



RESEARCH ARTICLE

NEW ZEALAND
GEOGRAPHER

WILEY

Co-production of insights for place-based approaches to revitalise te taiao in Aotearoa New Zealand

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Abstract

Communities across Aotearoa New Zealand are collaborating to reverse ecological decline, but little attention has been given to understanding the deeper relationship required with our physical and socio-cultural landscapes. We used

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Funding information

Our Land and Water National Science Challenge, Grant/Award Number: C10X1901

knowledge co-production to develop 11 insights to support place-based strategies that nurture a collective responsibility to revitalise both people and place. Twenty-five subject matter experts across communities, government, industry and research drew from their collective expertise and the review of 63 local-to-global case study examples of farm-to-community-scale place-based approaches. A key output from this work is an Aotearoa New Zealand framework that diagrammatically represents the interdisciplinary nature of the 11 insights.

KEYWORDS

collaboration, knowledge systems, place-based, tangata whenua, Te taiao, Te Tiriti o Waitangi

1 | INTRODUCTION

Globally, innovative land management and uses are needed to respond to pressing environmental challenges due to biodiversity loss, climate change and waterway degradation (Rockström et al., 2020). In Aotearoa New Zealand, government and industry are calling for land management, use, value chain and market opportunities to address similar local challenges (Ministry for Primary Industries, 2022). This is driven by government legislation, industry assurance schemes and the ability to increase market access based on consumer perceptions of product sustainability. Simultaneously, there is an opportunity for a uniquely Aotearoa- New Zealand response to these global and local challenges by meaningful inclusion of Te Tiriti o Waitangi and tangata whenua (people of the land) through protection, participation and partnership in decision-making (Taiao Ora, 2022). In Aotearoa New Zealand, partnership between tangata whenua and government in environmental decision-making is ideally place-based.

Place-based approaches aim to leverage community strengths and connection to place to respond to complex social, economic and ecological issues (Horlings et al., 2020). The term 'place' in this context does not refer to administrative or geographical boundaries and therefore does not have a universal definition. Rather, place is socially constructed through individual and collective engagement with spaces where people live, work and play. Place-based approaches seek to co-create shared attachments, meanings and responsibilities for a place (Agnew, 2011; Quintana Vigiola, 2022; Stedman, 2003; Tuan, 1979), the so-called 'place-making' (Toomey et al., 2020). This means places: (1) exist at different scales (Swagemakers et al., 2019), for example a town, landscape or business; and (2) are defined by an intricate web of ongoing relations among people and the physical environment (Agnew, 2011; Cresswell, 2014; Davenport & Anderson, 2005). Understanding place as 'socially

constructed' brings into focus the social processes needed to develop relationships between people and the physical nature of a place; this fosters a connection and a responsibility to protect that place (Masterson et al., 2017; Roep et al., 2016). This is similar to indigenous practices, such as kaitiakitanga (guardianship, stewardship and trusteeship) in Te Ao Māori (Māori worldview) (Kawharu, 2000), Feeling and Hearing Country in Australian Indigenous practices (Poelina et al., 2023), relational animacy in the Blackfoot worldview (Atwood et al., 2023) and *ǪvǪlǪs* (Haizaqv Law) in the Haizaqv (Heiltsuk) Nation of Coastal British Columbia (Artelle et al., 2018).

Internationally, there is a growing expectation that activities to address anthropogenic sustainability are place-based and this has led to increasing commitments to such approaches. Examples include policy and planning for sustainability in Europe (Quinn et al., 2019); the United Kingdom Place-Based Net Zero Policy for small and medium enterprise;¹ and Practical Place-Based Initiatives and Queensland Council of Social Service place-based approaches for community change in Australia.² In Aotearoa New Zealand, for example, the Department of Conservation was recognised as an early adopter of a place-based approach to regional conservation (Brown & Weber, 2013). These initiatives have developed their own guiding definitions of and insights for implementation of place-based approaches.

In this study, we describe place-based approaches as community-led initiatives tailored to the specific physical and social characteristics of a geographic area (Horlings et al., 2020) to nurture mutually beneficial and balanced relationships between people and place (Swagemakers et al., 2019). In Aotearoa New Zealand, this recognises the long-standing connection and responsibility tangata whenua have with the natural world, te taiao (Panelli & Tipa, 2007). Te taiao, the Māori concept of the environment, encompasses all aspects of existence, binding the

physical, metaphysical and temporal spheres into a holistic worldview (Taiao Ora, 2022). This interconnectedness underpins place-based approaches in Aotearoa New Zealand and by providing tangata whenua and tangata tiriti communities with a collective sense of connection and a call to care for their environment. This relationship with the natural world is central to the identity and wellbeing of hapū (a descent group with a common ancestor), and their capacity to act as mana whenua (authority associated with possession and occupation of hapū land) (Panelli & Tipa, 2007; Waiti and Awatere, 2019). Tangata tiriti (People of the Treaty of Waitangi) have their own connections with place (Morris, 2009; Sampson and Goodrich, 2009).

Earlier research on place-based approaches in Aotearoa New Zealand has not developed guiding principles (Curran-Cournane et al., 2021) but rather draws upon overseas frameworks (though recognising the importance of the principle of 'engaging with traditional custodians') (Barry et al., 2024). A knowledge gap addressed here is the identification of insights into the implementation of place-based approaches in Aotearoa New Zealand, with attention to meaningful inclusion of Te Tiriti o Waitangi and tangata whenua. To address this, we reviewed local-to-global examples of farm-to-community-scale place-based approaches and used these to weave together multiple perspectives and experiences of place-based approaches. From this, we identified 11 insights that look to grow and strengthen a sense of connection to and responsibility to care for a place, which can be adopted in Aotearoa New Zealand.

2 | METHODOLOGY

Our research identified and critically reviewed a total of 63 examples of place-based approaches to co-develop insights for the implementation of place-based approaches that support the uptake of land management practices and land use diversification to improve environmental and community outcomes. We conducted our research in five steps, as the following sections outline.

2.1 | Create an expert research team

Following a call for expressions of interest, an expert research team was formed. Thirty-five expressions of interest were reviewed and screened (by the first three authors of this article) based on applicant interest in, and experience and skills to contribute to the research outcome. The research team consisted of 25 people, many of whom had not worked together previously, from across agribusiness, communities, government, research and

industry: seven with te ao Māori and 18 with te ao Pākehā (the world view of New Zealanders of European descent). Two face-to-face wānanga (forum) took place to foster connections among the research team and set tikanga for how the team would work (Stokes et al., 2021). Research team member time and travel costs were fully funded by Our Land and Water National Science Challenge, aiming to support equitable participation. The research team has co-authored this article.

2.2 | Grounded theory

We used grounded theory (Glaser & Strauss, 1967) as a structured process to develop the insights by systematically collecting and analysing qualitative data from the 63 national and international examples of place-based approaches found by the research team. Grounded theory works almost in a reverse fashion from traditional research; instead of starting with a hypothesis, the data collection and analysis are conducted simultaneously to develop insights. Grounded theory is useful for exploring the complex social processes and interactions found in place-based approaches and was suited to our research's exploratory nature. We drew on mātauranga Māori to create culturally relevant insights and to thoroughly understand successful place-based approaches, keeping in mind the different social and environmental contexts of each example.

The grounded theory process involved data collection and open coding of national and international case study examples, followed by thematic analysis to generate, review and name themes, and finally write-up. This process was done iteratively, moving back and forth between data collection, thematic analysis and write-up, through 15 online team meetings and one face-to-face research team wānanga. For example, following open coding more data collection occurred as members of the research team found new examples and new criteria needed to describe the case study examples.

The research was undertaken between April 2021 and January 2022. We did not use a formal Human Ethics Application process but instead reflected on the collective research effort whereby the group established tikanga, kept a process of sharing and sought feedback on the insights as they were co-developed, and collectively took part in the write-up of our findings (Stokes et al., 2021).

2.3 | Data collection and open coding

Open coding involved finding and categorising the place-based approaches without any predefined categories (codes) or definitions of what is meant by 'success' or what is preconceived as 'important' for describing place-

based approaches. The case study examples included the following: ground-up initiatives led by local individuals, communities or agri-businesses; new modes of food and fibre production that realise improved wellbeing for people, animals and the environment; working with multiple community partners, including government agencies and research organisations; and local actions responding to global challenges, such as climate change, food security and environmental degradation.

The research group described the 63 case study examples using a total of 41 codes; information was entered based on relevance, reflecting that not all codes were necessarily relevant or present in each example (see [Supplementary material](#)). The 63 examples of place-based approaches were found by drawing on the research group's own experience, publicly available information (e.g. websites and reports), and peer-reviewed journal publications. In cases where information was missing, unstructured interviews were conducted with a key contact involved in the case study.

We used the focused conversation method (Stanfield, 2000) to help the research team collectively understand why each member selected their examples of successful place-based approaches. As part of this process, members of the research team used narratives to explain to the wider group why they had selected their example(s) using the 41 codes, and by verbally describing what their example(s) meant to them. Through this inductive process (Guest et al., 2014), the group developed a shared understanding of what constitutes 'success'. This led to the iterative development of new codes related to the place-based examples and the identification of additional examples. Of the 63 identified examples, 18 were international, 36 were from Aotearoa New Zealand, and nine were based in Aotearoa New Zealand but had an international component. The examples ranged from farm to catchment and community scale, including agroecology, diversification from monocultures, conservation management, climate adaption, renewable energy, indigenous biodiversity, organic farming, product and value chain development, and indigenous community development. From the data collection and open coding process, systematic data were compiled for each of the 63 examples using the 41 codes. These systematic data captured spatial and temporal scale, purpose, management practice, incentives and drivers for change, success outcomes, how change was monitored, community engagement, barriers to adoption, scalability and socio-economic, cultural and environmental outcomes.

2.4 | Thematic analysis

The research team then conducted a process of thematic analysis, using the focused conversation method, to

derive key insights from across the 63 identified place-based case studies. Here, we synthesised the codes and the systematic data for common themes associated with 'success' that recurred across the examples. These themes were then grouped, defined and named as potential 'insights' for implementing place-based approaches. Through this process, the research team developed a deeper understanding of the commonalities and differences associated with implementing place-based approaches from the examples.

2.5 | Write-up

The research team then formed small writing teams of two to three individuals to write up each of the 11 insights identified, based on their subject matter expertise of the insight. During the write-up phase, the team engaged with the place-based literature on each of the identified insights (e.g. community-led change, collaboration) to explore how it was grounded in existing knowledge, but also contributing to new perspectives and knowledge arising from steps 1–4 (sections 2.1–2.4). Lastly, a two-day face-to-face wānanga was held to collectively review, refine and explore connections among the insights to ensure they accurately reflected the research team's knowledge of the 63 case study examples.

3 | RESULTS AND DISCUSSION

The 11 insights are shown diagrammatically in Taiao Manawa Ora (Figure 1) and are summarised with a supporting case study example in section 3.4 below. From the research team's extensive discussions during thematic analysis, we grouped the 11 insights into three overarching constructs which we discuss below: Te Tiriti o Waitangi (section 3.1), Relationships and Connections (section 3.2) and Sustainable Business (section 3.3). Te Tiriti o Waitangi includes the insights: 1. Tangata whenua-Tangata tiriti; 2. Environment; 3. Respecting all knowledge; and 4. Values. Relationships and Connections includes the insights: 5. People and place; 6. People and community-led changes; and 7. Collaboration and participation. Sustainable Business includes the insights: 8. Broader measures of success; 9. Interconnected solutions; 10. Leadership and management; and 11. Access to resources.

The central diamond (pātiki) in Figure 1 represents the core ingredients without which an initiative will struggle to stay together. The four outer triangles (niho taniwha) are what might be considered the project elements. Each might work well on its own, but in combination, they provide a

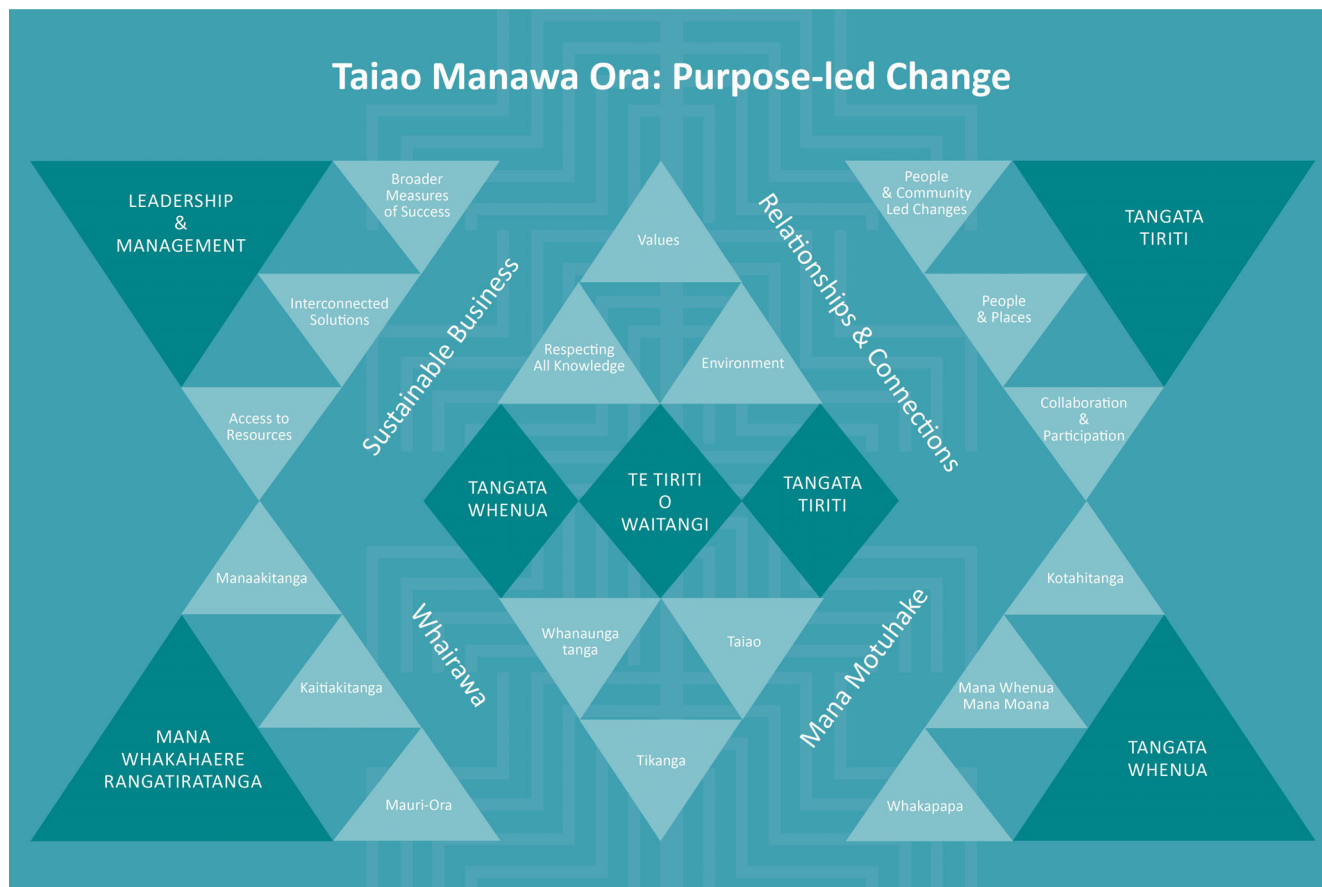


FIGURE 1 Taiao Manawa Ora: Purpose-led change as an expression of cultural, social, political, economic and environmental insights.

fuller project. The horizontal halves of the diagram are mirrored; the lower half reflecting tangata whenua, the upper half tangata tiriti. The halves are not exact reflections or direct cultural equivalents. Each half can work successfully on its own. Combining halves provides opportunities for greater, more culturally diverse and richer outcomes. The symmetry along the vertical axis shows a similar phenomenon. Each segment can work on its own. For example, sustainable business actions can be driven ‘top-down’ within an organisation without accommodating wider relationships. However, the incorporation of wider relationships (plus ‘bottom-up’) can ensure that organisations stay relevant within their own community.

3.1 | Te Tiriti o Waitangi: A foundational framework for place-based approaches in Aotearoa New Zealand

Our research found that there are four insights that underpin place-based approaches to environmental decision-making in Aotearoa New Zealand (Figure 1). The first insight (1. Tangata whenua-Tangata tiriti) is that the partnership between tangata whenua and the

government needs to be central to place-based approaches. Examples include Te Urewera Act 2014 and Te Awa Tupuna (Whanganui River Claims Settlement) Act 2017, which provide legal recognition by the Crown of whenua (Te Urewera) and awa (Whanganui) as indivisible, whole and legal entities with all the rights of a person (Ruru et al., 2017). These Acts recognise tangata whenua’s relationship with te taiao and enable tangata whenua’s ability to act as mana whenua (authority associated with possession and occupation of hapū land). For tangata whenua, the relationship with te taiao is central to their identity and wellbeing (Panelli & Tipa, 2007; Waiti and Awatere, 2019). Te Tiriti o Waitangi, signed on 6th February 1840, therefore continues to shape Aotearoa New Zealand’s approach to environmental management. Kukutai et al. (2021) and Manaaki Whenua-Landcare Research (2014) have named key principles from Te Tiriti o Waitangi that are central to successful place-based approaches, including reciprocity, rangatiratanga, shared decision-making, partnership, active protection and ōritetanga (mutual benefit, the right of development and redress). These principles have been instrumental in giving practical effect to Te Tiriti o Waitangi rights, particularly through initiatives like Te

Mana o te Wai (Taylor, 2022) and ensuring that the connections and obligations tangata whenua have to te taiao are reflected in local environmental decisions (Panelli & Tipa, 2007). While we found Te Tiriti o Waitangi is foundational to place-based approaches in Aotearoa New Zealand, implementation of Te Tiriti o Waitangi principles is still a challenge. Barry et al. (2024) highlighted a lack of knowledge and recognition of Te Tiriti o Waitangi as barriers to the implementation of this insight. These authors therefore called for education around Te Tiriti o Waitangi as an enabler of partnership.

The second insight (2. Environment) is the recognition of the many connections that tangata whenua and tangata tiriti have with te taiao. As well as the connections tangata whenua have to place (Panelli & Tipa, 2007; Waiti and Awatere, 2019), we found that tangata tiriti have their own ties to the land. For instance, high-country farmers who feel a deep connection to and belonging to the land they have lived on and benefited from for generations (Morris, 2009). The broad view of te taiao includes the various physical, emotional and spiritual connections both tangata whenua and tangata tiriti have with their lands. Place-based approaches aim to strengthen these connections to help communities tackle complex social, economic and environmental challenges.

To enrich collective understandings of place and the diverse connections that tangata whenua and tangata tiriti have to place, our research found the need to incorporate diverse knowledge systems in place-based approaches—the third insight (3. Respecting all knowledge). This includes the knowledge of place held by hapū, local farmers and science (Brugnach & Ingram, 2012). The importance of working across expertise and sectors to bring together people with different interests and understandings was seen as critical for success in European place-based approaches (Horlings et al., 2020; Swagemakers et al., 2019). Respecting and integrating these diverse systems of knowledge can lead to a deeper and richer understanding of a place (Turner et al., 2020). An example is Tuhoē Tuawhenua Trust (Ruātāhuna), founders of Manawa Honey New Zealand, who developed a deeper understanding of their forests through forest monitoring based on te ao Māori and using both mātauranga Māori and scientific approaches that reflected tangata whenua understandings, interactions and relations with their forests.

The fourth insight, setting group values that address historical power and resource imbalances (4. Values), especially concerning indigenous knowledge, was identified as essential in this process of incorporating diverse knowledge systems in place-based approaches (Maxwell et al., 2020; Norström et al., 2020). This means genuinely sharing power among all participants to enhance mutual understanding (Borén & Schmitt, 2022; Pisters et al., 2019). Our research

identified that to address power imbalances, the establishment of group tikanga and values is foundational by fostering a sense of mutual respect among group members, acknowledgement of one's own culture, respect for the cultural identity of others and ensuring all voices are heard and valued equally (Henwood et al., 2023; Turner et al., 2020). Tikanga, the Māori system of values and practices, is deeply embedded in the social context and guides right action (Moorfield, 2022). The development of shared values within a group was therefore seen as a precursor to drawing on multiple knowledge systems to develop a collective understanding of and care for a place (Arai et al., 2021; Henwood et al., 2023).

3.2 | Relationships and connections: Place-based initiatives begin with connections to people and place

Our research highlighted three insights for relationships and connections related to place-based initiatives. We found that we are unlikely to protect what we do not connect with—the fifth insight (5. People and place). We saw in the examples that individuals with a strong emotional attachment to place are more likely to respect, protect, care for and improve 'their place'. For example, the Māori ethic of kaitiakitanga suggests that if your ancestors are connected to a place, you have a responsibility to protect and sustain it due to ongoing relationships with the past and future (Kawharu, 2000; Walker et al., 2019). Similarly, Leopold's (1949) land ethic emphasises the importance of respecting and taking responsibility for the land. This connection to and care of place has previously been seen in community connection to the Lahn River landscape in Germany (Gottwald, 2022) and the Hudson River in New York City (Toomey et al., 2020).

A key aspect of place-based initiatives is, therefore, the strengthening of connections of people to place. The concept of 'place' is fundamental to place-based approaches, grounding individuals' diverse connections with each other and the places they live, work and play (Cresswell, 2014). Place-based approaches move from physical spaces to emphasise local contexts and the varied experiences of individuals within a place (Quintana Vigiola, 2022), fostering a 'sense of place' (Horlings et al., 2020; Turner et al., 2020). 'Sense of place' describes how places carry personal meaning and significance, underpinned by a deep emotional, spiritual and physical connection (Stedman, 2003). An example is Te Hoiere Project (section 3.4), which used participatory mapping for people to share their emotional and physical attachments to Te Hoiere. Participants contributed information and images of their significant experiences in the

catchment, such as tramping, fishing, swimming, trapping pests and collaborating as a catchment group. Similarly, Gottwald (2022) used Public Participation GIS with communities along the Lahn River to show meaningful places.

The sixth insight highlighted that place-based approaches need to be bottom-up and community-driven to account for the diverse and intricate connections to place (6. People and community-led changes). To capture this richness of connections to place, place-based approaches are driven by the communities themselves, rather than imposed through 'top-down' regulatory or policy frameworks (Kirk et al., 2022; Quintana Vigiola, 2022). This means regulatory agencies are working collaboratively with, not on behalf of, communities to build on local knowledge and capacities to address sustainability challenges (Horlings et al., 2020; Quinn et al., 2019). 'Top-down' approaches alone risk reducing community engagement to a tokenistic exercise, which does not forge meaningful connections and trust, especially with marginalised groups such as Māori, Pasifika and youth. Moreover, 'top-down' approaches may overlook the intricate ecological and social connections that make a place (Horlings et al., 2020). Brown and Weber (2013) compared the identification of places of significant conservation value by the Department of Conservation through a top-down approach using expert judgement by staff with places shown using public participation and knowledge. The authors found that public participation complemented the 'top-down' approach by providing spatial data, including values and development preferences that informed identification of areas of conservation value. Our research found that successful place-based approaches, from the 'bottom-up', actively empowered marginalised groups, local people and others not included in decision-making to take part actively in the development and implementation of locally relevant and effective solutions for sustainable outcomes for communities. Empowering those who have not traditionally had a place at the table in decision-making was seen as critical to place-based approaches in Europe (Barca et al., 2012; Quinn et al., 2019).

Based on our findings, we suggest that successful place-based approaches begin with a collaborative and inclusive exploration of the various connections people have with a location—the seventh insight (7. Collaboration and participation) (Horlings et al., 2020; Marques et al., 2021) (see section 3.4 for an example). By fostering dialogue among diverse community members, our research found that place-based approaches promote mutual understanding of multiple communities' and individual's physical, emotional, economic, social and spiritual connections with a location. This strengthens individual and collective 'sense of place' (Toomey et al., 2020; Turner et al., 2020; Walker &

Moscardo, 2016). If a holistic view of a place is to be cultivated (Barry et al., 2024; Marques et al., 2021), community participation in place-based approaches must involve collaboration with communities, rather than mere consultation (Quintana Vigiola, 2022). Our findings align with the literature, suggesting that this holistic view should integrate people's different experiences, relationships, attachments, vulnerabilities and responsibilities to each other and the environment (Horlings et al., 2020; Merschdorf & Blaschke, 2018), thereby enhancing the community's sense of connection to each other and their places (Kirk et al., 2022; Turner et al., 2020). For example, in a place-based approach to exploring a vision for future land use in Wairau Valley, Marlborough, Barry et al. (2024) found that the vision for land use varied depending on individual and collective connections with a particular place, but common elements to the vision were to increase native and agricultural diversity and restore and conserve the landscape.

3.3 | Sustainable business: Achieving multiple outcomes to support thriving communities through interconnected values

As described above, our research found that place-based approaches are underpinned by a holistic view of how people connect with place, reflecting *te taiao* as the complex interdependence of the health of the natural world and the long-term viability of businesses in the food and fibre sectors. This involves the eighth insight, defining success in ecological, social and cultural terms, as well as economic (8. Broader measures of success). We found that successful place-based initiatives viewed financial viability as crucial only as far as it is important for realising other more enduring values (Reid et al., 2019). This view is consistent with the long-standing Māori economy, which incorporates multiple cultural bottom lines, intergenerational wealth, maintenance of cultural identity and *whānau* well-being (Rout et al., 2020). An example is Miraka Dairy's *Te Ara Miraka*, which aims to shift farmers to values-led farm practice based on *kaitiakitanga*. Farmers are independently assessed against several farm standards: *ngā tāngata* (people), *te taiao* (environment), *ngā kau* (cows), *miraka* (milk) and *taurikura* (prosperity). Farmers meeting these standards are rewarded with an added payment (Knook et al., 2022).

Recognising the complex interdependence of ecological, social and economic spheres, we found that place-based initiatives co-developed interconnected ecological, social and economic solutions, rather than starting with a single technical fix—the ninth insight (9. Interconnected solutions) (Vereijssen et al., 2017). Interconnected solutions are more

likely to be successful in addressing complex challenges compared with single solutions designed in isolation of others (Leeuwis et al., 2021; Vereijssen et al., 2017). Collaborative processes that respect all knowledge systems, such as Te Hoiere Project (section 3.4), are essential to co-developing enduring solutions (Vereijssen et al., 2017). Another example is Mangarara Station³ in Hawkes Bay which transitioned from a sheep station to a diverse and integrated farm that balances ecosystem restoration and the production of healthy, nutritious food. This involved changing land management practices and land uses, including stock type, land retirement initiatives and shared farm resources within the community. The Harts sell their regenerative beef directly to Hawkes Bay and Auckland butchers to connect with people who are willing (and able) to pay a premium for higher quality food and farming. Premiums can provide a stable financial platform to enable continued ecosystem restoration and innovation in regenerative farming practices but are reliant upon consumer willingness to pay.

To co-develop interconnected ecological, social and economic solutions, our research identified the need for leadership and management that can bring together diverse perspectives of partners in place-based approaches—the 10th insight (10. Leadership and management). These leadership aspects included the ability to coalesce various perspectives to build a unifying vision that resonated with partners in the initiative, a focus on building a united, committed project group and the ability to bring in needed resources and skills (Pfeifer, 2005). These aspects of leadership have previously been observed in place-based approaches in Europe and Aotearoa New Zealand, particularly leadership by public, private and community members who bridge different interests and build new connections (Horlings et al., 2018; Sinner et al., 2023). An Aotearoa New Zealand example is leadership in Te Hoiere Project (section 3.4). The project's vision reflects over 400 individual voices and 1400 statements collected through a process of 'planning by the community for the community'. Management then set up monitoring and evaluation to ensure progress is made towards the social, economic, cultural and environmental outcomes sought by the community.

The 11th insight is another key aspect of leadership of successful place-based approaches: providing the necessary time, energy, financial resource, information and skills to sustain action by the group (11. Access to resources) (Pfeifer, 2005). Our research found that funding for successful place-based approaches needs to be provided in a way that enables risk-taking and innovation to try alternative land management and land uses by providing flexibility around activities to achieve desired outcomes and make them endure (Pinxterhuis et al., 2019). Other necessary resources included skills, technology, data and models to

provide new understanding and knowledge of places for communities. For example, in the French Alps researchers engaged with stakeholders in participatory scenario planning to co-create relevant, credible and legitimate scenarios for realising the community's goals. Through this participatory process, the scenario planning combined physical resources (including planning documents maps, remote sensing data and modelling) with social resources such as local, stakeholder and researcher knowledge (Vaissière et al., 2021; Vannier et al., 2019).

3.4 | Example: Te Hoiere Project in Marlborough

Te Hoiere Project,⁴ started in 2019 in Te Hoiere/Pelorus catchment, Marlborough, is a collaborative effort to restore the catchment from the mountains to the sea through a place-based approach (Barry et al., 2024). Te Hoiere/Pelorus River is the largest river catchment (110,108 km²) flowing into the Marlborough Sounds, including the Havelock Estuary, Kenepuru and Pelorus Sounds at the top of te Wai Pounamu (the South Island) of Aotearoa New Zealand.

The project's six guiding principles have similarities with the 11 insights, and indeed, Barry et al. (2024) describe Te Hoiere as an example of a place-based approach to enabling sustainable land use that incorporates the 11 insights. The project recognises the interconnectedness of te taiao in a 'from mountains to the sea' approach to long-term environmental, cultural, social and economic outcomes. The project embraces te ao Māori, including te reo Māori, tikanga Māori and mātauranga Māori. Collective knowledge is recognised, including knowledge of ancestors, people's own experiences and community participation in research and decision-making. Finally, leadership and management emphasises the need for robust governance, monitoring and evaluation to ensure social, economic, cultural and environmental progress is made (10. Leadership and management).

This project exemplifies a place-based approach by focusing on a specific geographical area, involving mana whenua, local communities and stakeholders to enhance and protect environmental wellbeing (2. Environment and 6. People and community-led changes), as well as providing social, cultural and economic benefits. The project also emphasises the past and present connections the community has with the landscape that sustains their social and cultural wellbeing, and economic prosperity.⁵ The project is a collaboration including community and the Kotahitanga mō te Taiao Alliance,⁶ which promotes collective action towards enhancing biodiversity at the top of the South

Island (7. Collaboration and participation). The project has identified indicative costs of over \$41 million over 10 years to restore their catchment, with funding towards these costs from the Department of Conservation's Ngā Awa River Restoration Programme and the Ministry for the Environment's at Risk Catchments Programme and Jobs for Nature (\$7.58 million) as of 2024 (11. Access to resources).

The project implements Te Tiriti o Waitangi principles (1. Tangata whenua—Tangata tiriti) through recognition of Ngāti Kuia and Rangitāne o Wairau as mana whenua and kaitiaki of Te Hoiere and the Kaituna sub-catchment, respectively, and partnership of these iwi with Marlborough District Council and government agencies (Ministry for the Environment, Department of Conservation).

It recognises strength in unity (4. Values). Community, including rural, urban and multiple land users, came together to share ideas and co-develop an Integrated Catchment Enhancement Plan to restore their catchment (5. People and place). Participatory-based mapping in community halls, at kitchen tables, camping grounds, cafes, in the bush, beside the river and with kaumātua at Te Hora marae helped people share their emotional and physical attachments to Te Hoiere. Te Hoiere Project's vision and actions reflect over 400 individual voices and 1400 statements collected through a process of “planning by the community for the community”.⁷

The project emphasises the importance of weaving multiple knowledge systems (3. Respecting all knowledge); mātauranga Māori, local knowledge and biophysical science. Stories and knowledge from Ngāti Kuia kaumātua about traditional food gathering sites were recorded. Biophysical science along with local histories has shown significant changes to land and estuarine ecosystems since European settlement. This included community sharing their own experiences of Te Hoiere; describing and mapping⁵ environmental changes they have experienced, and what a healthier catchment would look like (Coutts & Ulrich, 2020). Local farmers have been involved in conducting water testing to find sources of nitrate and *Escherichia coli* contamination.

By taking a holistic and collaborative approach to involving community and stakeholders in planning and implementation, these interactions have helped develop a series of interconnected restoration solutions to realise broader measures of environmental, community and economic success⁸ (8. Broader measures of success). This includes development of wetlands and exploration of alternative farming systems that help the environment, community and economy (9. Interconnected solutions). For example, farmers have worked together to fence off waterways, undertake native planting and restore wetlands.⁹ Another example is the extensive pest trapping in the Te Hoiere/Pelorus Bridge Scenic Reserve to protect

native species like the long-tailed bats, which are significant to the area's natural heritage.¹⁰

3.5 | Weaving the 11 insights together: Taiao Manawa Ora

To show the interconnectedness and applicability of the 11 insights, the fourth author of this paper visualised the insights as Taiao Manawa Ora (Figure 1). Taiao Manawa Ora can be seen as a recipe for place-based approaches in Aotearoa New Zealand. Not all the ingredients need to be in the same proportions—some may not be there at all. A combination of different ingredients will provide different flavours. The recipe metaphor makes clear associations between the result and the initial inputs. For example, a project created solely from tangata tiriti ingredients will not likely be appetising to tangata whenua.

Taiao Manawa Ora highlights that the insights for tangata whenua are like (but not the same as) tangata tiriti insights. These similarities, if balanced, can provide a successful recipe for implementing place-based approaches that share and weave understandings of people and place to revitalise te taiao. In Aotearoa New Zealand, Te Tiriti o Waitangi is the meeting point between tangata whenua and tangata tiriti. Placing Te Tiriti o Waitangi at the core of Taiao Manawa Ora purposefully shows that meaningful tangata whenua and tangata tiriti relationships must be central to any initiative to revitalise communities and environments.

4 | CONCLUSIONS AND IMPLICATIONS

We present an Aotearoa New Zealand unique framework to improve environmental outcomes by meaningful inclusion of Te Tiriti o Waitangi and tangata whenua for place-based approaches. We advocate that this framework can be applied globally. Together, the 11 insights co-developed by the research team provide the key ingredients necessary to bring communities and people together to strengthen their connection with each other and the place where they live, to provide a framework for revitalisation.

Place-based approaches look to reconnect people with place in ways that strengthen the responsibilities people feel for these places. The opportunity to bring a uniquely Aotearoa New Zealand perspective to place-based approaches has highlighted the foundational roles in the success of place-based approaches of Te Tiriti o Waitangi partnership between tangata whenua and government and the many connections tangata whenua and tangata

tiriti have with te taiao. That is, Te Tiriti o Waitangi and te taiao are enablers of factors observed by other authors as associated with place-based initiatives: locally led, recognising and respecting local community knowledge and capacities, empowering those who have not traditionally had a place at the decision-making table, and sharing power and knowledge (Barry et al., 2024; Horlings et al., 2020; Quinn et al., 2019; Swagemakers et al., 2019). The 11 insights highlight that strengthening people's connection and responsibility for place involves people collectively weaving physical, economic, emotional and spiritual connections with all aspects of their place, including each other. This is te taiao, the binding of all physical, spiritual and temporal aspects of existence into a holistic worldview. Te Tiriti o Waitangi is foundational to this weaving of aspects represented in the insights: values, knowledge, measures of success, solutions, and people and place. Enacting Te Tiriti o Waitangi empowers those who have been excluded from decision-making (Quinn et al., 2019) and involves sharing power and knowledge among all participants to enhance mutual understanding (Horlings et al., 2020). The other insights highlight the capabilities needed to achieve this weaving: leadership, community and access to resources (both people and financial).

What the 'mix' of the 11 insights will look like in practice will be shaped by the specific characteristics of the community and places where people live, work and play. Each place will have access to differing resources and capabilities, have different connections to place, different values and different knowledges of place. Communities and individuals will each, therefore, understand and interpret the insights in diverse ways, based on their past and present experiences, and vision for the future. Discussing the insights as a group—what each insight means to them individually and collectively—will forge a deeper understanding of what the insights look like in practice in their place. Using the framework as a tool to plan and implement place-based approaches will help communities to connect with and care for their places by collectively finding land practices, uses and management opportunities to improve environmental and community outcomes. We hope this research and the examples identified show what can be achieved by tangata whenua and tangata tiriti working together within Taiao Manawa Ora.

ACKNOWLEDGEMENTS



Thank you to Roxanne Henwood and Oriwa Tamahou for their careful and thorough review of a draft of this study, and Jessica Wholey for her thorough copy editing.

FUNDING INFORMATION

This work was funded by the New Zealand Ministry for Business, Innovation and Employment's Our Land and

Water National Science Challenge (Toitū te Whenua, Toiora te Wai), contract C10X1901, as part of the 'Revitalise Te Taiao' programme.

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ENDNOTES

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Turner, J. A., Stokes, S., Te Hurinui Jones, R., Hemi, M., Collins, H., Vannier, C., Burkitt, L., Bradley, C., Doehring, K., Macintosh, K. A., Young, J., Roskruge, N., Perry-Smith, P., Kahukura Iosefa, R., Walker, N., Young, F., Bell, A., McDermott, A., & Wood, C. (2024). Co-production of insights for place-based approaches to revitalise te taiao in Aotearoa New Zealand. *New Zealand Geographer, 80*(3), 233–244. <https://doi.org/10.1111/nzg.12408>