

Terra Moana seeks to establish a unique constellation of stars driven by common purpose and principles:

- Recognising that private sector responses to complex resource management challenges mean innovative solutions have solid business cases.
- Using the power of business and its inherent competitive culture to catalyse improvement.
- Identifying how new ecosystems of sustainable business create webs and systems of inter-connected businesses, each with a unique role to play, benefit to reap and story to tell.
- Building stronger brands for business who contribute to and benefit from credible solutions.
- Recognising the power of designing smart solutions to credibly reinstate our reputation for being clean, green New Zealand internationally.
- Catalysing improvement can generate pride and incentive rather than shaming to drive action.
- Ensuring that the perfect is not the enemy of the good when it comes to making information accessible.

The Time is Right

With technology (apps, online databases, drone technology), domestic and international market pressure to be credibly clean and green, and responses including Predator Free New Zealand, the Land and Water Forum, Fonterra's Restoring 50 Catchments initiative, the new biodiversity conservation on private land collaboration and hundreds of community based catchment restoration initiatives nationally such as Whangawehi and Whakaki on the East Coast, this Platform for Conservation and Sustainable Management Innovation, a home for conservation apps that talk to one another is timely. Race to the Top seeks to begin this new alliance. New Zealand doesn't need an army of community coordinators each trying to keep up with what's current, innovative or working, it needs a refreshed approach to collect, hold, share, validate and analyse data whether generated by citizen science or formal research that motivates real change and a healthier environment for people and nature.

Who we are



Terra Moana Ltd and Associates (TML) bring a highly experienced team with expertise in natural resource management and collaboration. We focus on primary industries, especially fisheries and oceans. Our areas of expertise include research, policy, analysis, management, valuation, collaboration, facilitation and business development.

Terra Moana's mission is grounded in natural capital "know how" and coaching. This is predicated on a respect for and understanding of the multiple factors that must be considered to enable wise stewardship of natural resources and the

communities reliant upon them. We can support teams, executives, divisions and individuals to do the right thing.

Natural capital includes human, manufactured, financial, social, and natural assets and resources. TML seeks to bring best practice evidence, assessment and valuation to these areas to enable sound decision-making support for businesses and governments. Using careful design and sensitive engagement principles we work with both those who seek economic development and those who may be affected by it.

Te Mana o Te Wai - the health and well-being of our water has three elements: i. te hauora o te wai – the health and mauri (quality and vitality) of water, ii. te hauora o taiao – the health and mauri of the environment and iii. te hauora o te tangata - the health and mauri of the people.

A number of apps are already being developed or used to support conservation and sustainable management in New Zealand including: <http://idealogue.co.nz/design/2016/11/drones-floating-water-monitors-and-disease-tracking-apps-three-innovations-could-change-conservation> and <http://predatorfreenz.org/online-tools-for-predator-control/>, Native Orchid Key App. , <http://naturewatch.org.nz/>, NZ Coprosma Key, Birds of New Zealand, New Zealand Eucalyptus Pest

RACE TO THE TOP

Accentuating Positive Catchment Restoration



The Concept

Race to the Top is a new visualisation platform concept being created to share the progress of catchment restoration in easily accessible communications formats. It's kaupapa is to enable Te Mana o Te Wai through accentuating leadership and positive actions rather than exposing bad behaviour. We all care about the health of the environment, whether big business, the local school or landowners trying their best. Catchment restoration initiatives, producers, landowners and interested citizens would be able to interact and see the relative status of all that's happening in their catchment in one place.



We aim to visualise key information from sources, informal (citizen/landowner/recording devices/user) and formal (research, territorial local and regional authorities and academia). Individuals, communities of interest and anyone else will be able to find out what restoration is happening catchment by catchment through the visualisation platform.

Whilst conservation and sustainable management apps exist or are being developed in New Zealand, Race to the Top aims to enable data integration to show the macro level outcome of conservation, restoration and sustainable land management at multiple levels.

Strong support

During this conceptualisation process we have gained support from various organisations from regional councils, academia to community groups. Their support in principle and willingness to contribute to the platform provides a strong foundation for the Race to the Top.

Science Communication Association NZ Dr Fabien Medvecky

Falcon Farming Chris Falconer

Dairy Farmer, Past President of Manawatu Rangitikei Federated

Farmers James Stewart

Hinerangi Station Sarah von Dadelszen

The Nature Conservancy Michael Looker

Predator Free NZ Rob Fenwick

WWF NZ Michelle Frank

Squad Squawk Fraser McConnell

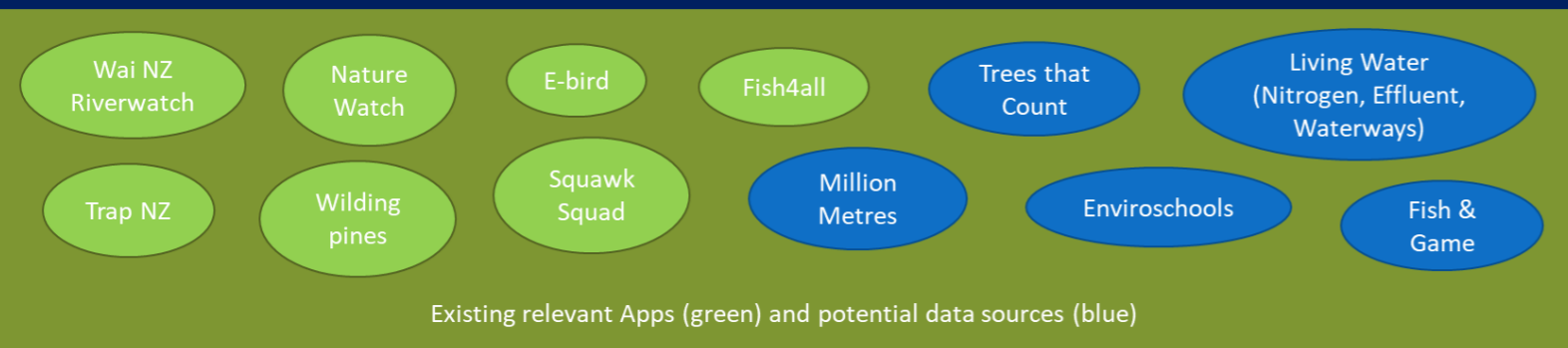
Koordinates Anne Harper

Whakaki Lake Trust Richard Brooking

Fish4all NZ Recreational Fishing App (us)

New information needed	Existing information to draw upon
<ul style="list-style-type: none"> Km's waterways fenced Riparian margin planting Tonnes of carbon sequestered Eel and fish population status /change and catch by sector 	<ul style="list-style-type: none"> Native bird enhancement Recreational usage / activities Cultural health indicators Water quality improvement Predator eradication Macro invertebrate index Recreational fishing

Delivering Te Mana o Te Wai



The diagram above illustrates the key data parameters Race to the Top seeks to integrate. There are some data that are readily available that we can tap into and some that are not, which we will develop the mechanism to collect. Together, the data collected will build a picture of catchment restoration to deliver Te Mana o Te Wai including out into the marine environment.

The Benefits

There is no shortage of sound community based and sectoral catchment restoration initiatives nationally. What there isn't yet is a simple way to see the national picture and its progress between and across initiatives. Race to the Top will deliver a) a simple, visual and easily accessible means to track improvement, and b) a means to identify return on investment for sustainably financing ecosystem (natural capital) based improvement.

Demonstrable restoration progress will benefit:

- all New Zealanders through increasing confidence in landowners who take responsibility to genuinely care for the waterways and taonga within their sphere of influence,
- landowners:
 - contribute to an independent catalogue of collective restoration impact,
 - receive tailored information about their restoration investments,
 - summarise information about their improved land asset values and leverage opportunities,
 - links to a farming network community of interest locally and regionally, and,
 - demonstrate to communities, through an independent lens, that they're doing the right thing.
- sustainable products that can be branded and recognised in discerning markets as premium because they come from catchments undergoing restoration,
- investment models that reduce risk for owners, insurers, bankers and other finance sector members,
- community partnerships understanding where and how to highlight needs and fill gaps with their efforts,
- the tourism offering for tourism operators and tourists to contribute to (financially, in person) restoration activities (see box on next page),
- local government to understand the natural capital well-being (ecological, social, cultural, economic) of the catchments in their region, and,
- central and local government to complement initiatives with targeted resources

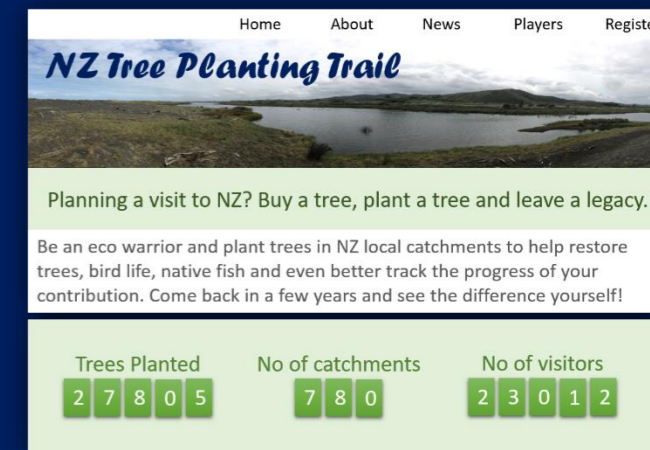
Tourist Restoration Participation

The New Zealand Tree Planting Trail

With data overlays, Race to the Top could become a portal for healthy catchments where great New Zealand adventures can be had by visitors! This could include increased waterway usage, tourism, fishing, tramping, cycle trails etc

Tourists could be invited to invest in riparian planting i.e.

- Before their visit \$ buys x trees, and/or equalling offsetting carbon/travel. E.g. partnering with the Campable App could participate in restoration activities.
- R2T2 identifies the catchment for planting for when the visit occurs. (Seasonally dependent, they can plant or visit the trees.),
- And/or as they leave they can donate which creates a legacy/invitation to return and visit "their trees" in the relevant catchment. They can also track the progress of the catchment online from home.
- Link these people to local accommodation etc ...draws extra spend etc
- There are already several tourism/tree planting initiatives (Trees for Travellers Kaikoura, Kaitoki Tours Bay of Islands) in this space to potentially link with.



Key Assumptions

Race to the Top notes the following key assumptions about New Zealand catchment restoration:

- it is largely ad-hoc and dependent on the initiative, goodwill and resources available to communities, and which itself often largely depends on key individuals,
- the many current well-intended initiatives to highlight bad practice are useful but can be demoralising to those trying to do the right thing,
- that markets domestically (New Zealand consumers and tourists and international visitors/tourists), and internationally (exported New Zealand product) value New Zealand's natural capital (native wildlife, intact forests, clean rivers etc) and are increasingly aware that the clean green veneer is slipping off,

and that:

- technology, online, open source and App based information systems now mean that more information can be more available and inter-linked to show bigger picture progress, highlight areas that need support and where traceability systems exist, even underpin brand and product provenance,
- this underpins the Business Growth Agenda ambition to build a more productive and competitive economy,
- incentive based approaches that motivate action through enlightened self-interest are more effective in producing sustainable long-term, systemic change than punitive ones.

Collaboration

Terra Moana Ltd is a sustainability advisory company that blends perspectives from across non-government and industry to seek, design and deliver innovative solutions for complex resource management challenges, especially in the aquatic/terrestrial interface zone. The Fish4all App, an innovative tool that enables recreational fishers to record their catch is the brainchild of Terra Moana partner, Tony Craig. The App is a foundation for information collection (i.e. citizen science, riparian restoration tracking) and can integrate with associated Apps to create a holistic solution