

New Zealand's National Community-Based Freshwater Monitoring Programme

As of 2026, hundreds of community and catchment groups across Aotearoa are monitoring the health of their streams and awa. There are few standardised processes, different platforms with a variety of costs and complications involved, and generally the data is siloed.

Designed to be delivered with trained local coordinators, Wai Collective combines standardised community-based freshwater monitoring training, digital tools, and data analysis. Co-designed with catchment groups, it meets local groups' needs and has clear data sovereignty mechanisms. Results can be viewed and interpreted at local, regional, or national scale - a hugely valuable asset for anyone who wants to make data-informed decisions about freshwater health in Aotearoa.

Training

- A trained coordinator works with groups in person to plan monitoring that answers questions about their waterway
- Accompanying digital resources
- Ongoing access to qualified coordinators

Tools

- ArcGIS-linked Survey 123 mobile phone form to input results
- Online dashboard to display results, graphs, and progress

Network

- Access to national coordination and support
- Further training and access to experts via seminars and online hui

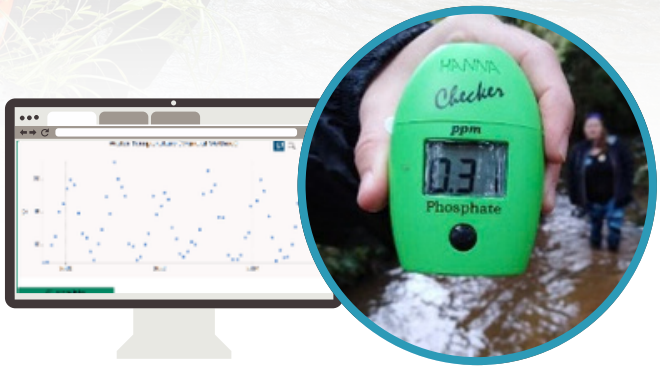
The 7-step process

1. **Make connections** Coordinator introduce CBFM and identify what the group wants
2. **Strengthen connections** Make a monitoring plan together
3. **Dive In** Get the group set up with resources
4. **Dive Deeper** Getting the group set up in the field
5. **Get out in the field** The group monitors on their own with limited support
6. **Find the treasure** Interpreting the data
7. **Action** Plan and implement protection and restoration activities



Benefits for government / data access

- Managed and stewarded by a charity - all decisions are based on what's best for the environment/communities
- No data silos - all data sits within the same platform and can be accessed accordingly
- No requirement for councils to manage and administer their own software or digital ecosystem
- Data that can be viewed and interpreted via ArcGIS layers at a local, regional, or national scale
- Reliable, standardised data underpinned by a quality assurance framework, and overseen by subject matter experts



Benefits for user groups

- Standardised training, resources, and systems that are overseen by a national administration team
- Significantly reduced software costs compared to some current systems - an ArcGIS license costs $79pa
- Ongoing support from a regional coordinator with locally relevant expertise



Current status

Wai Collective is now at the end of its beta-testing phase. 27 groups are currently using the platform, and have submitted more than 420 monitoring results. The programme and tools are now ready to be rolled out around the country.

History

Mountains to Sea Conservation Trust has more than two decades experience working with community groups in freshwater monitoring and restoration. In 2018, Mountains to Sea worked with NIWA and prominent freshwater ecologists to help develop the National Quality Assurance Framework for Community-based Monitoring in Aotearoa New Zealand to address the lack of consistency in monitoring methods and reporting.

From 2023-July 2026, Mountains to Sea administered the Wai Connection project - a national catchment group capacity and capability-building initiative - with funding from Ministry for the Environment. The project engaged more than 400 catchment and community groups, many of which began undertaking freshwater monitoring. Throughout the programme, there were clear and consistent calls for a national community-based freshwater monitoring system, including digital monitoring tools. With ongoing collaboration with catchment groups, this led to the development of the Wai Collective programme and associated digital monitoring platform.