreds of cups of tea in paddocks, people start tying up their dogs. They are not greenies, but it's cool to have a kiwi in your back yard.
- Peer pressure gradually making uncontrolled dog unacceptable. Don't tell people what to do. The signs don't tell people what to do, they tell them what we are doing and invite help
- Challenges
 - Complacency - of dog owners, of people
 - Avoiding being seen as green police - diversity in the forum helps
 - Burnout - frequent in volunteer groups, but we get help through the forum
- We are winning. Principles we use can work elsewhere. Social roles, getting people to act because they care, technical information is necessary but of no use without the right relationships with the people involved.

Andrew Sinclair and Eli Evans – Simple Monitoring by Whakaupoko Landcare.

- Lot of Landcare driven by government funding and regional councils. Lot of NZ structures are top-down, we need more bottom up.
- Just near mouth of Waikato river. 18% of NZ is native forest, cf Japan with 60%. In my area 1.8%. One of the first sites of the Maori land wars, not many left in the area.
- Taraire ere (trees) almost dead from stock grazing around them and possums. Possum control and fencing fixed this. 5000 possums dead, had a cake celebration.
- Deer eat all the planted trees, also removed them, think long term to be effective
- Initiative opportunity funding good, but no ongoing core funding
- Volunteer efforts. Limited time.
- Monitoring has to be simple, and lead to feedback for finders and the community. Also an awareness tool. Being able to display positive trends leads to support.
- Revegetation - photos over time
- Birds simplified 5 minute bird count of key indicator species. Brought back kereru. Have an app whatbirdnz. No entry barrier. From with birds down one side and boxes to put numbers in. Have seasonal troughs and small upward trend. Tui large upward trend. Fantail trending down.

- Pests chew cards, sample of total survey. Peanut butter on cards. Monitoring 276 sites. Cheap and easy to use. By 2011 49% of sites pest free.
- Taraire berries is what pigeons like best, so plant taraire and other food species.
- Best ideas for monitoring
 - Fine tune procedures.
 - Web friendly and attractive data
 - Benchmark is that primary school children should be able to do it
 - Spread the word nationally.

Robert McGowan. Nga Whenui Rahui and Waitao-Kaiate Environ. Group

- Welcome Bay Story. Networks that work together to care for the Whitetail River.
- Starts with the Icoai iwi ngati puke ga loss of mahinga kai loss of water quality. So started river monitoring. Talked to local people about what the river was like before, got some funding.
- Worked in Maori owned land. Snails were coming back. But general community wasn't involved.
- Then in 2006 an application was put in for a rubbish dump just up the road from where the work had been done by iwi. Community came together to lodge objections to the dump. Used monitoring data. After a long time the application was withdrawn - the site was subject to regular flooding.
- Rebirth of the local community, not just people who lived along the same road.
- Learnt from the older people that it used to be a community, people used to know each other, have picnics etc. The Landcare trust brought people together, we accessed resources from the councils. Started plantings, beginnings of the Waitao-Kaiate Group.
- Re-established the local picnic on Waitangi day. Realized we needed to start growing on our plants, so set up a nursery, have planting days. Have cups of tea after, that's where we become a community. Started a kids group.
- Key considerations
 - A sense of urgency over the dump got us started, everyone is incredibly busy
 - Only when personally affected does it move us, despite all the stories of global warming etc we feel powerless, iwi were aware but we weren't listening.
 - Loneliness is one of the biggest sicknesses, people living in their own worlds with people right next to them -we can only change this by caring with the people around us. Need to share the vision. Have Landcare field days -we like to be encouraged, not told what to do.
 - Farmers are among our most active members, once the farmers come on board you are really onto a winner, they can see the results. Still have a long way to go, need to learn about the rhythms of the local environment, each little valley is different, it's about the knowledge of the people living on the land, from the land, we build up by actually becoming totally involved with it, we have to learn this so we can care for it better. We really come to love the place. We are all really busy at other things so we minimize all the structures.
 - We meet at the nursery, so busy people are not tied up by unimportant things and we can put our energy into the land, and can teach our children, we are still not working closely enough with iwi, they called a meeting about young people being killed on our road and no one turned up. We want our kids to be able to play in the bush and swim in the creeks, and eat berries that are full of anti-oxidants.

Discussion from the second session, lunch

Some focus on issues around lack of opportunity for young people to become involved. How do we convert the passion and energy of young people into opportunities for work – have Ranger programs, but not enough funding to meet the needs. We need a political solution, to create opportunities to involve the youth. Maori places for cadetships as Rangers. Used to be a very good thing, lots of competition, training and a job afterwards. Now iwi are required to sponsor cadets about 10 k each. Funds are contracting.

Sue Brown. Aorere Catchment Group.

- Kahurangi Aorere River. Farming permits in the inlet for mussels. Ruatariwha.
- We are dairy farmers, cooperative traditions to build on. 33 farms.
- Bacteria is the water quality issue—Identification of bovine e coli as the key problem.
- NZ Landcare Nick, Jodie, Barbara. Cross boundary organization extraordinaire.
- They drive us by collaboration, what we could do, not what we should do.
- Aorere plume model. Nitrogen sediment and faecal coliforms. But we did not have nutrient problem. Mussel beds were positioned close to the land, because that was the least objected to site in a 22 week court.
- Best management practices: farmers of top, experts on tap.
- Stock fenced out, adequate effluent storage. Low rate of application of effluent onto farm. Confidential farm plans between NZ Landcare Trust and the farmer, allowed honesty. Mussel farmers were stoked
- Took farmers out to sea. Real discussion happens after the meeting. Extended to the rai valley.
- We need organizations who can take that brokering role in each catchment eg. Landcare Trust.

Geoff Crutchley. Community Management of Water Allocation, Taieri River.

- Very dry 350 mm pa. East coast between Dunedin and Christchurch.
- Community ownership and management of water rights in the irrigation scheme. Not new agreed in 73. Commissioned in 83. Budget blew out. Parliament came for an inspection.
- Suggested sell the scheme to the farmers. No way will we sell a 30 million public asset to farmers. 5 years later we bought it for one dollar.
- Rabbit control is huge issue for us. We put together a company and took over the rabbit management. Has worked well.
- Faced with losing our hospital, we bought it, biggest shareholder is our irrigation company.
- Now looking at taking over water, we have group permits, so converting to cooperative management is no big deal. Asking them to give up what they deemed to be a chattel.
- Upper Taieri Water Management Group. Started in 2001 as a trust, new structure 2006. Now negotiating supply issues.
- Our CEO woman has honors degree in law and masters in planning. Woman studied relationship between water quality and community health.
- Brought everyone together fisherman, environmentalists, farmers, canoeists set up the trust. Objectives to foster relationships, get efficient water use, smooth allocations. Achieved most of those.
- Done lots of work, monitoring and modeling flows, transiting to group membership rather than private water rights. Big shift in thinking for farmers working through the issues for group sharing.
- Future - new approach to water quality.
- None owns water, it belongs to the community, we have an obligation that comes from using it to return benefits to the community.
- Large investment groups see a large opportunity wherever there is water. Money talks, effect on land use is not good. Buy it from an irrigation company. Need to engage with these companies.

Fred Litchwark. Whaingaroa Harbourcare.

- 90% of water ways were un-fenced. Cattle trampling out onto mud flats, destroying marine fishery. Dead sheep and cows.
- As a community we decided to assist our farmers to stop silt getting into the harbor.
- Grew trees, but no farmers wanted them planted.

- Decided to work on a public land. Started a committee, got some farmers on board.
- 350km of fence, about one third of what needs to be done, after fencing went from 90% fish dead to 90% successful recruitment, reduced stock lost in weed areas. increased pasture quality etc.
- Developers are putting in storm water retention and cleansing ponds to improve water quality. Mangroves appear when mud has moved down the inlet, we now have mussels and cockles, as well as sea grass.
- Fish now back. One of the best fisheries in the country due to all that riparian work.
- Launched Ecotourist Boat and the killer whales came. We have completely restored our harbor.
- Clean streams, clean harbours, clean green NZ and great economies.



Mal Brown and Darren Williams. West Gippsland CMA.

- Brief Australian history
 - 1986 first Landcare group
 - 1994 Victorian Catchment Mgt Authorities
 - 1989 NFF ACF Decade of Landcare
 - 2000-10 Consolidation of Landcare into nrm boards
- 160 landcare groups in his region. 6 networks, 8 landcare facilitators. Lots of floods last couple of years.
- Advisory Committee meets monthly, have two Indigenous Coordinators.
- AC advise board. Landcare devolved grants scheme.
- Emerging issues
 - Getting young people
 - Volunteer burnout
 - Group reporting
 - Funding cycle
 - How to get native grasses into our farm systems.
- Kids getting nature deficit disorder.
- Landcare is all about collaboration. Bowl of spaghetti you can't say how it works.
- Need something in common. Respect, trust reciprocity are essential ingredients.
- Make planning relevant.
- People first. Facilitative leadership. Engaging appropriately, valuing local knowledge and wisdom, ensuring an ownership legacy.
- Planning needs to hit the ground at some stage. Landcare is big in fire flood and drought. Good brokering organisation.

Andrew Stewart and Brett de Hayr. Australian Experiences.

Andrew Stewart presented about issues:

- Water quality, salinisation, die-back, water logging and erosion. Not a sustainable farming system
- What they did
 - Whole farm plan – land class subdivision. Integrated agro-forestry and biodiverse plantings along landclass boundaries and drainage lines with connections to form wildlife corridors.. Containment paddocks. 23 km interface of trees with pasture provides multiple values including protection of soil, pasture and livestock. Fencing out dams. Protecting

- remnants. Shelterbelts for stock. Seed orchard. Banskia and native food project around a dam. Attract pollinators. Farm integrated with a local catchment plan.
 - Social events – family tree planting. Social benefits:- family cohesion, health, better work and recreational environment.. Networks for site visit programs and peer group mentoring.
 - Gone from 3% vegetated to 17% vegetated.
 - Links – carbon neutral farming system.
- Key messages
 - Landcare should be above politics:- bipartisan political support is needed
 - Bridge the urban-rural divide to raise awareness and support for landcare
 - Engage young people with landcare by creative use of the arts (eg. music/festivals) and social media. Attract the youngest and brightest.
 - Bring science down to earth and actively engage landowners and land managers
 - Support and strengthen the regional delivery model (CMA's) but don't let them take over
 - Encourage and support innovative and creative extension programs
 - Celebrate achievements of Landcare and engage the latest technology to monitor progress and develop an evidence based case for productive Landcare
 - Then lobby politicians/treasury other potential funders and the public
 - Landcare is about people, fellowship and trust – it is a social movement and this should be the focus of the investment
 - Landcare must be flexible and adaptable to the diversity of landowner interests
 - Locals have the motivation and knowledge to identify issues and determine solutions but need support
 - Focus on Landcares' potential to deliver multiple outcomes including enhancement of agricultural production to balance conservation with profit.

Brett de Hayr—governments grappling with

- Food security
- Maintaining, enhancing environment
- Reduce emissions increase sequestration
- With less water, fuel, more people.
- 9 billion people
 - Produce as much food over the next 50 years as we have over the last 500
 - But green revolution based on fossil fuels, opening new areas to production.
- Need big changes in government and society.
 - Landcare could be part of a solution because it could deal with multiple issues
 - Landcare movement – includes lots of different groups, support structures
- Social movement
 - amorphous, hard to focus, hard to kill
 - Cannot be controlled or represented
 - Challenge how to link it and give it a shared sense of purpose
 - Social benefit apparent in natural disasters and stresses on community, bushfires, decadal drought, floods in Qld and NSW.
- Society has changed
 - Urbanisation
 - Social media
 - Decline of volunteering
- Opportunities
 - Carbon market
 - Biodiversity fund
 - Future of CfoC to be announced.
 - Input costs going up, people interested in soil carbon, reduction in carbon intensive production
- What role will landcare have?

- What is the vision?
- People are both the problem and the solution
- More than a tree-planting movement
- Extremely diverse, challenge and opportunity
- Could address multiple issues of national, local and global issues
- Some want to see it change, others want to leave it frozen in the original model.
- More cooperation and sharing could help us find the answers.

Rob Youl. Australian Landcare International

Many trips to NZ. What he shows visitors to Australia:

- Facilitators – competent people everywhere organising
- Networks – share resources
- Science – direction collaborations
- Consultations – expected, could be better
- Bold concepts – Habitat 141, Gondwanalink
- Enterprise – Landcare run as community enterprises
- All types of people, but lots of geriatrics.
- Production – extended conservation farming, marketing Envirobeef
- Wildlife – conservation management network within landcare promoting wildlife habitat
- Water – group across a catchment
- Climate change – we can offer ideas, learn from kiwis
- Corporate involvement, marketing, shopping bag
- City-country connection
- Youth team, e.g. Bass coast
- International outlook.

Landcare in Germany

- Formed 6 months before Landcare in Victoria
- Aimed at preserving ancient farming systems and wildlife habitat
- Landschaftsflegerverband – landscape care organisation.
- Cutting and burning bush instead of planting trees

African Landcare network

- Nigeria, Ethiopia, Kenya, Tanzania etc.
- South Africa – community work on farms, some pretty severe erosion problems
- Junior landcare very strong.
- 1997, Africans came out. Launched as top-down, now very strong.
- People sharing information.
- Lots of efforts helping farmers to improve productivity through trees, agroforestry

Landcare in the Phillipines

- Contour planting of crops and trees to reduce erosion

Indonesia

- Slopes of a mountain – trying to stop hillslope erosion.

Landcare USA

- Community sustainability centre from an old mental institution. Trying to localise agriculture again.
- Farm forestry groups.

Landcare Sri Lanka

- Composting pit in the tea plantations

Landcare Iceland

- One third of all farmers involved
- All erosion culture.

Starting in lots of other places, two groups in Fiji, Canada, Japan, India, Bangladesh, Pakistan, EU network ,
International Year of Landcare.

Landcare in Action Conference Day Two

1 March 2012

Dr Nick Smith, Minister for Environment

- The Minister for Environment, Dr Nick acknowledged the trail blazing work of the Landcare Trust that has enabled the work at a national level of the Land and Water Forum (LWF). The NZ Government views the LWF as the critical new approach for putting land and water use on a sustainable footing. Key reasons
 - Recognized poorly served by the highly polarized arguments, we need to get parties to work together to find solutions.
 - Need to reward those that bring people together, not those that polarize.
 - Stronger degree of leadership required at the national level, clear central government direction. Resource Management Act too devolved.
 - Annual Blue-Green Forum this Sunday from which will come the Government's new 3 year agenda.
- Key priority on marine environment
 - 650 million ha of sea country;
 - Need to pass laws for assessing environmental impact;
 - Governments need an independent regulator separate from the one promoting gas and oil development
 - New environment reporting act to improve integrity of NZ as a nation with clean green industry; only OECD country without this.
 - Will undertake 5 year State of Environment report; authored by the Parliamentary Commissioner for the Environment in an auditor role
 - Improving the management of fresh water is also critical for marine environments.
- Fresh start for fresh water.
 - First eighteen years of RMA delivered on 2 national policies.
 - Consent processes under the Act now improved, down from 80% late to 20% late; National Protection Authority now approves major projects within 9 months.
 - LWF produced consensus across 51 groups produced a common view on fresh water management
 - Context of increasing competition for water; one third of lakes and a fifth of rivers are polluted; climate projections see drier areas on coast; current system inefficient, big delays in the system; about half of rivers have allocation plans but only 20% have water quality plans
 - LWF reports due in April on the process of setting limits for water use and water quality on the rivers
- What is the role of the community?
 - Nitrogen trading going on in Taupo basins – NZ showing world leadership in collaboration and community financing mechanisms
 - Technological innovation e.g. recycled coke bottles being used to pull out pollution from water bodies Government will support projects that involve community parties, including local iwi.
 - Will there be more money? Very tight fiscal times. Shifting funds into collaboration and on ground works, and out of legal disputes
- Future of regional and local government
 - No final decision. Auckland unification poses a challenge to two-level system
 - Unitary model offers some efficiency, water quality and water quantity needs coordinated mechanism.

Parliamentary Commissioner for the Environment. Dr Jan Wright

- Works for Parliament as a whole, not for the government. Like the auditor and the ombudsman.
 - Writes report e.g. recent report on 1080.
 - Makes submissions on matters e.g. Legislation.
- Later this month releasing a report on the science of water quality.
 - Aim of the water quality report is educational, no recommendations.
 - Context of concern about the town and country finger pointing on water quality (Fish and Game campaign on “dirty dairy”)
 - Started with the history of water quality.
- Big three national water quality issues
 - Pathogens - bacteria and viruses
 - Sediment - particles of soil and rock
 - Nutrients - nitrogen and phosphorous
 - Recognizes local/regional specific pollutant issues e.g. heavy metals, pesticides
- Three issues are often conflated
 - Blue-green algae occur when there is too much nitrogen and phosphorous, which is in turn caused by siltation. They are cyano-bacteria but use oxygen like plants.
- Maori views
 - Ko au te awa
 - Ko te awa ko au
 - I am the river and the river is me.
- Changes to land use meant changes to water quality.
 - Pathogens triggered first public water quality concerns
 - Gold rush. Typhoid. Sewage, night soil dumped near the water supply for the city. Piped sewage in 1906. Increasing numbers of inland towns now spraying effluent, many farms.
- Sediment triggered next water quality concern, legacy of high silt loads continues today - high pressure water hoses into the river. Legal declaration of rivers becoming sludge channels. Miners had more rights than farmers over rivers. Flax industry put a lot of rotting plant material into the river. Refrigeration brought export industry. Felling and burning of forest. Soldier settler schemes led to clearing on the hills. Sediment filled rivers. Major source of phosphorous into rivers is still sediment.
- Current concern is on N and P. Recipe for algae N and P (from sediment) and carbon dioxide and sunlight. Science is about cause and effect. No need for more science to establish link between land use change and the condition of the lake. Science doesn't tell us what to do, or how to make trade-offs. Science can help inform effective collaboration.

Matthew Reddy. International River Foundation.

- Integrated river basin management.
 - Going about ten years.
 - Mainly in Africa, central and south America, northern China,
- 7 habits of a successful river basin
 - Shared vision
 - Science
 - Collaboration
 - Funding
 - Support for natural processes and less for hard infrastructure
 - Political and institutional frameworks from soft approaches like education to regulation
 - Celebrating success and achievements
- Thames

- Used as an industrial drain. Now lots of hard infrastructure. Fencing off a river buffer. Daylighting the river.
- Upland basin restoration. Letting nature do the work.
- Danube
 - From Austria and Germany through Romania etc. in total crosses 8 European Union nations and 6 non-EU nations. Danube River Commission Mekong River Commission has similar multi-jurisdictional arrangements. Collaboration is the key. 21 stakeholders are involved as observers. Takes a lot of work to get that shared vision.
 - Policy institutions and governance -book on the EU framework, worth looking at
- Kenya.
 - Immense pollution problems – rivers jammed with plastic bags full of poo.
 - Working with people on "twinning" river basins
- What next
 - Market-based instruments e.g. Salinity trading
 - Collaboration
 - Collaborative research into adaptive management.
- Status of IRBM in New Zealand.
- Is the Landcare model key to successful IRBM?

Paul Quinlan Northland Totara Working Group

- Promoting the management of a naturally regenerating forest resource for commercial timber production.
 - Quantify resource, trial for growth rate, timber quality, supply chain, policy impediments.
 - Coordinated by the NZ Landcare trust and funded by the sustainable farming fund.
 - Farmers being encouraged to integrate trees into their farms.
 - Reconceptualise a weed into an asset
 - Moving away from the tradition of spatial separation of production and conservation.
- Totara ideal tree.
 - Likes steep slopes and poor pastures.
 - Regrowth everywhere, seen as a weed - re-conceptualise as a unique native forest type.
 - Thinning and pruning really increased the growth rates.
 - Regenerates as hundreds of poles close together
 - Assessed supply in a sub-region 105000 ha. Good opportunities for improvement.
- Forest Act applies to milling of naturally regenerated Totara.
 - Have now logged using continuous cover practices in compliance with the Forest Act.
 - Surveyed people about Totara wood quality, good feedback despite much larger proportion of sap wood
 - Still revered by Maori and used.
- Commodity markets are the biggest drivers of our rural land use. Real challenge is to try to get markets to shape land use for the better.

Mike Barton. Beefing up in Taupo

- 12 years of social change.
 - Capping nitrogen emissions from farms in Taupo
 - Analysis of the NZ farming business model.
- Lake Taupo is one of the cleanest lakes in the world.
 - Production forestry on one side -plantation pine.
 - Also native forest then tussock.
 - Upper Whangenui river diverted to Lake Taupo.
 - Only 20% of catchment is farmland.
- Large farm-scale trial of capping nitrogen.

- Issue is stock urine. It is a simple function of numbers of stock.
 - Became aware of the issue in 2000.
 - Formed a Cooperative Society to represent farmers, including Maori organisations (own about half the farms)
- Forced to face unwelcome facts
 - Native forest leaches about 3 kg a ha, same for plantations.
 - Sheep farm about 17 kgs,
 - Dairy farms about 55 kgs.
 - Farming emits 93% of the manageable nitrogen entering the lake.
 - 7 % from urban.
- Land values are now defined by nitrogen discharge allowances and nitrogen management plans.
 - Cap on nitrogen is effectively cap on stock rates and farm incomes
 - Science informed early stages but social and political drivers dominated later stages.
 - Environment court forced parties to negotiate and settle but there has to be a better way!

Andrew Fisher, Eco-Stock Supplies

- Andrew described his business built on recovering waste from the food supply system (out of date packages etc.). Nothing post-usage, because of large range of health issues.
- Now supplying ~10% of feed supplement – much of rest is coming from imported corn.
- See his presentation online

Andrew Bruere. Bay of Plenty Regional Council.

- Wai Care? The Road to Restoring the Rotorua Lakes.
- Notes not taken, see on line presentation

Mike Scarsbrook. Dairy NZ.

- Dairying and the Environment: Crisis or Crossroads in Sustainable Supply?
- Notes not taken, see online presentation

Ian Smith, National Manager Conservation Volunteers New Zealand.

- The Conservation Crusaders: Why Volunteering Makes Cents.
- Notes not taken, see online presentation

Partnerships are key to Landcare in NZ



Coastcare is also part of Landcare in NZ

Feedback from Working Groups at the Closing Plenary Session

Although topics for the small group workshops had been pre-determined, the members of the ALC Indigenous Working Group initiated a workshop session to discuss Indigenous peoples' involvement in Landcare with the participation of Robert McGowan, Nga Whenui Rahui and Waitao-Kaiate Environment Group. The session was titled **Tangata Whenua** (Maori for People of the Land)—about 10 people participated in the small group. The group discussed the possible role of Landcare and what we could do.

Possible role of landcare –

- Catalyst for change
- Bridge between culture and types of knowledge
- A safe space/forum for coming together and learning
- Help provide access to white owned land for looking after

What can we do?

- Start a dialogue
 - o Ask people “what do you want?”
 - o Listen to people
 - o Learn local history to understand (and be humbled)
 - o Have our heart in it
- Employ Maori staff
- Value traditional knowledge and the deep knowledge of older people
- Co-governance models such as the Waikato River Authority through to local grass roots scale.

Keelen reported back to the plenary session on the workshop findings with Rob.

Possible follow-up

Members of the ALC IWG met a range of key individuals with whom we would like to maintain contact and share information and ideas.

For example the Co-governance model that has been established for the Waikato River, as discussed in the key findings above, is an inspiring example from NZ that may inform existing or new models for co-governance in Australia. As a co-governance body the Waikato River Authority appears to be empowering, providing both decision-making power and resources to the parties involved, but centered around the shared and agreed Vision and Strategy.

Additionally there is interesting work underway in regard to Maori Traditional medicine and contemporary uses, and with regard to Intellectual Property of Maori and how this can be protected.

Appendix One: NZ Land and Water Forum

Spoke with the Chair of the Land and Water Forum, Alistair Bisley.

- Collaborative process started by the organizations themselves.
- Conference run every year by the Environmental Defenders, focused on conflict, brought together most of the players locked in decadal legal disputes, agreed to try another approach, started a working group from the floor of the Conference
- Invited Alistair to chair, he is a retired diplomat. Spent some time getting the membership right, brought the government along as observers. Probably not enough of the public service on board for first round, have now increased the engagement
- Definitely has cut through.

The [Land and Water Forum](#) brings together a range of industry groups, electricity generators, environmental and recreational NGOs, iwi, scientists, and other organisations with a stake in freshwater and land management. They are joined by central and local government observers in developing a common direction for freshwater management in New Zealand and provide advice to the Government.

The Forum's objective is to develop a shared vision and a common way forward among all those with an interest in water, through a stakeholder-led collaborative process.

The Land and Water Forum is the trading name for the [Land and Water Trust](#). A [Small Group](#), with representatives from 21 organisations, meets on a monthly basis and reports to the [Plenary](#), which has a membership of 62 organisations. The Small Group is joined by [active observers from local and central government](#). The Land and Water Forum members are assisted in their work by a [Secretariat](#).

The Forum's Process

The first phase of the Forum's work lasted from August 2009 to August 2010 and resulted in the report [A Fresh Start for Freshwater](#), which identifies a set of outcomes and goals for freshwater management and recommends a number of policy changes to achieve those. [Public meetings](#) to discuss the Forum's Report were held around the country at the end of 2010 and the beginning of 2011.

The government issued a response to the Forum's recommendations in September 2011, and asked that it carries on its consensus-building work and come up with recommendations on the methods, tools and governance processes required for setting and managing limits on water quality and quantity.

The Land and Water Forum will report to Government in the course of 2012, first on a general framework for setting limits, including the governance arrangements which would ensure the successful involvement of all stakeholders and in particular of iwi, and second on the methods and strategies required to achieve and manage those limits, through better land use management and improved allocation mechanisms.

Plenary Organisations

Aqualinc Research Ltd
Ballance Agri-Nutrients
Beef + Lamb New Zealand
Business NZ
Carter Holt Harvey Ltd
Contact Energy
CPG New Zealand
DairyNZ
ECO
Ecologic
Environmental Defence Society
Federated Farmers
Federated Mountain Clubs of NZ
FertResearch
Fish and Game New Zealand
Fonterra
Forest and Bird
Foundation for Arable Research
Genesis Energy
Horticulture New Zealand
Ihutai Trust
Ingenium
Institution of Professional Engineers New Zealand
Irrigation New Zealand
Landcare Trust
Lincoln University
Massey University
Meridian Energy
Mighty River Power
MWH
National Institute of Water and Atmospheric Research
NZ Farm Forestry Association
NZ Forest Owners Association
NZ Institute of Forestry
NZ Winegrowers
Opus International Consultants Ltd
PGG Wrightson
Straterra Inc
Te Arawa Lakes Trust
Te Runanga o Ngai Tahu
Tourism Industry Association
TrustPower
Tuwharetoa Maori Trust Board
Waikato River Authority
Waikato-Tainui

Watercare Services Limited
Water New Zealand
Water Rights Trust
Whanganui River Maori Trust
Whitewater New Zealand
Wood Processors Association of New Zealand
Zespri

Small Group Organisations

Beef + Lamb New Zealand
DairyNZ
Ecologic
Environmental Defence Society
Federated Farmers
Fish and Game New Zealand
Fonterra
Forest and Bird
Horticulture New Zealand
Irrigation New Zealand
Meridian Energy
Mighty River Power
National Institute of Water and Atmospheric Research
NZ Forest Owners Association
Te Arawa Lakes Trust
Te Runanga o Ngai Tahu
Tuwharetoa Maori Trust Board
Waikato-Tainui
Water New Zealand
Whanganui River Maori Trust Board
Whitewater New Zealand

Central and Local Government Active Observers

Auckland Council
Department of Conservation
Department of Internal Affairs
Environment Canterbury
Environment Waikato
Hawkes Bay Regional Council
Ministry for the Environment
Ministry of Agriculture and Forestry
Ministry of Science and Innovation
Tasman District Council
Treasury

Appendix Two New Zealand Landcare Trust

NZ Landcare Trust works with farmers, landowners and community groups to improve the sustainability of our landscapes and waterways.

“Sustainable land management through community involvement”.

- field days and workshops
- engagement with scientific community latest research and answer questions.
- funding and financial support
- active roles on working parties, helping with ‘hands on’ work such as weed clearance and native planting.

Three main areas of work

- Sustainable Land Management
- Biodiversity
- Integrated Catchment Management >

Trustees and their organizations

Richard Thompson (Chair): Ecologic Foundation.

Bryce Johnson: Fish & Game New Zealand.

Owen Cox: Federated Mountain Clubs of New Zealand.

Bruce McNab: Federated Farmers of New Zealand.

Hugh Stewart: Royal Forest & Bird Society of New Zealand.

Liz Evans: Rural Women New Zealand.

George Matthews: Federation of Maori Authorities.

FOR FURTHER INFORMATION

Australian Landcare Council

Secretariat
Landcare and Regional Delivery
Improvement Branch Department of
Agriculture, Fisheries and
Forestry M.3.71 | 18 Marcus Clarke
Street | GPO Box 858 Canberra ACT
2601 Australia

www.daff.gov.au/natural-resources/landcare/council

CONTACT CSIRO

t 1300 363 400
+61 3 9545 2176
e enquiries@csiro.au
w www.csiro.au

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