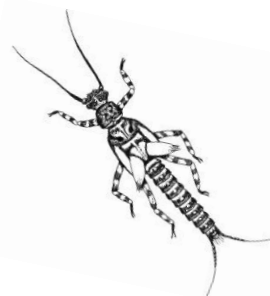
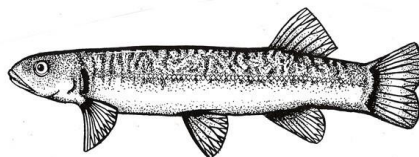


Coordinators Handbook



Updated in 2022 by National Coordinator, Patricia Clark

The Whitebait Connection (WBC) is a programme of the Mountains to Sea Conservation Trust



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Section One – Background Information

Summary of Programme Details

Purpose of the Whitebait Connection programme

To foster understanding of life sustaining capacities of aquatic ecosystems, by engaging school children, teachers, parents and the wider community, in an ecological and largely outdoor practical inquiry about streams and catchments and to encourage and facilitate any restorative actions that may result from that inquiry.

New Zealand has 425,000 kilometres of rivers and streams, almost 4,000 lakes larger than 1 hectare in size, and about 200 groundwater aquifers. By international standards, freshwater in New Zealand is both clean and in good supply. However, some aspects of water quality are getting worse in areas dominated by intensive land use. Demand for water is increasing, particularly in areas that are already water-stressed (Ministry for the Environment, 2007).

There are various government and NGO initiatives being delivered around the country in a bid to reverse the degradation and promote the conservation and preservation of New Zealand's fresh waterways. For example, The Dairying and Clean Streams accord, which is targeted at farmers to get stock out of waterways or local government riparian planting initiatives e.g. Taranaki District Council.

The world is changing, evidence suggests that people are becoming more and more aware that there is something wrong with our environment – and that we are playing a part in it. However, many New Zealanders don't know exactly what it is that is wrong, how they are connected and how they can make a difference.

Now, more than ever before – we need people on the ground engaging communities with the environment. Not only that, but we need to take it a step further and get communities involved in the active restoration of these environments. It is no longer acceptable for us to be a nation of observers – it's time to get to work. But before people can get motivated to make a difference, they need to get **connected**. This is where the WBC programme becomes so vital. WBC focuses on the living things – we engage communities with the environment to view the biological beings that are at stake. We highlight the connections between land and sea to encourage big picture thinking. We connect communities with their local government organisations and get them involved in established restoration projects. If there aren't any restoration projects happening, we provide a foundation from which to get them happening. ***No other freshwater education programme in New Zealand offers this unique outlook, kaupapa and foundation.***

What is The Whitebait Connection (WBC)?

For most Kiwis, the word 'Whitebait' is strongly associated with 'fritter'. But the conservation education programme, called the Whitebait Connection (WBC), is changing that association for many New Zealanders, young and old.

Whitebait is a collective term describing the juvenile stage of five species of native freshwater fish that migrate in large mixed shoals from the sea to freshwater rivers and streams during the season.

The way we use our land directly affects the health of our streams, rivers, estuaries, and the sea. In fact, it affects us all.

By looking at the life in a stream, we can draw many conclusions, about the state of health of the stream and about the lands that surround it.

The Whitebait Connection provides knowledge about freshwater ecology and the effects of land management on freshwater quality.

Schools that participate in the Whitebait Connection programme will also learn about freshwater bugs or macroinvertebrates, as they are known. The term invertebrate refers to life forms without spines. In this case they are basically insects whose larval stages occur in streams and rivers and that feed on algae, leaf litter or other invertebrates.

These creatures are not only indicators of water quality, (as some are more tolerant to pollution than others) but they also form the primary food source for our freshwater fish.

As well as being on the menu of many New Zealanders, Whitebait are on the menu of the Kahawai and the Kingfish that swim into the estuaries to feed. Since the Kahawai itself is an irresistible morsel for a hungry Marlin you can see how in ecological terms, the Whitebait has a connection to a world much wider than its own.

The Whitebait Connection programme has been raising awareness of this connection since 2000 in several regions throughout New Zealand.

The WBC is a stream and catchment environmental education programme. The programme offers specialist advice concerning freshwater ecosystems and their critical role in sustaining life. Furthermore, WBC delivers interactive, holistic in-stream learning experiences. Participants develop sound knowledge and understanding of their local waterways, and the environment as a whole. As such, they explore key environmental education concepts such as interdependence, sustainability and biodiversity by learning about freshwater ecosystems. Consequently, personal and social responsibility for action, and recognition and respect for Māori concepts are developed and nurtured.

Our Offer

Instant teaching - just add water.

Our coordinators come to your school to help you plan and integrate the programme into your

curriculum. They also take your class out to deliver an in-stream workshop with the children, other teachers and parents, local stakeholders, everyone is welcome.

The WBC concept is the essence of the programme:

- Introduction **about** NZ whitebait and freshwater biodiversity.
- Investigation of the **local** catchment.
- Freshwater **discovery** experience **in** a healthy freshwater environment.
- Freshwater **biodiversity** monitoring.
- **Action** **for** the freshwater environment.

The WBC Programme outcomes:

- Promotes education for sustainability, conservation education and environmental enlightenment.
- Information transfer and opportunities for community development and collaboration.
- Inspires action for the freshwater environment.
- Builds water safety skills.
- Increased awareness, knowledge and involvement in freshwater conservation.
- Empowerment to make a difference in tomorrow's management of the freshwater environment.
- Media opportunities.
- Attitude change.
- Promotes youth leadership.
- Increased support for freshwater conservation.
- Hands on educational opportunities for 'learning by doing' learners.
- Specialist freshwater monitoring programmes for all ages, cultures and abilities.
- Participants learn about freshwater life.
- Promotes the ethic of Kaitiakitanga.
- Embraces Māori culture.

Action

After experiencing their local catchment and waterways, participants often lead action projects and become kaitiaki of their freshwater environments. Over the years students have been involved in a range of action projects from making short films, writing letters to their local authorities and Members of Parliament, presentations in front of assembly and public (including international) events, investigating local issues and where freshwater restoration could happen in their community; to creating community native plant nurseries and organising community riparian planting days.

Where and when does WBC operate?

The Whitebait Connection (WBC) has been operational in Northland since 2000 and available to other parts of New Zealand since 2004. To see if WBC is operational near you or to find national contact details, log on to www.whitebaitconnection.co.nz. Due to local topographical, logistical and weather conditions, some regions may only operate in Terms One and Four or have limited services in Terms Two and Three (e.g. no field trips). Contact info@whitebaitconnection.co.nz for more information.

Who is involved?

WBC Coordinators, teachers, students, parents, community members, government organisations, non-profit organisations... and anyone with an interest in freshwater conservation education!!!

Resources

WBC aims to continue to develop quality freshwater education resources and to offer the many other services we have developed to date in Northland, such as:

- Community planting days and nurseries
- Regional freshwater forum meetings
- National Marine and Freshwater Educators Wānanga
- 'Investigating Freshwater/ Akoranga Waimāori' freshwater inquiry learning framework and video.
- WBC manual
- Whitebait Connection Website which includes a community events calendar and resources library – www.whitebaitconnection.co.nz
- Drains to Harbour stormwater awareness programme
- National Īnanga spawning programme

All of these activities add value to the sound WBC programme already developed. Future priorities are to continue to build on these activities in Northland while further developing the national delivery of the WBC programme in a Mountains to Sea context.

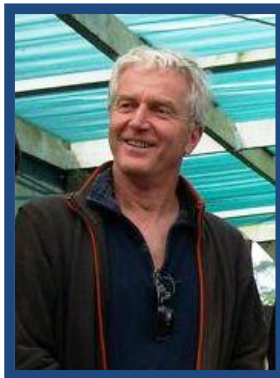
Programme founders

The Whitebait Connection (WBC) programme was developed in Northland in 2000 by Stefan Seitzer and Vince Kerr. The Northland based, Mountains to Sea Conservation Trust (MTSCT) was formed in 2002 as a charitable umbrella and support organisation for both the WBC programme and also the Experiencing Marine Reserves (EMR) programme (EMR was co-founded by Vince Kerr and Samara Nicholas (nee Sutherland)) in 2002. Both programmes were born out of an urgent need for community engagement in freshwater and marine conservation and have become leading models for Education for Sustainability (EfS) in New Zealand.

Stefan Seitzer and Ira Seitzer successfully directed and undertook the national development and coordination of the WBC programme from 2001 until 2008 as founders and trustees of the trust. Ira and Stefan both resigned from their roles within WBC and the trust at the 2008 WBC wānanga at their home in Ngunguru to enter new ventures. MTSCT trustee and consultant, Kim Jones, took on the role of WBC national coordinator in April 2008.



Ira Seitzer



Stefan Seitzer



2008 WBC wānanga at Ngunguru

Programme National Management and coordinators



MTSCT Co-Director/Poutokomanawa – Freshwater Lead - Kim Jones is an experienced coordinator of the trust's programmes. Kim is the Mountains to Sea Conservation Trust's Poutokomanawa/Co-Director - Freshwater Lead. Kim is based in Taitokerau/Northland and led the national expansion of the Whitebait Connection programme from 2008-2022 and spearheaded the creation of the National Inanga Spawning Programme as well as multi-year Northland and Auckland

region-wide whitebait habitat research, engagement and conservation projects. Kim was an EMR coordinator from 2005-2014 and founded the trusts Drains to Harbour programme. She is a graduate of the Diploma in Environmental Management and Conservation at Northland Polytechnic and a PADI DiveMaster. Kim also has a National Certificate in Business Administration and Computing and is currently completing a Bachelor of Applied Science in Biodiversity Management at UniTec. Kim is passionate about collaboration and strategy and experienced with governance through her contributions to committees and boards including a selected member of the youth delegates at the 2006 Digital Earth symposium on sustainability, a committee member of the New Zealand Association for Environmental

Education, Northland Branch, Whangarei Harbour Marine Reserve Advisory Committee, Whangarei Harbour Catchment Group and National Advisory Group for Freshwater Citizen Science. Kim will be leading MTSCCT's Wai Connection project from 2023-2025 which will include supporting the WBC National Coordinator and strategic development of the Trust's programmes.



National Coordinator – Patricia Clark

Patricia (Pat) has whakapapa connections to Ngāpuhi and grew up on a farm near her hometown of Kaikohe. She is a graduate of a Bachelor of Science majoring in environmental science and earth science and a Master of Science majoring in environmental science focussed on freshwater ecology. After working at the University of Auckland, Te Uri o Hau Environs and the Integrated Kaipara Harbour Management Group Pat joined the WBC team as a Northland Programme Coordinator in 2021 whilst also working at Papa Taiao Earthcare. She took on the role as National Coordinator in December 2022. Pat loves being part of the WBC team as it combines her passions for freshwater ecology, education and hands-on conservation.

For an up-to-date list of all our coordinators please see: <https://www.whitebaitconnection.co.nz/about-us/coordinators.html>

Mountains to Sea Conservation trust – the national umbrella organisation

The Trust sees education as a vital part of society and central to all environmental restoration. Our work involves providing dynamic experiential education programmes that engage schools and communities in conservation. We aim to support communities in achieving their goals in environmental restoration and conservation. Thanks to a partnership formed in 2004 with the Department of Conservation, both the WBC and EMR programmes have been available nationally through the provision of a national coordinator and seed funding from DOC head office. MTSCCT has also been successful in applications for other national development funds through the Tindall Foundation and MBIE's Unlocking Curious Minds fund.

In addition to EMR & WBC in Northland we have developed a range of programmes, resources and services such as community guided snorkel days, community events for Seaweed & Conservation week, DVD's, the MarineNZ website, community nursery education programme (He Kakano), and the Drains to Harbour and Mangrove Discovery programmes.

The continued development of the Mountains to Sea Conservation Trust brings together an extensive array of professional skills and diverse capabilities. Within our group of trustees there is a balance of youth and experience, scientific, social scientific and educational accomplishment.

The Trust strives to work in ways that build community involvement, foster equity, and work toward a shared vision of ecological sustainability as the basis of all community. The methods we have developed for delivery of our programmes make a unique contribution to environmental education in New Zealand.

MTSCT Trust Structure



Marine and Freshwater Education and Conservation

www.mountainstosea.org.nz
For all enquiries: info@emr.org.nz

Schools and community engagement programmes



www.whitebaitconnection.co.nz



www.emr.org.nz

'How to' create a
marine reserve
proposal
www.howtokit.org.nz

Community Riparian Planting
Projects

Whitebait Spawning Site and
Habitat Restoration Projects

Drains to Harbour
(Whangarei)

Mountains to Sea Wānanga

Community Guided
Snorkel/Kayak Days



**SINCE
2001:**

Planted 105,028
trees along waterways

Engaged 92,330
people in river monitoring

Identified 87 inanga
spawning sites

Taken 119,131
people snorkelling

Information transfer to
communities via
713 media articles,

Delivered 230 public
community guided snorkel
& kayak days guiding a total
of 65,518 through marine reserves

Annual wānanga
attended by
576 people

153,315 hours of
volunteer time
contributed

The total reach for our engagement to date is 245,945 people.

Mountains to Sea Conservation Trust
Nga Maunga ki te Moana

Community Engagement

MTSCT Wānanga

Community Led & Kaitiaki Actions

Marine Protected Areas

Community Snorkel Days

Experiencing Marine Reserves

Snorkelling Te Kura Moana

Whitebait Habitat Restoration

Freshwater Protected Areas

School Programmes

Landowner Engagement & Support

Volunteer Fresh Water Monitoring

Restoration Planting

Whitebait Connection
x-stream about freshwater life

Clean Cool Clear Cover

Creatures Current Connections Coastline

**Whakamana te maunga, Whakamana te wai,
He mauri o ngā tangata, Ngā mea katoa he pai.
If we look after the water from the mountains to sea,
it will look after us. it is our life force.**

Whitebait Connection

Trustees

Katrina Goddard – Chairperson, Marine Advocate



Katrina is a marine ecologist with over ten years' experience working on fisheries and aquaculture management, policy development, marine protection, marine spatial planning and conservation management. Katrina currently works as marine ecologist consultant in Northland. Growing up in Northland, sailing and scuba diving, Katrina has always had an interest in the marine environment. She is passionate about marine science and ecology and working with hapū and iwi and other stakeholders around New Zealand to

restore abundance and safeguard our marine environment for future generations. Katrina's role on the Trust is to advise on marine conservation and fisheries management issues and advocacy and support the strategic vision of the Trust.

Jean-Louis Ecochard - Deputy Chairperson and Secretary



Jean-Louis grew up in France at the onset of the digital age and found in technology the vehicle to quickly convert his ideas into new ways of working that transformed our world. His incessant curiosity led him to pioneer many technologies that we now take for granted: online banking, caller ID, internet access, global systems, B2B, digital trading, video conferencing, online advertising, and eHealth. Jean-Louis spent the last few decades pursuing his passion of creating digital innovations for good, accelerating the mission of the largest international nonprofits. Jean-Louis now serves NetHope as Chief Innovation

Officer leading The Center of the Digital Nonprofit, a social sector accelerator and the center of excellence for digital transformation in nonprofits. He resides virtually on the Internet @jecochard and physically in New Zealand where he lives sustainably with his wife and daughters, blending roles of husband, dad and visionary.

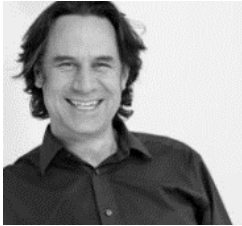
Dr. Olivier (Olly) Ball - Science Portfolio



I am a senior tutor at NorthTec Whangarei and teach subjects ranging from ecology to conservation to the dreaded statistics. My interest in ecology and conservation was sparked when, as a child growing up in London, I found out that I was never going to be able to see such wonderful creatures as moa, huia and dodo, as every last one had been exterminated by humans, directly or indirectly.

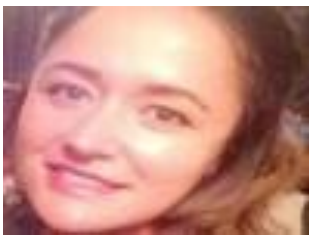
After leaving school in England, I followed the zoological pathway, completing a BSc Hons at the University of Canterbury (NZ), majoring in ecology and invertebrate physiology. For my PhD at Waikato University, my studies focused on biological control of pastoral insect pests using endophytic fungi of grasses. After post-doctoral studies on endophytic fungi at the University of Tennessee, and several years as a research scientist with AgResearch at Ruakura and Grasslands, I was able to rekindle my passion for plants, animals and their conservation when I took up my current post at NorthTec. Since my arrival at NorthTec, I have been lucky enough to participate in several research projects, including studies on freshwater invertebrate communities of northern Northland dune lakes. What a stunning environment we have, and how lucky we are. That is why I am so happy to support the amazing work of the Mountains to Sea Conservation Trust.

Matt Keene - Strategy and Communications Portfolio



Matt is born and bred in Whangārei. He has a Bachelor of Management Studies from Waikato University and is a partner in a software development company. Matt is on several not-for-profit boards that focus on education, the arts and skills development for young people. He has many years of experience in the development and implementation of strategic planning for not for profits. Matt has been on many EMR school trips with his 3 daughters and has seen first-hand how important and effective it is to make the education of tamariki about the environment and ecology an adventure and fun.

Sheila Taylor - Treasurer



E ngā mana, e ngā reo, e ngā karangatanga maha,
Tēnā koutou katoa.
Ko Emiemi te maunga e tū mai nei,
Ko Pupuke te awa, e haerere ana,
Ko Whangaroa te moana,
Ko Ngātokimatawhaorua te waka,
Ko Ngāti Kahu, ko Ngāpuhi ngā iwi,

Ko Ngāti Pakahi ki Whaingaroa, ko Ngāti Uru, ko Te Whanau Pani ngā hapū,
Ko Te Huia, Tahawai ki Pupuke, Mangaiti ngā marae,
No Kaeo, Whaingaroa ahau,
Ko Sheila Taylor tēnei.

Sheila is a daughter of Taitokerau but grew up in small towns across Te Ika a Maui/the fish of Maui (North Island). A childhood spent in small rural communities embedded within Sheila a sense of duty to the environment and the communities that rely on its nourishment. Sheila is a passionate business professional and civil servant with experience in both the public and private sector. As a Chartered Accountant, Sheila values the need to understand and evaluate strategic priorities to ensure an entity remains relevant and sustainable in today's ever-changing environment.

Arla Kerr - Trustee



Arla spent her early years in the Hokianga and Whangārei. After living and working in Wellington and London, she has returned home to Whangārei where she lives with her husband and two young daughters. Arla's childhood inspired a love and respect of the ocean. This was cemented in High School when she had the privilege of being one of the many students who campaigned successfully for the creation of the Whangārei Harbour Marine Reserve. Diving and snorkelling are currently taking a backseat while she explores the shallows and rock pools with her kids. Arla balances work as a lawyer with her busy family life. As a barrister, she works with lawyers and clients nationwide in civil and regulatory litigation and investigations. She is a member of Kate Sheppard Chambers (a fully virtual chambers championing the promotion of women in the law, inclusivity and diversity).

Arla has been behind the scenes supporting MTSC since its foundation and is now proud to be following in the footsteps of her father, Vince Kerr, one of the founding trustees of MTSC.

Funding and support history – Mountains to Sea Conservation Trust.

The Whitebait Connection (WBC) was founded in Northland in 2000 and Experiencing Marine Reserves (EMR) in 2001. The Northland based Mountains to Sea Conservation Trust (formally known as Ngā Maunga ki te Moana Conservation Trust) was established in November 2002 to umbrella these programmes and provide a means for finding financial support from a variety of sources. The foundation trustees included Vince Kerr, Roger Grace, Stefan Seitzer and Samara Nicholas. A 2003 agreement between the Department of Conservation and Mountains to Sea Conservation Trust made EMR and WBC available to other parts of New Zealand.

Funding and partnership history

- The **Department of Conservation** is a foundation partner of the Mountains to Sea Conservation Trust. Their Ngā Awa project currently also funds some of WBC's īnanga spawning work in Northland.
- Since 2008, the **Tindall Foundation** has also supported EMR's national expansion.
- WBC have received support from the **Ministry for the Environment's Sustainable Management Fund** and BOC.
- **WWF-NZ** supported EMR for three years from 2003 through the Environmental Education Action Fund during its early stages of development in Northland.
- The **Pacific Development and Conservation Trust** made a one-off contribution to EMR Northland delivery in 2005 and joint delivery of EMR and WBC in 2014
- The **Lion Foundation** has made several contributions for programme equipment for EMR since 2006.
- **Foundation North** (formally the ASB Community Trust) has supported EMR & WBC programme operational costs since 2007. They also have funded school programme delivery in the Northland region for WBC since 2007.
- The **ANZ Staff Foundation** supported EMR in 2007.
- The **Southern Trust** has supported the purchase of new wetsuits and the trailer for Far North delivery
- During 2010 EMR & WBC delivery was supported by **Lotteries Environment & Heritage** for Far North and Whangarei schools
- programmes have partnered with the **Northland Regional Council** to deliver marine and freshwater biosecurity programmes.
- WBC has partnered with **Landcare Trust, Northland Regional Council** and **Auckland Council** to conduct whitebait spawning workshops, research and protection projects and stream monitoring workshops.
- **Auckland Council** is a significant funder for WBC within the Auckland region funding īnanga spawning projects and school programme delivery within the region often through their local board projects
- WBC is also partnering with the **Living Water (DOC/Fonterra)** partnership programme in Northland receiving sponsorship to deliver the programme to local schools, farmers and marae.
- **Pub Charity** have supported both EMR and WBC with funding for gear and delivery costs.
- WBC has also partnered with **Papa Taiao Earthcare** to deliver freshwater education in bilingual schools in Northland.
- We have also received local support from businesses in the past such as **Refining NZ**.
- The **Whangarei District Council** supports our He Kakano community nursery and has funded our Community Guided Snorkel Days at Reotahi.
- **Kaipara District Council** has funded our open days at Kai Iwi Lakes.
- **The Far North District Council** has funded the Drains to Harbour programme in the Far North region.
- We have introduced school charges and equipment sales to our organisation as this will help support both outputs, outcomes and financial stability.
- The Trust is actively engaging with potential corporate and personal sponsors including **MTF Finance, 2plus, The Choc Fish Co** and **nznativefauna**.
- MTSC's was successful in gaining funding from the **Rata Foundation** for WBC Canterbury project delivery.

- EMR uses and is supported by 'Wettie' www.wettie.co.nz quality snorkel equipment, and Dive Tutukaka www.diving.co.nz sponsors a trip to the Poor Knights annually.
- MBIE's **Unlocking Curious Minds** fund funded our National Inanga Spawning Programme development.
- **The Ministry for the Environment** funds our Northland Inanga Spawning project and Wai Connection programme.
- Please go to our website (www.whitebaitconnection.co.nz) for a list of our current sponsors and for information on how you can support the programme.

WBC Coordinators Handbook - Section Two

Programme Breakdown

It has been said that...

“The day we successfully manage our freshwater resources, we would have solved all our land management issues in the process”

The aim of the WBC programme is to raise awareness, understanding and involvement in freshwater and catchment discovery, monitoring and conservation through provision of dynamic, experiential education for sustainability opportunities.

The WBC concept

INFORMATION – EXPERIENCE – ACTION!

The WBC concept is the essence of the programme:

- Introduction **about** NZ whitebait and freshwater biodiversity.
- Investigation of the **local** catchment.
- Freshwater **discovery** experience **in** a healthy freshwater environment.
- Freshwater **biodiversity** monitoring.
- **Action** **for** the freshwater environment.

Learning Outcomes:

- Understand the lifecycle of the NZ whitebait and be able to explain some of the threats to NZ whitebait.
- Give at least 3 examples of New Zealand freshwater biodiversity and explain what a catchment is.
- Explain and use monitoring equipment.
- Describe the local catchment and what lives in it.
- Identify and classify some freshwater creatures seen on field trips.
- Make comparisons between sites and explain some of the reasons for differences.
- Base their opinions about the value of good land management practises and freshwater conservation on their personal experiences and action what they learnt in the community.

Main Curriculum Links:

- Social Science and Science – Living World, Ecology and Evolution
- Health and PE
- Arts
- English – written language, speech
- Maths – data analysis, statistics.

Curriculum and resources:

There is a range of resources available for teachers of all year levels on the WBC Google Drive including unit plans, inquiry frameworks, links to existing assessment and unit standards and lots of ideas on games and activities.

What the WBC coordinators do (for free for schools*)

- Explain how the desired learning outcomes can be achieved.
- Provide freshwater and catchment education resources.
- Deliver a freshwater biodiversity, catchment and conservation presentation to the class.
- Work in partnership with you to coordinate and organise field trips.
- Provide safety management and briefings/leadership on field trips
- Provide freshwater monitoring and safety equipment and instruction for water activities.
- Provide RAMS forms and emergency procedures for inwater activities.

What teachers do:

- Explain how the intended learning outcomes are based on the achievement objectives in the relevant curriculum areas and deliver follow up lessons in the classroom.
- Provide adequate parental/community supervision for field activities (WBC recommends a 1:4 ratio and can help identify community support for supervision on request).
- Provide student participation consents, medical conditions and permission for WBC use of student images/footage.
- Provide appropriate support for students with special needs.
- Review the snorkelling risk management template provided and seek approval from the Board of Trustees.
- Risk management planning for all activities other than freshwater study (e.g. transport).
- Provide a first aid kit on field trips.
- Cover any costs associated with transport, food, accommodation, WBC Northland requires a \$1 per student per field trip for use and maintenance of the monitoring gear.

****Subject to funding availability.***

The Action

WBC has a long history of success since its establishment in 2000. Many examples of this can be seen on our website under the 'News' section.

Empowering community including student to take action for the environment is a core part of the programme.

Statistics

As of 2022 WBC has documented the statistics below (this is conservative as some items have not been measured by some areas);

- *Since 2001, our Mountains to Sea freshwater programmes have planted 131,599 trees, we engaged 119,920 people, we have helped identify and restore 141 īnanga spawning sites. Information is transferred into the wider community by our hundreds of media articles. Over 93,972 volunteer hours have been contributed. Our annual wānanga has attracted the attendance of 699 people.*

Testimonials

"DOC's partnership with the Whitebait Connection has contributed a great deal towards our freshwater advocacy and awareness goals in Northland. The Whitebait Connection programme consistently delivers effective and engaging freshwater education to northland schools and community groups. When working with the whitebait connection I have observed the positive and open relationships their staff build with the groups they work with. I have also seen firsthand, schools and community groups getting involved in positive conservation action after undertaking the Whitebait Connection programme. Whitebait Connection has undoubtedly contributed a great deal of positive momentum to the Northland freshwater conservation cause and will continue to do so in the future. I feel lucky to have such a high-quality freshwater education programme operating in Northland, and I will continue to look for opportunities for DOC to work with Whitebait Connection in our own education projects".

Testimonial in support of Whitebait Connection Programme in Northland, Amy Macdonald, Freshwater Technical Support Officer, Northland Conservancy, Department of Conservation.

"The practical science approach that the Whitebait Connection apply to their work is readily understood and appreciated by landowners who are able to see a direct connection between what they do on their land and the effects on īnanga and other wildlife. Kim has done an excellent job of educating our group about the threats to īnanga and the importance of predator control to protect eggs and larvae. She was able to connect with landowners in such a way that they were able to see how they could help."

Kevin Adshead, The Forest Bridge Trust.

WBC Coordinators Handbook - Section Three

Stages of the programme

School Programme – Timeline of key events pre and post the in-water workshop/s

Introduction

1. The Whitebait Connection Programme's (WBC) geographical range covers the Northland, Auckland, Waikato, Gisborne, Taranaki, Wellington, Nelson, Tasman and Canterbury regions. (For facilitator contact details go to WBC website home page/contact us).

1.1 Initial contact is established, usually by a phone call, with the principal or a referred teacher (Head of EE, Science Dept, etc).

1.2 Alternatively, school or group contacts WBC coordinator by telephone, e-mail, or WBC website contact page. If contact is by phone, a brief introduction and overview of the WBC programme is provided. Coordinator will propose meeting with principal and/or interested persons.

1.3 Appointment time for meeting &/or staff presentation is made.

Staff Meeting

2. Meeting &/or presentation conducted at school or site.

2.1 Tikanga is practised and observed when working in Kura Kaupapa Māori and places of similar area.

2.2 Professional development workshop (incl. demo of in-stream activities) with staff (optional).

2.3 WBC overview is presented to teachers at first and then students at the start of the programme -

- Introduction, background, objectives of the programme
- Activities and experiences
- Past, current projects and work with other schools
- WBC resources and equipment
- WBC stages of involvement (exploration to restoration)
- Health & Safety requirements (e.g 1:4 adult supervision by water, permission).
- Discuss, develop a suitable programme for your school/group

Logistics

2.4 Site visit by WBC staff to assess safety and suitability. Landowner, teaching staff and group leaders informed and invited to attend.

1. Complete health & safety protocols, check road/land access issues or concerns. Take site photographs.

2.5 Field trip planning

- Schedule suitable dates and time to introduce and deliver programme to class or group. (req. approx 3 hours), incl. tentative rain check dates.
- Make worksheets with teachers.
- Deliver field trip preparation session to students.

Engagement and Exploration

3. Confirmation of field trip is made 1-3 days prior to scheduled date.

3.1 WBC facilitator arrives at least 45 minutes before start time to prepare for in-stream workshop.

- Facilitator to set-up WBC resource kits:
- Large invertebrate nets
- Fish scoop nets
- Sample containers, sorting boxes
- Magnifiers, pipettes, clarity measurer/secchi disk
- Books, i.d information on freshwater fish, invertebrates, plants, weeds & algae.
- (Technical equipment maybe available in some regions – microscopes, handheld meters)

3.2 Group arrives at workshop site;

- Formal greetings
- Brief enquiry conducted about catchment area, habitat, freshwater systems
- Potential hazards and risks associated with activities are explained to the group.
- Workshop sites, boundaries and safety procedures are given to the group and leaders
- Demonstrate use and care of field equipment and resources. Incl. enter/access water, monitoring and sampling techniques, identification, etc.

3.3 Adult leaders designated to groups (safety ratio 1:4-5).

- Groups provided with individual resource kits.

3.4 In-stream activities commence. WBC group activities involve;

- Monitoring water clarity, temperature, depth, pH.
- Sampling/i.d of macroinvertebrates
- Capture and study of freshwater fish
- Study of the freshwater eco-system incl. plants, algae, weeds, and other animals.



3.5 All participants remain in their designated areas to collect, i.d and record samples.

3.6 On completion of workshop return all samples (alive) to water. Group then returns to 'central' site for de-brief and discussion of results.

3.7 Facilitator to tally and pack equipment.

3.8 Clean equipment thoroughly to avoid transportation of invasive/noxious weed species.

3.9 Pack and store equipment in dry conditions.

Post Field Trip

4. Optional follow-up session conducted with staff and students (appointment made by prior arrangement)

4.1 Results of practical workshop are discussed. i.e monitoring data, identified impacts such as pollution, fish barriers, erosion, lack of riparian cover.

4.2 Problem solving for positive solutions and a draft action plan may follow

4.3 As each group is participating at varying stages of the programme the scale of WBC involvement will differ from project to project.

WBC Towards Action

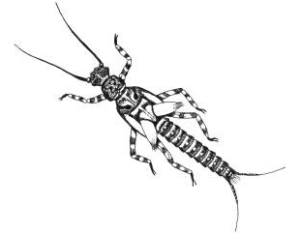
4.4 WBC assistance may involve areas such as;

- Providing advice on suitable restoration methods
- Linking groups with local/regional stakeholders and organisations
- Help to plan and/or assist with clean-up projects, planting days, 'celebration of success' events.
- Funding advice and support
- Facilitate emerging processes



Check out the Investigating Freshwater videos for a good look into what each stage looks like:

https://www.youtube.com/watch?v=pjPQM4mRyHc&list=PLPbxrvGC-enl61Oet0DTSuxr7ji6GUD_i



WBC school delivery checklist (for coordinators):

Pre delivery:

- ☐ Identify suitable site/area for field trip/s on map
- ☐ Prepare site Field Intentions Forms (FIFs) and recce the site/s
- ☐ Approach school or community group and organise planning meeting

At planning meeting:

- ☐ Complete planning meeting checklist
- ☐ Complete WBC teacher pre-delivery evaluation.
- ☐ Plan and agree on delivery methods, learning outcomes, number of sessions, field trips etc.
- ☐ School to sign 'School agreement'

After the planning meeting:

- ☐ Prepare school itinerary and share with school
- ☐ Prepare RAF/s and share with school
- ☐ Plan and deliver presentation/s and activity session/s with school
- ☐ Agree on weather call communications procedure with teaching staff

Before the field trip - Print and take to complete on site:

- ☐ RAFs
- ☐ Pre WBC field activity operation risk assessment form
- ☐ Volunteer forms
- ☐ Incident report form
- ☐ Worksheets and data sheets
- ☐ Full set clean gear/first aid kit/safety gear/comms device
- ☐ Field safety briefing checklist (laminated)

On site at field trip:

- ☐ Follow field safety briefing checklist and school itinerary
- ☐ Take photos for media releases and social media (check permission)
- ☐ Report any incidents
- ☐ Collect a copy of any data collected

After the field trip/s:

- ☐ Check Clean Dry all waterway testing/discovery gear
- ☐ Record data on database/s– e.g. NZFFD, SHMAK or Waicare
- ☐ Deliver post field trip workshop with photo story and support creation of action plan
- ☐ Follow up on action and agree on media release with school
- ☐ Send evaluation forms to teaching staff and students (if over ten years old)
- ☐ Complete report and share with regional coordinator

WBC Coordinators Handbook - Section Four

Are you ready?

WBC Training Checklist

A guide to delivering the Whitebait Connection (WBC) programme (for regional and local coordinators)

Minimum skills required by WBC leader/coordinator

Experience delivering inwater sessions.

Knowledge of NZ freshwater biodiversity and sampling techniques.

Knowledge of NZ non-biological sampling techniques.

Knowledge of hazards and how to treat – must hold a current Workplace or Outdoor First Aid certificate.

Be fit and healthy.

It is highly recommended that the WBC leader/coordinator has the following qualifications:

Tertiary qualification in environmental and conservation management and/or science/biology.

Teaching and/or Education for Sustainability experience and/or qualification.

Minimum skills required by parents/volunteers

Anyone is welcome to join in – all ages and abilities. However, parents and volunteers must listen to briefings and adhere to all safety guidelines and practises outlined by the teacher and WBC coordinator.

They must also be approved by the school e.g. any criminal convictions must be disclosed and WBC and the school have the right to deny people with convictions.

WBC Coordinator Training Checklist

1. Safety policy

Regional/Local Coordinators/contractors/leaders must:

- Report all accidents to the national coordinator, including near misses, whether or not these involve injury.
- Complete site safety checklists and safety plans as required. Please send copies of completed checklists at the end of the season (I recommend laminating checklist and signing it off every time with vivid, then photocopy at the end of the season).
- Practice safe work methods including adherence to safety plans and the proper use of safety equipment.
- All coordinators to be police vetted

2. Field Trip Plans

- a. Base your plan on the template provided in this section. Feel free to email to Patricia Clark (national coordinator) for comment. You must also develop your own school agreement; outlining responsibilities of each party.

3. Safety Equipment

See equipment list in this section.

4. Fitness Ability

Do you feel physically fit enough to perform all the duties of a coordinator? Keep your fitness levels up!

5. Local Conditions Knowledge

Make sure you always know the area above and below the water level, knowledge of area is essential to developing appropriate safety plans. Always gain permission when accessing private land.

6. First Aid Certificate

You must have a current Workplace or Outdoor First Aid Certificate to be a WBC programme coordinator. Unit standards 6400, 6401 and 6402 required. Please send Patricia Clark (national coordinator) a copy of this for the national records.

7. Driver's license

You must have a full or restricted driver's license if you are driving a vehicle to perform your duties as a WBC programme coordinator.

8. Teaching Experience/Ability

Can you demonstrate your ability to deliver a health and safety briefing and WBC classroom lesson?

9. Freshwater Biodiversity Knowledge

Skill yourself up with facts from the WBC Freshwater Discovery and Monitoring Handbook. Be fully aware of catchment management issues on both a global and local context. Understand the different types of freshwater and catchment protection. Make sure you are familiar with section 3, inwater guidelines.

10. Police vetting

Signed police vetting authorization form and sent to Patricia Clark (national coordinator) for processing every 3 years.

11. Code of Conduct

Coordinator has read and signed the MTSC CoC

12. Google Drive Induction

Coordinator has been set up and inducted with a Google Drive account

A checklist before leading programme delivery:

1. Do I understand the WBC concept?
2. Have I done the online training modules including the quiz?
3. Have I attended a national MTS wānanga and been fully inducted and endorsed as a WBC programme coordinator by MTSC?
4. Have I got all the gear required for safely and effectively delivering all classroom and inwater workshops?

WBC Document checklist

Make sure you know where to find digital copies of these documents easily on the WBC Google Drive provided to you. Some of the H&S documents are available on our website (<https://www.whitebaitconnection.co.nz/about-us/health-and-safety.html>) and these are the most recent versions. If you can't find any of these documents please request copies from your regional coordinator or the WBC National coordinator.

1. WBC background

- 'WBC standards' – all found in the WBC Standard Operating Procedures (SOP)
 - Field Intentions Form (FIF)
 - Briefing checklist and safety considerations
 - RAF
 - Incident Report Sheet
 - Pre WBC field activity operation risk assessment form
 - Responsibility Agreement

2. Info for schools

- WBC Teacher Handbook
- Itinerary example
- Programme opportunity/invitation to join template

3. Classroom intro files

- Movies and resources
- Powerpoint presentation for adaptation

4. WBC curriculum

- WBC Unit Plan
- WBC Teacher Handbook
- WBC Freshwater Discovery and Monitoring Handbook

5. WBC planning, evaluation & reporting

- End of year project reporting and evaluation
- Teacher and student evaluation

‘WBC Standards’

For a detailed look at all our standards and policies please check out the WBC SOP Manual and the Health and Safety section of our website.

Briefing checklist and safety considerations

Sensible assessment of environmental conditions, clear instruction and adequate supervision are the keys to the WBC risk management policy. If participating in the programme with a WBC leader, then all risk management policies will be worked through with the teacher well before any field trips/camps commence. The leader undertakes pre-site inspection and obtains up-to-date weather reports before field trips commence. Leaders/coordinators will make recommendations to the teacher in charge, and decisions will be made cautiously. The school provides a first aid kit, and WBC also carries a specialised kit. All students must have permission from their parent/guardian to attend field trips. Medical conditions should be disclosed, especially since students with, for example, epilepsy, diabetes or asthma require special attention. WBC provides safety briefings and associated in-water leadership.

The Waterway Discovery/Investigation Area

The area for discovery/investigation should be well defined for students, adults and helpers, with cones to mark boundaries. The WBC leader/coordinator should explain the safest entry and exit points and proposed study site. The WBC leader/coordinator will also explain what they are likely to see. Hazards such as sharp rocks, soft sediments and slippery surfaces will be identified and any danger with currents or rips explained, along with an explanation of the need for caution. There must always be an adult on the lookout. This person must be ready and equipped to handle any emergency (for example, knowing the location of first aid, medical and emergency information).

WBC Website and Google Drive as a resource for coordinators

Make sure you utilise the Whitebait connection Google Drive and website! www.whitebaitconnection.co.nz There are so many possibilities to link up with other WBC areas, share resources, get awesome new freshwater education ideas, get WBC kids online, receive newsletters, and get connected! You can even create your own school pages under the regions tab. Be sure to keep Patricia Clark (national coordinator) updated with news, action stories, media articles and new developments from your area. Email patricia@whitebaitconnection.co.nz