Heni Unwin

Tūwharetoa, Ngāti Kahungunu ki Te Wairoa,Ngāti Rongomaiwahine, Ngāi Tūhoe, Te Atihaunui-a-Papaarangi

"Rukuhia te hohonutanga o te mātauranga - I like researching into the depths of knowledge."

Māori researcher for marine technologies

Brings science and Mātauranga Māori together to study ocean health

Heni on a fish survey dive, Tuhua/Mayor Island, Tauranga

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What Heni studies

Heni works on a wide range of exciting research in our oceans.

Kaupapa Māori aquaculture

Heni is working with iwi, hapū and whānau groups around Aotearoa on projects to develop Kaupapa Māori aquaculture – farming food like mussels in ways that align with Māori values and culture. This helps produce more food, creates jobs, and supports successful Māori businesses.

Tracking plastic in the ocean

Heni was part of a team that created a website to show where plastic travels when it gets into the sea. The team built a tracking engine using the physics of tide, winds and currents to create a simulation. Heni wrote the text, incorporated Māori kaitiakitanga (guardianship) of the ocean, and interviewed groups of school students to test the website.

Monitoring mussels remotely

Heni was in a team that created a smart mussel buoy to send information about the health of a mussel farm to a computer. The technology includes underwater communications for ROVs (Remotely Operated Underwater Vehicles), and laser analyses of phytoplankton in the water.

Heni is also developing a biological sensor on mussels, to measure their rate of closing or opening. The mussels can tell us about the environment, because too much sediment or toxic algae makes mussels close. If the environment is healthy, they stay open to feed.

See her complete profile from Oketopa 2019 - Scroll down at
https://nzase.org.nz/resources/?resource=scientist-profiles

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