Research   Policy   Practice

NGĀ RĀKAU TAKETAKE
Saving Our Iconic Trees
from Kauri Dieback & Myrtle Rust

NEW ZEALAND'S BIOLOGICAL HERITAGE
Ngā Koiora Tuku Iho
National SCIENCE Challenges

CULTURAL MONITORING TOOLS:

A MANA WHENUA NARRATIVE

We developed this tool in partnership with six hapū across three case study regions from 2021 to 2023. We have shared the mana whenua perspective of those who contributed to creating this tool, along with their responses during the initial trials using a paper field sheet template that subsequently was delivered in an easy-to-use digital format (Survey123).

Cultural monitoring involves assessing and expressing the values and perspectives of iwi/hapū. By monitoring environmental-cultural changes over time from an iwi/hapū standpoint, this approach contributes to representing the values and interests of tāngata whenua in the management and decision-making processes related to ngahere ecosystems within the region. Active engagement of iwi and hapū is a key aspect of ecosystem management.

Our cultural monitoring tool complements other survey tools, such as biological surveys for kauri dieback and myrtle rust, within the broader Ngā Rākau Taketake programme.

AT A GLANCE

This living tool was developed to respond to the urgent need of mana whenua to have a Te Ao Māori-based tool to capture their worldview and data, to formulate and articulate their response to kauri dieback and myrtle rust.

RESEARCH

Establishing the foundation

We reviewed cultural monitoring tools previously created in New Zealand (Hetet et al., 2021). A collaborative team comprising mana whenua, Māori researchers, and the Te Whakahononga Māori Co-lead rōpu from the Ngā Rākau Taketake project deliberated on how these existing models could be adapted and customized to create a tool specifically addressing kauri dieback (caused by the pathogen *Phytophthora agathidicida*) and myrtle rust (caused by the pathogen *Austropuccinia psidii*) in the context of biosecurity monitoring.

The process

Volunteer rōpū (groups) involved in the development of our monitoring tool were invited to day-long wananga (gatherings) in their respective regional areas—Te Tai Tokerau, Tauranga moana, and Manawatu. Based on feedback from these wānanga it was decided that the tool would be more accessible to end-users in the field in a digital, handheld tablet-based format.

Tool development

To assess the health of the ngahere (forest), we identified key attributes governing its well-being. These attributes were organised into cultural themes. Ngāti Rangi initially identified these themes, and our participating mana whenua kaimahi (tribal workers) further extended them. Each indicator was associated with cultural descriptions, allowing us to gauge the state of health - ranging from wellness (Nui) to unwellness (Aue) - or the presence or absence of specific measures.

1. **Ngāhere**: Representing the nature of the forest.
2. **Rongoā**: Focusing on medicinal properties.
3. **Manu**: Pertaining to birds.
4. **Wai**: Addressing the two states of water (wai) within the ngāhere: (i) the mauri (life force) of water in the forest and (ii) the mauri of water sources such as puna (springs) and awa (rivers) within the ngahere.
5. **Tāngata**: Metrics that observed interactions between these cultural indicators.

FEEDBACK

The cultural monitoring tool was found to be significantly more user-friendly in its digital format. General feedback acknowledges that kaimahi recognised the survey's comprehensiveness in capturing Māori ecological data related to the well-being of the ngahere (forest).

Valuable insights from the feedback were:
1) The suite of surveys may be too much, clarifying the difference between the different kinds would support kaimahi to not feel overwhelmed by the overall tool.
2) Back resourcing kaimahi e.g., Identification guides for rākau, shrubs, ground cover, weeds birds etc. specific to areas.
3) Maramataka add on suggested to track seasonal patterns.
4) Information quick guide on tool to be updated, e.g: must reload new link for updated version etc, data held on tablet, must be manually submitted when in range etc.
5) Understanding the natural changes, such as the death of a rākau as opposed to the incursion changes of the rākau, manu, ngāngara and ngahere etc.
6) Taking time and slowing down to reconnect with the Ngahere to reclaim the connections that our tupuna had.

Kaimahi trialling the framework from the two case study groups: Tauranga moana and Te Tai Tokerau 2022.

CONCLUSIONS

Hapū who trialled this cultural monitoring tool throughout its various iterations consistently indicated that the tool was needed and offered a comprehensive, holistic perspective on forest health. Furthermore, it offered quantifiable metrics that could be shared with external stakeholders.

In this context, we have successfully achieved the goal of creating a readily accessible, easy to use tool that allows for the measurement of forest health from a Te Ao Māori worldview. Essentially, the data collection and training associated with this initiative will prove invaluable to hapū, enabling them to access seasonal information and gain a comprehensive understanding of their forest sites, including observations related to myrtle rust and kauri dieback disease.

The sharing of knowledge between hapu cannot be underestimated as hapu previously without the disease are now being affected as the diseases progress through the ngahere.

We would like to acknowledge and give our sincere thanks to all the kaimahi and hapu who participated in the development of the tool, who attended the noho taiao, the paper and digital trials and feedback that were received through the development process especially whanau from Ngāti Te Wai, Patuharakeke, Te Uri o Hau, Ngāti Rehia, Rangitane, Ngāti Manawa. Our sincere gratitude to the Tangata kokiri for their guidance on tikanga and facilitation all through the tool development.

Ngā mihi atu ki a koutou katoa.
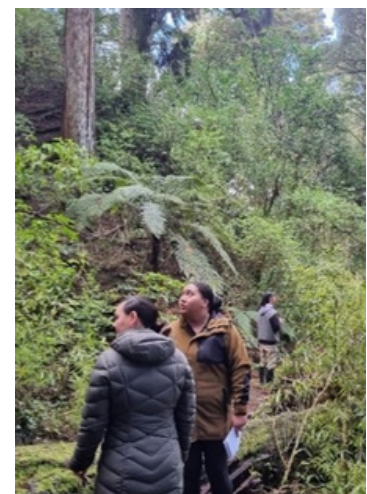
Kaimahi training of Rangitane in Makirikiri reserve and Mangatoro reserve.

FIND OUT MORE

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REFERENCE:
Hetet, R., Griffiths, R., &Milner, D. (2021). Cultural Health monitoring framework review: Summary document. Kahu Environmental.

Data repository