



NEWS UPDATE

MEI TE VAI KI TE VAI – RESTORING THE HEALTH OF OUR LAGOONS RAROTONGA NEWS UPDATE, JULY - AUGUST 2018

AT A GLANCE

- Environmental monitoring shows link between groundwater and lagoon
- Coming soon: full results of our environmental investigations
- Oceanographic studies inform wastewater disposal options
- PMU Updates the House of Ariki

WHAT'S HAPPENING?

Environmental monitoring shows link between groundwater and lagoon

The Mei Te Vai Ki Te Vai project management unit is preparing the full report of its environmental investigations, but we are now certain that groundwater in the Muri catchment is directly connected to water in Muri Lagoon.

Past environmental studies of the Muri Lagoon did not confirm the factors contributing to the lagoon's water quality, so we decided to undertake further studies to close the remaining information gaps. The extent of connection between groundwater and the lagoon was one of these gaps.

We installed monitoring wells in Muri, conducted ground surveys on Muri beach, and tested water in the lagoon. What this showed was that groundwater, even at very deep levels below the ground, responds to the lagoon tide. There were also chemical indicators of groundwater far out into the lagoon. This proves that groundwater and water in the lagoon are mixing.

This means that toxic material dumped on the ground or in streams can make its way into groundwater and eventually into the lagoon. Examples of common products likely to cause issues are insecticides, weed killer, pharmaceuticals, paint and motor oil.

Improving sanitation infrastructure can help protect groundwater and the lagoon, and we are working towards this, but we also need to take a more conscious approach to choosing products we use on the land.

Coming soon: full results of our environmental investigations

The Mei Te Vai Ki Te Vai project will release full results of our environmental investigations in September, but we are currently sharing our key findings with stakeholders while we develop the final report.

These results will provide valuable information that will help guide future decisions about assessment, monitoring, and management of water quality.

Oceanographic studies inform wastewater disposal options

As a part of the Mei Te Vai Ki Te Vai project, coastal engineers from the University of New South Wales have been working to gather data on nearshore ocean currents, and mixing processes in the ocean off Rarotonga. This work will help us to evaluate the feasibility of an ocean outfall for treated wastewater – one of the two options we're considering for wastewater disposal.

The work involved dye tracing and current profiling at four locations along the coast. The team dropped dye at each location, and measured the movement of the dye for between 30 minutes and one hour. They also used acoustic measurements to help profile currents at each location, and to understand how the currents vary at different depths.

The data on currents and mixing processes will help us to understand the potential mixing and movement of wastewater from an ocean outfall, and support the development of an outfall with the least possible environmental impact.

Alongside ocean disposal, we are also evaluating and preparing information on land-based wastewater disposal, to enable Government to consider both options before deciding on a preferred method.



Dye plumes used to measure currents and water mixing off the coast of Rarotonga. Photos from UNSW.

PMU updates the House of Ariki

On 9th August, the PMU team presented at the House of Ariki conference, providing a high-level update on Mei Te Vai Ki Te Vai and Te Mato Vai projects and answering questions from attendees.

The PMU thanks the House of Ariki for allowing the team to present, and for their comments and support of both projects. The PMU will continue to keep the House of Ariki updated as the projects progress.

TE KARERE

MEI TE VAI KI TE VAI - TE AKAOKI'ANGA MAI I TE TURANGA MEITAKI O TO
TATOU TAI ROTO. RAROTONGA TE KARERE, TIURAI - AUKUTE 2018

TE AKARAKARA'ANGA ATU

- Te piri'anga ote vai enua e te tai roto tei kiteia na roto ite akarakara matatio'anga ote Ao Natura.
- Kare e roa ia atu ana: ka tukuia atu te ripoti no runga ite katoatoa'anga ote kite ete marama tei rauka mai mei roto mai ite au akarakara matatio'anga ite Ao Natura
- Te akarakara matatio'anga ite aere'anga ote tai moana te ka riro ite tauturu ite akarakara'anga ite au ravenga tau note aka'atea'anga ite vai repo
- Kua oronga atu te PMU ite karere kite Are Ariki

EAA TE TUPU NEI?

Te piri'anga ote vai enua e te tai roto tei kiteia na roto ite akarakara matatio'anga ote Ao Natura

Te akateateamamao nei te tu'anga angaanga Mei Te Vai Ki Te Vai ite ripoti no runga ite au kite ete marama tei rauka mai no roto ite akarakara matatio'anga ite ao natura tei raveia ki Muri, e kua papu ia matou i teiane e e piri'anga tikai to te vai enua kite tai i roto ite tai roto o Muri.

Ko te au akarakara'anga tei raveia ite au tuatau i topa no runga ite tai roto o Muri kare te reira i akapapu mai ana ite au tumu papu e akatupu nei ite turanga ote tai roto, no reira kua rave atu matou i tetai au akarakara matatio'anga no te topiri'anga ite au va i roto i teia au akarakara'anga tei rave mua ia. Kote piri'anga ote vai enua ete tai roto tetai o teia au va.

Kua ko atu matou i tetai au va'arua vai i Muri note akarakara matatio'anga ite turanga ote vai ete vai enua, kua rave ia atu te vaito'anga ite turanga ote enua ite tapa taatai o Muri e kua rave katoaia te vaito'anga ite turanga ote tai i roto ite tai roto. Kua akaari mai teia e kote vai enua, noatu eaa te oonu ki raro ite enua, te aru nei te reira ite aere'anga ote ngaru i roto ite tai roto. Kua kite katoaia mai tetai au vairakau tate vai enua i apai mamao ki tai i roto ite tai roto. Kua akapapu mai teia ete ka'iro nei te vai enua kite tai ote tai roto.

Ko te aite'anga kote au apinga tau kore e pepeia nei ki runga ite enua me kore ki roto ite au kauvai me kore aravai te tae nei te reira ki roto ite vai enua e taopenga atu i reira ki roto ite tai roto. Ko teia tetai au akara'anga o teia au apinga koia oki kote au vairakau tamate manumanu, vairakau tamate tita, au vairakau note maki ote tangata e pera te inu ote au apinga matini.

Ka riro te akameitaki'anga ite turanga note akaatea'anga ite repo ete vai repo tangata ite paruru ite vai enua e pera te tai roto e te 'anga'anga nei matou ki runga i teia inara ka anoano katoaia kia ta'anga'anga tatou ite au apinga me kore vairakau meitaki note natura i runga ite enua ite tuatau ki mua.

Kare e roa ia atu ana: ka tukuia atu te ripoti note katoatoa'anga ote kite ete marama tei rauka mai mei roto mai ite au akarakara matatio'anga ite Ao Natura

Ka tuku atu te tu'anga 'anga'anga Mei Te Vai Ki Te Vai ite ripoti note katoatoa'anga ote au kite ete marama tei rauka mai mei roto mai ite au akarakara matatio'anga ite Ao Natura i roto nei ite marama Titema, inara te akaari nei matou ite au tu'anga mamaata o teia au kite ete marama tei rauka mai kite au pupu e 'anga'anga kapiti nei ki runga i teia tu'anga 'anga'anga ia matou e akateateamamao nei i teia ripoti.

Ka riro teia au kite ete marama tei rauka mai ite oronga mai ite au manako puapinga note tuatau ki mua ite tauturu'anga ete arataki'anga ite au tuku'anga tika no runga tikai ite akarakara matatio'anga e pera te akono'anga kia rauka te turanga meitaki ote vai.

Te akarakara matatio'anga ite aere'anga ote tai moana te ka riro ite tauturu ite akarakara'anga ite au ravenga tau note aka'atea'anga ite vai repo

E tu'anga 'anga'anga katoa nate Mei Te Vai Ki Te Vai ite apai'anga mai i tetai aronga kite pakari mei te apii tuatoru mai koia te University of New South Wales tei rave atu ratou ite au 'anga'anga note koiko'i'anga i tetai au marama no runga ite koko'anga e pera te kairo'anga ote tai i roto ite moana i vao ake ia Rarotonga. Ka riro teia tu'anga 'anga'anga ite tauturu ite akara matatio'anga ite au turanga tau note ravenga paipa'anga ite vai repo tei ta vairakauia kite moana – ko tetai oki teia ie rua nga ravenga e akarakaraia nei note akaatea'anga ite vai repo.

Kua raveia teia 'anga'anga na roto ite ta'anga'anga 'anga ite peni tei aru ite aere'anga ote koko'anga tai i tetai au ngai e a i roto ite moana. Kua tukuia atu teia peni ki roto ite tai i teia au ngai e a e kua vaito ia te aere'anga ote peni mei tetai 30 miniti kite tai ora te roa. Kua ta'anga'anga katoa ratou i tetai apinga akarongo'anga ei ravenga tauturu ite kite ete akapapa'anga ite turanga ote koko'anga tai i teia au ngai kia rauka te marama e i akapeea i tuke ei te au koko'anga e pera te tuke ote au oonu'anga i teia au ngai.

Ko te au marama no runga ite koko'anga tai e pera katoa te au ravenga ka'iro'anga ote tai ka tauturu te reira ite oronga'anga mai ite marama note kairo'anga ete aere'anga ote vai repo me paipaia te reira kite moana, ka riro katoa teia marama ite turuturu ite akatupu'anga ite ngai ka tau note paipa'anga ite vai repo kite moana mate iti rava ote tamanamanata'anga te ka tupu kite natura.

Kapiti atu kite paipa'anga ite vai repo tei ta vairakauia kite moana, te akarakara katoa nei matou mate rave i tetai au akapapa'anga no runga ite akaatea'anga ite vai repo tei ta vairakauia ki runga ite enua kia rauka ite Kavamani ite kimikimi matatio no runga ite ravenga tau tikai i mua ake ka akapapuia ei teia.



Kote peni tei ta'anga'angaia note vaito'anga ite koko'anga e pera te ka'iro'anga ote tai i vao ake ia Rarotonga. Tutu mei te UNSW

Kua oronga atu te PMU ite au karere kite Are Ariki

Ite ra 9 o Aukute, kua oronga atu te pupu ote PMU ite au karere kite Are Ariki no runga ite turanga ote nga tu'anga 'anga'anga Mei Te Vai Ki Te Vai e pera katoa te Te Mato Vai ite tuatau o ta ratou Uipaanga Mataiti, kua oronga katoaia te au pau'anga ete au akamarama'anga no runga ite au ui'anga tei uiia mai.

Kua oronga katoa te PMU ite akameitaki'anga maata kite Are Ariki no tei akatika mai kia orongaia atu te au karere e pera katoa no to ratou au manako ete turuturu i teia nga tu'anga 'anga'anga puaping. Ka rave ua atu rai te PMU ite oronga'anga ite au karere kite Are Ariki no runga i teia nga tu'anga 'anga'anga