

UC publishes the science behind detecting whitebait spawning sites using straw bales

The Waterways Centre for Freshwater Management and Marine Ecology Research Group are pleased to announce a new paper published in *Ecological Indicators* that sets out the science behind using artificial habitats (such as straw bales) to find spawning sites in degraded waterways.

The paper can be viewed and downloaded free of charge until June 15 via the following link:
<https://authors.elsevier.com/a/1WyBS,XRNLZ1JK>

This technique was used successfully to investigate major shifts in spawning habitat that resulted from the Canterbury earthquakes – which itself is [a fascinating story](#) with the major findings also recently published [here](#).

The work culminated in the hugely successful ‘Whaka Inaka – Causing Whitebait’ project in collaboration with EOS Ecology, K4 Cultural Landscape Consultants, and Te Rūnanga o Ngāi Tahu.

Whaka Inaka installed a large number of artificial habitats to detect degraded areas that could be restored and engaged the Christchurch community in the straw bale experiment to raise awareness of conservation needs.

Many other organisations were also involved including several local schools and the [outreach from Whaka Inaka](#) has increased interest in this method elsewhere.

Some highlights of this method include:

- Īnanga (*Galaxias maculatus*) is a declining fish that is the mainstay of New Zealand’s whitebait fishery.
- Spawning habitat is found on waterway margins that are often degraded by human land uses.
- In degraded locations spawning may happen but most of the eggs will die. This also makes detection of these sites more difficult, but if they were found they could be protected.
- Using artificial habitats, such as straw bales, can overcome this detection problem.
- Artificial habitats can help identify and confirm the location of spawning – and this information is directly useful for whitebait conservation.

