

## We're all in this together? Community resilience and recovery in Kaikōura following the 2016 Kaikōura-Hurunui earthquake

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### ABSTRACT

The magnitude 7.8 earthquake that struck North Canterbury, on the east coast of New Zealand's South Island on 14 November 2016 had significant impacts and implications for the community of Kaikōura and surrounding settlements. The magnitude and scope of this event has resulted in extensive and ongoing geological and geophysical research into the event. The current paper complements this research by providing a review of existing social science research and offering new analysis of the impact of the earthquake and its aftermath on community resilience in Kaikōura over the past five years. Results demonstrate the significant economic implications for tourism, and primary industries. Recovery has been slow, and largely dependent on restoring transportation networks, which helped catalyse cooperation among local hospitality providers. Challenges remain, however, and not all sectors or households have benefited equally from post-quake opportunities, and long-term recovery trajectories continue to be hampered by COVID-19 pandemic. The multiple ongoing and future stressors faced by Kaikōura require integrated and equitable approaches in order to build capability and capacity for locally based development pathways to ensure long-term community resilience.

### ARTICLE HISTORY

Received 7 April 2022  
Accepted 9 January 2023

### HANDLING EDITOR

Andy Nicol

### KEYWORDS

Disaster recovery;  
community resilience;  
earthquake; Kaikōura; New Zealand

## Introduction

On 14 November 2016, at two minutes past midnight, a 7.8 (Mw) earthquake struck the east coast of the South Island, New Zealand. Despite being located 60 km north-east of the epicentre, the 'Kaikōura earthquake' as it is often known resulted in widespread damage and disruption throughout the northern South Island, and Wellington. Along the East Coast of the South Island there was significant disruption to the natural environment, including massive landslides, displaced communication networks (road and rail) and spectacular scenes of seabed uplift. Kaikōura's important role as a tourist destination – for domestic and international tourists alike – made it a touchstone for media reporting (Fountain and Cradock-Henry 2019) and coverage of the dramatic damage led to a close association between this seismic event and the township. The earthquake involved the rupture of at least 21 faults across a span of approximately 180 km. It is estimated that close to a million cubic metres of rock and material fell onto the coastal transport corridor (NCTIR 2021a), this, coupled with faulting, buckling, landslides, and damage to tunnels and bridges meant all roads and the rail network in and out of the area were damaged and closed by the slips and Kaikōura and the surrounding rural

communities were isolated (Stevenson et al. 2017). Road and rail networks and distributed infrastructure – water, power, communications, and sewerage – were severely distributed for a number of weeks, and there was extensive property damage both in Kaikōura township and surrounding regions (Stevenson et al. 2017).

Natural hazard events can be geologically complex, and may be impacted by social and economic factors. To date, there has been extensive analysis of the earthquake's morphology and its impacts, for networked infrastructure in particular (for example, see Davies et al. 2017, 2021; Stirling et al. 2017; Litchfield et al. 2018; Lane et al. 2021; Nicol et al. 2022). There is less known, however, about the socio-economic consequences of the earthquake, subsequent response and longer-term recovery, or the impact of, and on, the resilience of the Kaikōura community. Here, we seek to contribute to closing that gap through review and synthesis of social science research conducted in Kaikōura and the surrounding rural district in the years since the earthquake. The paper is organised as follows: first, we provide a brief overview of the concept of community resilience, particularly in the context of disaster response and recovery. This is followed by a summary of the regional pre-event context and immediate impacts of the 2016 earthquake. Following

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a brief review of the research methods, the five years of recovery following the earthquake are discussed; a period marked by the repair and reconstruction of infrastructure, particularly State Highway 1 and the marina, and the recovery marketing of Kaikōura as a tourist destination. The impact of this crisis and recovery period on the resilience of the Kaikōura community is also assessed. We close the paper by reflecting on the challenges of maintaining and enhancing resilience in the face of multiple and ongoing stressors, including the impact of the COVID-19 pandemic.

## Community resilience

Community resilience has been a growing focal area for research over the last two decades, building on and extending work in natural hazards and disaster risk reduction, to consider the social, economic, political and cultural factors that influence and shape vulnerability (e.g. Adger 2000; Magis 2010; Aldrich and Meyer 2015). Much of this work emphasises communities' need to, or their capacity for, 'bouncing back' from crises, such as natural hazard events (e.g. Paton 2013; Thornley et al. 2015; Vallance and Carlton 2015). As such, community resilience has been considered as 'the collective ability of a neighbourhood or geographically defined area to deal with stressors and efficiently resume the rhythms of daily life through cooperation following shocks' (Aldrich and Meyer 2015, p. 255). However, there is growing interest in the opportunities for resilient communities to pro-actively respond to slow-onset change processes (Steiner and Markantoni 2014; Carmen et al. 2022), and for a greater focus on transformative possibilities of a resilient community (Folke et al. 2010; Matyas and Pelling 2015; Brundiers and Eakin 2018; Craddock-Henry et al. 2018).

In order to enhance preparedness and post-event recovery there have been various attempts by researchers to proactively identify the attributes associated with resilient communities (e.g. Magis 2010; Maclean et al. 2014). Resilient communities, for example, have been shown to have strong social networks which are activated prior to-, during- and following an event, and are used to share information and knowledge. The presence of collaborative and participatory forms of local governance (Matarrita-Cascante and Trejos 2013; Maclean et al. 2014), which can encourage engagement and social-learning are also associated with greater resilience. Broader contextual factors in keeping with social-ecological principles, such as economic diversity, or an individual's access to social capital and other resources serve as prerequisites for community resilience. Social capital may be defined as an intangible resource that *binds individuals and communities together* and which, when utilised, enables the facilitation of coordinated

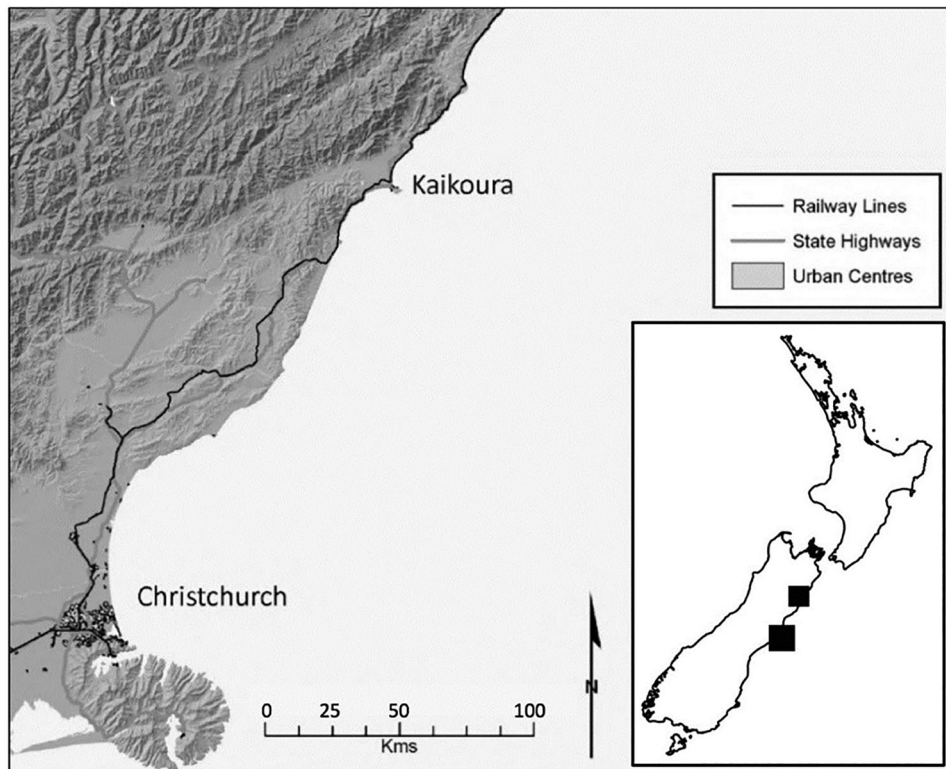
actions, mobilisation of resources, pursuit of shared objectives and collective resolution of problems (Putnam 2000). Social capital develops as individuals connect with each other and form bonds, with trust underpinning these relationships. Resilience researchers have recognised the value of a community having high stocks of social capital *in reserve* to be drawn on in particularly challenging times (Aldrich and Meyer 2015). While social capital is generally positioned as a positive quality, research has acknowledged that those with existing networks and social capital may also leverage this to consolidate privileged positions, at the expense of others (Gelderblom 2018; Vallance and Rudkevich 2021; Carmen et al. 2022).

In summary, community resilience can be considered as both a *process* and an *outcome* which builds capacity from within (Ross and Berkes 2014; Carmen et al. 2022). It is fostered through, and a function of, collective action, as individuals work together to resolve challenges, in the process drawing on existing networks and building social capital, enabling a community to work and solve problems together (Adger 2000; Paton 2013; Craddock-Henry et al. 2018).

As noted above, community resilience is often studied in the context of disaster response and recovery. In the tourism context, post-disaster recovery has been defined as: 'the development and implementation of strategies and actions to bring the destination back to a normal (pre-event) condition or an improved state' (Mair et al. 2016, p. 2). Scott et al. (2008) suggest three phases that may occur sequentially or concurrently in the recovery of tourist destinations: the recovery of damaged infrastructure, marketing responses (recovery marketing) and adaptation – either short- or long-term – to a new system. In many cases a return to pre-disaster 'normality' may be impossible or at least undesirable (Carlsen and Hughes 2008; Scott et al. 2008), and the loss of pre-existing systems, structures and processes can provide a 'window of opportunity' for significant change and re-imagination (Brundiers and Eakin 2018) so that disasters and crises can have 'transformational connotations' (Faulkner 2001, p. 137; see also Calgaro et al. 2014; Lew 2014). The following discussion will explore the recovery effort, and the role of the Kaikōura community in activities across these three interrelated phases and consider the extent to which novel system(s) and economic drivers have emerged and been maintained.

## Setting and context: Kaikōura District

Kaikōura District stretches from a point just south of the Haumuri Bluffs to just north of the settlement of Kekerengu. Kā Whata Tū a Rakihouia (The Seaward Kaikōura Range) and the Pacific Ocean mark the western and eastern boundaries respectively, so that



**Figure 1.** Kaikōura and surrounding area, South Island, Aotearoa-New Zealand. Source: authors.

‘Where the mountains meet the sea’ is an apt description of the district (see [Figure 1](#)). At just over 2000 km<sup>2</sup>, Kaikōura is the smallest district in New Zealand by area and its lowest rating base. At the time of the 2013 Census, the district had a usually resident population of approximately 3700 residents (Market Economics 2017), two-thirds of whom reside in Kaikōura township (2013 Census; see [Figure 1](#)). In the time since then, the population of Kaikōura township and district has increased slightly, with the district population standing at 3912 in the 2018 Census (Kaikōura District Council 2022a).

As a peripheral district with a small population base, Kaikōura has restricted facilities and services, and the council has a limited ability to raise funds through rates increases (Cradock-Henry et al. 2019). Furthermore, there are relatively high levels of socio-economic deprivation in the district (Yong et al. 2017). At the time of the 2018 Census, the median personal income in Kaikōura District was \$32,440 compared with a national median of \$36,597, and 12.2% of the population earned more than \$70,000 per year, compared to 17.2% nationally. This in part reflects the relatively low levels of education amongst the population, with a quarter of the population (24.8%) reporting no formal qualifications (compared to 18.2% nationally) and only 14% having a bachelor degree or higher (compared to 24.8% across New Zealand). A council staff member noted to Wilson and Simmons (2018) that some of the people who have been working temporarily in Kaikōura would have

liked to stay ‘but we don’t have the quality of education without more kids and more resources for the schools’ (p. 30), so most young people leave the district for employment and post-secondary study. In addition to the pressure on education provision, there are also challenges around health and welfare services. While there is a hospital, it has relatively limited resources with many health specialists travelling from Christchurch or Blenheim for weekly or monthly clinics. The town also lacks a rest home, meaning many elderly residents must leave town once they are unable to live at home unaided (Wilson and Simmons 2018).

Kaikōura’s economy has traditionally been centred on primary economic activities including farming and fishing. The district outside the township remains rural and reliant on agricultural production, particularly dairy, sheep and beef, and some arable farming and forestry. Over the last thirty years, tourism has become centrally important to the local economy, particularly in Kaikōura township, where in 2016 half of the workforce was directly employed in tourism and another 35% employed indirectly supporting the industry (Kaikōura District Council 2017, p. 34). By comparison only 12.1% of the population was employed in agriculture, forestry and fishing at the time of the 2013 Census, the most recent data available. The contribution of tourism to the district’s GDP has fluctuated over the years, peaking at 25.1% in 2016, although the true proportion of GDP from international tourism, incorporating accommodation,

transportation, retail and food services, has been estimated at 34.1% (MBIE 2018). In the three years from 2013 to 2016 tourist expenditure in the district increased by more than 40% (Destination Kaikōura 2017).

The importance of tourism to the district meant that in 2014 Kaikōura achieved Regional Tourism Organisation (RTO) status, with the new Destination Kaikōura being the smallest RTO in the country. Destination Kaikōura is responsible for promoting the district domestically and internationally and is funded through Kaikōura District Council from commercial rates and an accommodation sector charge for visitors. The town also has a not-for-profit visitor information centre separate from the RTO, the Kaikōura i-SITE [information centre]. The i-SITE is predominantly funded by membership fees and booking commissions, and is governed by an association and independent board, Kaikōura Information and Tourism Incorporated (KITI), with nine elected members.

## Research methods

Here, we present a review and synthesis of social scientific research conducted in North Canterbury following the 2016 earthquake. At its core is ongoing primary research conducted by the authors in the Kaikōura community and surrounding rural district over the past five years, some of which has been published (e.g. Cradock-Henry et al. 2018; Rennie et al. 2018; Cradock-Henry et al. 2019; Fountain and Cradock-Henry 2019; Fountain et al. 2020, 2021) but much of which is unpublished or conference presentations (e.g. Fountain and Cradock-Henry 2018; Fountain et al. 2020; Range and Fountain 2020). Supplementing this primary research is other published research from the district, and secondary data drawn from a review of local and regional policy and planning materials, media reports, promotional tourist material, including print and television advertisements and social media posts, and trade newsletters. The primary research on which this paper is based has resulted from more than ten periods of fieldwork in the community, spanning the period February 2017 to February 2022. This fieldwork has included individual in-depth interviews, focus groups and workshop discussions with representatives of tourism and business organisations, tourism operators, local government, and community organisations. Early interviews in the months following the earthquake began with questions about the immediate impacts of the earthquake and initial responses (see Cradock-Henry et al. 2019). These early engagements were followed by a series of interviews and a workshop discussing longer term decision-making processes and activities involved in tourism marketing recovery efforts (Fountain and Cradock-Henry 2019; Fountain et al. 2020, 2021). Interviews and focus groups from

2018 onwards have asked respondents to assess the current state of Kaikōura at the time of the interview, to outline recent and potential developments and challenges, and to consider future directions for the district (e.g. Fountain and Cradock-Henry 2018; Fountain et al. 2020). Between periods of fieldwork, the researchers remained in contact with informants via email, with communication including discussion of recent events, upcoming issues, and new projects. Most interviews and focus groups were recorded, with permission of participants, and transcribed then analysed thematically, as outlined by Braun and Clarke (2006). During the first phase of analysis, the researchers read and re-read transcripts of interviews, and listened to the recordings, to familiarise themselves with the data. Following this, the researchers identified codes related to key themes, some of which emerged during the research process and emerged during an initial search through the data, but others were anticipated through previous research phases and existing literature. Once these themes were identified, the transcripts were read more closely to clarify the themes and find connections between them. This thematic analysis was iterative and collaborative between the researchers, and this investigator triangulation, coupled with the use of multiple data sources and the longitudinal nature of the research adds to the credibility and trustworthiness of the study (Wallendorf and Belk 1989; Denzin and Lincoln 2018).

## Earthquake impacts, implications and response

The days and hours immediately following the earthquake were chaotic for residents and visitors alike (Mitchell and Redmond 2016). Critical lifeline networks were damaged; the town and surrounding district had no power, water or phone or internet connections, and impassable roads and structural damage to buildings left the community and its visitors largely to their own devices. Within Kaikōura township, the tourism i-SITE set up a table outside their damaged building and liaised with Kaikōura District Council to provide information to visitors and residents (Fountain and Cradock-Henry 2019). As is often the case in emergency management (e.g. Hudson and Hughes 2007; Kenney and Phibbs 2015), the local Takahanga marae was quickly operationalised and registered as a Welfare Centre, under Ministry of Civil Defence and Emergency Management provisions (Carter and Kenney 2018).

The response at Takahanga marae in the six days following the 2016 Kaikōura earthquake saw between 500 and 1000 individuals registered to receive assistance; several hundred tourists slept at the marae, 10,000 meals were served, and 1700 care packages

were distributed to earthquake victims (Towle 2016). One frequently recounted story is of the 1000 crayfish donated to the marae by Ngāi Tahu Fisheries when their refrigeration unit lost power (Harris 2016; Carter and Kenney 2018). The head office of Te Rūnanga o Ngāi Tahu in Ōtautahi Christchurch organised teams of volunteers to work on the ground in Kaikōura in three shifts, and flew these volunteers and food in, while also providing transport out for evacuees (Towle 2016; Carter and Kenney 2018). In the immediate aftermath of the earthquake, up to 1200 stranded tourists were evacuated, leaving 300 rental vehicles behind (Fountain and Cradock-Henry 2019). Some were flown out, others evacuated by naval vessels on exercise (Mitchell and Redmond 2016), while others waited for the alternative inland road link, which was established within days of the earthquake (State Highway 70 [SH70]), travellers faced often lengthy delays, and the route remained subject to frequent closures and limited opening hours for months following the event (Fountain and Cradock-Henry 2019).

Within a week of the disaster, a support package of \$7.5 m for small businesses in the town had been announced by central government through the Ministry for Business, Innovation, and Employment (Fairfax Reporters 2016) with additional support to follow in subsequent weeks for larger operators and regional marketing. In total, NZ\$650,000 was invested to promote and market Kaikōura District with a further NZ\$350,000 allocated to the neighbouring Hurunui District, much of which was spent on re-establishing the Alpine Pacific Touring Route (Fountain et al. 2021). Support was also offered by the wider Canterbury tourism community, including representatives of Christchurch Canterbury Tourism (now ChristchurchNZ) and the Christchurch International Airport (CIAL), who flew to the town within days of the earthquake to share lessons they had learnt during the Christchurch-Canterbury earthquake recovery process and offer moral support (Orchiston and Higham 2016; Fountain and Cradock-Henry 2019).

As a destination critically reliant on tourist flows, the 2016 earthquake had a sudden and severe impact on the district, and especially the township. Tourism expenditure and visitor numbers plummeted with the closure of State Highway 1 – the most travelled route for free independent tourists travelling the length of the country. The region's tourism industry is highly seasonal, with a busy 'peak' summer season (December to April) but a very quiet winter period. This is generally the pattern with tourist destinations nationwide, but the nature of key attractions in the region – wildlife viewing and outdoor recreational opportunities – exacerbate this pattern. The timing of the earthquake at the start of the busy summer

season was particularly devastating to business operators and the wider community. Guest arrivals in the town in December 2016 plummeted 85% on the previous year (Destination Kaikōura 2017). While this improved somewhat over the rest of the summer, visitor volume each month fluctuated between 43% and 70% decrease over the previous year, with visitor spend in Kaikōura declining from a record high of \$125 m in 2016 (year ending September) to \$63 m the following year (Destination Kaikōura 2017), representing only 15.2% of the district's GDP in 2017.

While the effect of the earthquake may have been most evident in the tourism industry, the primary sector was also significantly affected in the weeks following the event. Throughout the district, rural communities experienced damage to homes, farm facilities and land, stock losses and business interruption/ reduced productivity (Stevenson et al. 2017). In the immediate aftermath of the earthquake, road closures meant the collection, processing, and distribution of agricultural products from sea and land was adversely affected. For example, reliance on the inland road lengthened travel times and increased freight rates. Bridge washouts and landslips isolated rural communities from their nearest service centres, and fault slips resulted in significant damage to fencing, and in some cases, the losses of considerable amount of productive land (Range and Fountain 2020). The two dozen dairy farms in Kaikōura District were forced to dump thousands of litres of milk each day for three weeks, due to the inability of tankers to access their farms (Stevenson et al. 2017; Cradock-Henry et al. 2018). Along the foreshore, uplift exposed an abundance of marine life, including cray and shellfish, stranded assets, and limited access for commercial fishers and tourism operators (Kaiser et al. 2017). A rāhui (a tapu, restricting use of, or access to an area) imposed due to concerns about contamination meant this source of fresh food was also out of bounds (Cradock-Henry et al. 2018). All these events left the district's population with a lack of fresh food, including meat, fruit, and vegetables; an irony not lost on the residents of this agricultural district (Cradock-Henry et al. 2018).

Clarence Valley, north of Kaikōura District, provides an illustrative example of the impact on rural communities. The valley was the site of a major fault rupture (Papatea Fault, see Litchfield et al. 2018), resulting in significant slips and uplift. Due to the closure of State Highway 1, this small community, made up predominantly of sheep and beef farmers, faced a year of isolation from Kaikōura township, 45 km to the south. Major uplift destroyed a bridge at the head of the valley, effectively splitting the community in half; numerous homes – from historic homesteads to farm labourers' cottages – were destroyed, and the course of the Clarence River was dramatically altered,

with one farmer losing 35 hectares of productive land as a result. As with many rural communities in the area, Clarence pulled together in the immediate aftermath of the earthquake to repair damaged infrastructure, grading roads, and restoring the community's water supply (cf. Rushton et al. 2021). The community also received substantial financial and personnel support from organisations such as the Rural Support Trust and Federated Farmers. Some challenges facing the rural community of Clarence were ongoing. For example, the closure of State Highway meant the children of the valley had to relocate from Kaikōura schools to Ward school (approximately 48kms to the north) and Blenheim, over 90 km to the north, became the main base for shopping, sport and leisure activities (Range and Fountain 2020). Whilst acknowledging the importance of understanding the impacts of disaster events on rural communities (Spector et al. 2018), the remainder of the paper will focus particularly on community recovery and resilience in Kaikōura township.

### Community recovery pathways

Once critical lifelines including power, water and communication were re-established, attention shifted to broader community recovery. In December 2016 Waka Kotahi (NZ Transport Agency) and KiwiRail (a state-owned enterprise) formed the North Canterbury Transport Infrastructure Recovery [NCTIR] alliance with engineering and transport infrastructure firms including Downer, Fulton Hogan, HEB Construction and Higgins, to begin the challenge of restoring road, rail and marine access. State Highway 1 south of Kaikōura was opened on a limited basis before Christmas 2016, but it was not until December 2017 that the full length of State Highway was reopened during the day, and April 2018 before it was accessible day and night. On 15 September 2017, 10 months after the earthquake, freight rail services resumed in a limited capacity on the Main North Line. Low-speed, low-frequency services ran at night, with work on the rail and road networks continuing during the day, with daytime freight services and the passenger service, the Coastal Pacific, inoperative for two years following the earthquake.

A key attraction for visitors to Kaikōura – particularly international tourists – is viewing and interacting with marine mammals. Commercial whale watching has been a central feature of the town's tourist appeal since the 1980s and the range of marine-based tourism has expanded since this time to include swimming with, and/or viewing, dolphins, seals and marine birds from land and water. Diving for crayfish and shellfish, and fishing (both commercially and recreationally) are also popular activities. The substantial uplift of the seabed along the coast had damaged key

marine infrastructure and severely limited access to the harbour. NCTIR worked on dredging Kaikōura's South Bay and repairing the wharf and piles and rebuilding the marina and exactly one year after the earthquake, the repaired (and improved) facility was returned to the community for commercial and recreational use.

NCTIR's goal during the recovery process was to 'build back better', with improvements to road design and safety and a deeper harbour part of the rebuild process. Additional environmental and cultural enhancements were also made, including the creation of a new safe stopping zone at Ōhau Point, an area famous with locals and visitors alike prior to the earthquake as the home to a large colony of fur seals, who would be seen basking on the rocks. While there were initial concerns for the wellbeing and safety of this colony, it was quickly discovered that they remained in the area, and the new safe stopping area at Ōhau Point allows travellers to take a break to enjoy the seals and coastline views (NCTIR 2021a). Another important enhancement to the coastal transportation network is the installation of a Cultural Artwork Package along a 60 km stretch of coastline from Clarence in the North, to Oaro in the south, and is the result of consultation with appointed representatives from the mana whenua of Kaikōura, the goal being 'to tell the story of mana whenua and to leave a legacy beyond safe and resilient road and rail connection' (NCTIR 2021a, p. 204) and 'to have our [Te Rūnanga o Kaikōura] stories laid over our environment and to share them with all people' (Maurice Manawatu, cited in NCTIR 2021a, p. 204). The final installations in the series of murals, storyboards and pouwhenua and tekoteko (carved pillars) were unveiled in December 2020 (NCTIR 2021b). An ongoing project is a new 200 km cycle trail (known as the 'Whale Trail') which will run down the east coast from Picton to Kaikōura, but which has been delayed due to various environmental and cultural concerns (Rennie et al. 2018; Kaikōura District Council 2020).

Over the course of the transport network reconstruction close to 9000 men and women worked more than 6.5 million hours to restore and improve these critical transport network (NCTIR 2021a, p. 6). While approximately 180 of these workers were Kaikōura residents (NCTIR 2021a, p. 58), the remainder moved from elsewhere in the country and overseas. At the peak of the project, 1700 workers lived in Kaikōura, almost doubling the population. While rental cottages and other motel and hotel accommodation in the town left empty with the absence of tourists could accommodate some of this number it was not enough, so in June 2017 the NCTIR Village was built on the outskirts of the town to house up to 300 workers. The village was finally disestablished in

December 2020 upon completion of the main infrastructure projects.

As stated above, disasters can provide a basis for transformation, and an opportunity for new modes of engagement and collaboration to realise desired outcomes. An early initiative saw the establishment of Shop Kaikōura, a website and personal shopper service encouraging New Zealanders to do their Christmas shopping via Kaikōura shops (Rae 2016). The massive NCTIR project resulted in another unique collaborative opportunity for cafes and restaurants in the township, which had experienced a dramatic decline in customers, with a reported 60% decline in custom on average (Skinner 2018, p. 1). While a comprehensive business relief package had been provided by the government, four months after the event 80% of hospitality businesses were expressing ongoing concerns about cash flow and loss of market (Skinner 2018, p. 8). The influx of construction workers into the NCTIR Village who needed feeding led to the launch of 'The Hospo Project: Feeding the Village People' which represented a collaboration between the Kaikōura District Council Recovery Team, NCTIR, Compass Group and local hospitality, transport and logistics businesses. The Hospo Project saw 22 local cafes and restaurant working in two teams to deliver a multimillion dollar 'catering service' contract to provide a set-price lunch (four cafés) and dinner (18 businesses) to construction workers. The cafés worked on a roster to prepare lunches, while collaborating to order non-perishable goods and to contract a local licenced food transport company to deliver the meals each day. The evening meal service involved a roster of food providers and seats available each night to ensure the widest distribution of benefits to providers, while ensuring workers had a choice of cuisines.

The impacts of this project flowed to the community as a whole and have been social as well as economic. The goal of the project was to increase business cash flow, replacing the lost tourist market, and provide certainty to businesses wanting to retain staff. These goals were achieved and exceeded; within four months of the project the proportion of businesses concerned about loss of market or cash flow had dropped from 80% to 50%, and 36.4% indicated that without this initiative their business would have closed. Economies of scale saw the lunch team save up to 40% on bulk purchases of food (Skinner 2018, p. 8) and a more cohesive and supportive hospitality sector emerged, offering new ways of working with some larger operators behaving in quite altruistic ways to ensure smaller businesses received their share of bookings. As one participant explained:

I think [the Hospo Project] took the individualists out of it ... and brought everyone into the group and down to size. From the big boys to the little kid on the block. We all went into it on an even basis, for

the betterment of us all and the betterment of the town.

The reopening of State Highway 1 late in 2017 led to an increase in visitor numbers, meaning hospitality businesses no longer relied on the business from the Hospo Project. While the lunch contract ended in October 2018, the dinner contract was extended, due primarily to the considerable social benefits of the scheme – for the businesses, but also for the workers, who were able to integrate into the community through their evening meals. As is often the case, however, patterns of behaviour and attitudes amongst participants had changed as life returned to 'normal' so by mid-2019 the dinner roster has gone and all restaurants competed for workers' custom in a free market.

A crucial component of the recovery process for this tourism-dependent community was re-establishing Kaikōura as a destination, post-disaster through recovery marketing and communication management. The goal of recovery marketing is generally twofold: first, to change the perceptions of the destination caused by media reporting of damage, and second to restore visitor confidence that the destination is both safe to visit and can accommodate their needs (Ciocco and Michael 2007; Scott et al. 2008; Walters and Mair 2012). While Kaikōura had been isolated from the rest of the world following the earthquake, dramatic footage of road and rail networks decimated by massive landslips and fault lines had been widely shared through social and mainstream media within hours of the event. As is often the case following disasters, the media used sensationalist and dramatic language to describe events (cf. Mair et al. 2016), so that there were headlines declaring a 'mortal blow for Kaikōura's tourism industry' (Mitchell and Redmond 2016) and asking 'Can Kaikōura survive?' (Dangerfield 2016). One article suggests that the damage to the marine environment 'could take years' to recover, and that State Highway 1 'may never be rebuilt', meaning that 'locals fear the tourism boom has come to a swift and violent end' (Mitchell and Redmond 2016).

While the two largest tourist operators in the town – Whale Watch and Dolphin Encounter – were effectively closed due to seabed uplift, by Christmas 2016 most tourism operators, accommodation providers and retail premises were open, State Highway 70 was open for unrestricted travel, and there was limited access via SH 1 from the south of the town (Destination Kaikōura 2016). The lack of access or availability of marine-based resources (both commercial and non-commercial), and a sense of uncertainty regarding access, meant that tourists and visitors were not arriving in significant numbers, and a specific recovery marketing strategy was required.

The role of recovery marketing was primarily undertaken by the local RTO, Destination Kaikōura,

funded through a central government grant of \$650,000 for a recovery marketing plan and strategy in February 2017 (Dangerfield 2017). This fund was a windfall for a very small RTO with limited funding and resources and enabled the employment of a marketing executive to maintain a communication strategy, develop marketing campaigns for key target markets and build a stronger web presence for Destination Kaikōura. The district also received ongoing support and advice from colleagues in the neighbouring Hurunui and Christchurch regions. Destination Kaikōura focused on honest, yet relentlessly optimistic, messaging as a deliberate strategy to get the audience onboard with the recovery process (cf. Walters and Mair 2012). To maintain this positivity, no images of the damage, and in particular the fragile conditions of roads and marina, were shared by Destination Kaikōura in their communications for six months after the disaster. As one stakeholder remarked ‘If people really saw how bad the road was, they wouldn’t think we would ever get it back’ (for more details see Fountain and Cradock-Henry 2019).

Recovery marketing strategies work best if developed collaboratively amongst stakeholders at the destination and regional level (Ciocco and Michael 2007; Hystad and Keller 2008; Mair et al. 2016). Such collaboration was evident within the Kaikōura tourism community, and between Kaikōura and the wider region as North Canterbury’s dispersed communities came together in the weeks and months after the earthquake. The reliance on the inland road (SH 70) was critical to strengthening relationships and networks between tourism businesses in Hanmer Springs and Kaikōura (see Fountain et al. 2021).

A year, a month, and a day after the earthquake, State Highway 1 opened the length of the South Island. Coinciding with this reopening, a series of light-hearted television advertisements confirmed that ‘Kaikōura is back’. Accompanying the tagline ‘Kia ora from Kaikōura’ were iconic images of local wildlife and pun-laden slogans: ‘We’re dolphintely open’, ‘We’ve got the seal of approval’, and ‘Come, have a whale of a time’. Another advertisement featuring Kaikōura’s mayor and other residents was broadcast saying ‘Thank you New Zealand, for all your support.’ When the road reopened, informants reported an immediate surge in business:

We went from 200 vehicle movements a day to 5,000. It was literally a tap turned on. There was a 2.5 km traffic jam, waiting for that road to open. ... It was just a massive impact on all the businesses; from nothing to full on. (See also Fountain and Cradock-Henry 2019)

The *Kaikōura Recovery Marketing Plan 2017–2018* had set the ambitious goal of achieving ‘pre-earthquake annual visitor spend of \$120 m within two years of the Recovery Marketing Plan being

implemented’ (Destination Kaikōura 2018, p. 3) and the recovery of half of lost visitor spend and visitors and visitors (\$24 m and 36,000 guests) within the first year (Destination Kaikōura 2018). This was close to being achieved, with 147,268 guest arrivals for YE April 2018 (a rebound of 33,048 guests) and an annual visitor spend of \$93 m (\$3 m short of target; Destination Kaikōura 2018). It took until 2020 for the sector to return to close to pre-earthquake levels of GDP contribution (23.7%), compared to agriculture, forestry and farming (19.4% of GDP), but is higher still when accommodation and food services (8.5%) and the retail trade (6.2%) are taken into account, both of which rely substantially on the tourist market (Infometrics 2021).

The funding flowing into the community was not limited to the tourism sector; health and social services in the community were also enhanced. For example, one organisation which has been able to significantly expand its role in the community as a service and educational provider is ‘Te Ha o Mātauranga’ (‘Breath of Knowledge’), an educational trust that had been largely inactive for several years. Since the earthquake, this organisation has scaled up considerably through ongoing funding grants, with initiatives including the establishment of community gardens, a community shed, a time bank and the provision of formal training courses and youth support and advocacy. This organisation had strong networks locally, regionally and nationally before the earthquake, and the organisation has strengthened their relationships with central government agencies and charity funders such as Lotteries Corporation (Cradock-Henry et al. 2019). The earthquake had also brought economic opportunities, particularly through the NCTIR project rebuilding and restoring critical infrastructure, providing well-paid employment opportunities for residents, many of whom had struggled to find full time work (Cradock-Henry et al. 2019).

Infrastructure throughout the region was ‘built back better’, and new township facilities have been replaced through community efforts, including the rebuilt Mayfair theatre (opened November 2020) and a new Aquatic Centre (opened November 2021), replacing the old community swimming pool. Successful recovery marketing efforts ensured limited reputational damage to the tourist destination amongst international or domestic tourists, who returned in numbers once full access was restored (Fountain and Cradock 2020). The earthquake provided opportunities for new collaborative initiatives and led to discussions about the potential of transformation in the industry (Cradock-Henry et al. 2019; Fountain and Cradock-Henry 2019; Fountain et al. 2021).

Interviews with community stakeholders in the years following the earthquake presented a narrative



of a resilient community pulling together (Cradock-Henry et al. 2018, 2019; Wilson and Simmons 2018). For example, Cradock-Henry et al. (2019, p. 6) present the following assessment from an interviewee, largely typical of the respondents with whom they engaged: 'From day one ... this is not a community that sits down and feels sorry for itself. [Our] spirit is very resilient, and we're very willing to take ownership of problems and deal with it.' A respondent made a similar comment to Rushton et al. (2021) 'A small community like this, everybody pitches in and helps ... It's not like a big city where you'll only get a certain few that will help, and the rest will sit back' (p. 9). Part of this was due to the 'down time' that many in the community had with the roads closed, as a former council employee explained to the researchers:

Because [people's businesses] weren't fully operational, a lot of people had a lot of free time. I mean, you go down to the pub at 3 o'clock in the afternoon, most people were down there ... It was actually a very big community spirit, and a lot of business networking happened there directly, just by local businesses in the town.

Within the tourism and hospitalities industry, larger enterprises took a lead role in the recovery efforts, on behalf of the smaller operators with limited financial and human resources and ensured the benefits were shared. Tourism industry representatives from outside the district commented on the success of the collaborative efforts during this time and spoke about Kaikōura 'flying in formation' (cited in Fountain and Cradock-Henry 2019, p. 42), and within the community it was felt that the tourism industry had a new-found energy and enthusiasm, and an appreciation on the value of working collaboratively, as typified in the following quotations: 'we can't work in isolation ... we are all in this together, and we can all bring different things to the table ... The earthquake has brought us together, definitely'.

It is true that for many in the community, the earthquake had intensified this feeling of connection, with residents speaking proudly of initiatives such as 'The Hospo Project' and informal activities such as communal meals and working bees to repair houses and properties (Cradock-Henry et al. 2019; Rushton et al. 2021). The following comment is typical of many:

The good thing we have is that all the people involved in community groups have a really strong social conscience and I think that's an absolute bonus because that in itself means that people are looking out for other people, there's a high level of social connectedness and a high level of understanding of the need for that.

Some in the community felt that new networks established would continue. A business owner who

had been involved in the Hospo Project looked back on that period and acknowledged 'there will be a certain drifting off' as life returned to normal, but concluded:

[that network is just sitting there behind the scenes so you know that you can pick up the phone and say 'look, I need that from you, and that from you' ... can it all be pulled together?' I think that might be there now that wasn't there two years ago, eh

One respondent went so far as to tell Rushton that he felt sorry for the locals who left town in the post-earthquake period:

They ran when it was tough, when it was a bit scary ... they didn't get to see the way the community got it together, the gifts, the food, the marae ... sports days, having BBQs ... people were able to rub shoulders and tell stories and I think they missed out on that. (Cited in Rushton et al. 2021, p. 8)

The narrative presented here of the earthquake recovery process in Kaikōura provides a largely positive account of a community pulling together, facing adversity, and coming through the process stronger and more united. According to this narrative, in the time since the earthquake, the community has mobilised its collective resources to cope with the shock and resume seasonal rhythms suggesting a resilient community (see Cradock-Henry et al. 2018; Cradock-Henry et al. 2019). This is a selective perspective, however, and as time has gone on, there has been increasing evidence in published accounts (Wilson and Simmons 2018; Rushton et al. 2021) and ongoing research by the authors of a more tenuous reality. Despite appearances, not all in the community felt empowered to engage with the recovery process. Here, in the final section, we interrogate Kaikōura's community resilience with the benefit of five years of hindsight and considering new challenges facing the district brought by the COVID-19 pandemic.

### Resilient Kaikōura?

Reflecting on the tragic 2010 earthquake in Haiti, the author Junot Diaz (2011) reminded readers that 'Apocalypse comes to us from the Greek *apocalypsis*, meaning to uncover and unveil'. Disasters reveal not only the underlying physical processes that give rise to catastrophic events, but the social, economic, cultural and historical dependencies, and vulnerabilities that often have the longer consequences, and may be less amenable to mitigation. So too in Kaikōura, where on the surface, and in the public eye, the community showed resilience in the earthquake recovery process. This however, is only a partial account which ignores divisions in the community and underlying vulnerabilities which have not been addressed, many of which are caused by Kaikōura's status as a

remote, fiscally constrained, rural community, overdependent on tourism.

Research published in the last few years has identified dissenting voices in the community, with not everyone feeling they had equal access to decision-makers or funding opportunities with some community groups feeling they were ‘missing out’ in funding decisions (Rudkevitch et al. 2019; cited in Vallance and Rudkevich 2021). Many community groups seemed to be working in silos, as one informant acknowledged to Wilson and Simmons (2018, p. 33) ‘we have these amazing, exciting projects and they are all happening quite independently of each other’. There was also resentment in the township and throughout the district about the role of outside experts – particularly city dwellers – telling rural folk how to operate (Wilson and Simmons 2018; Range and Fountain 2020; Rushton et al. 2021); an observation made frequently in the context of rural resilience in Aotearoa (e.g. Glavovic et al. 2010; Spector et al. 2018). High turnover in Kaikōura District Council meant some in the community felt they lacked an understanding of what the community had been through and how it operated, with examples shared with the authors of confusing planning decisions and funding decisions based on lack of understanding of the community.

A lack of unity was also apparent amongst tourism providers. Some smaller operators felt that the ‘big players’ in the tourism sector had dominated discussions of the future direction of tourism for the region, both on account of their economic contribution to the region, and their prominence in regional tourism decision-making bodies. As one operator said: ‘they’ve got a voice on the Council, they’re on the i-Site committee, you know, they go to all the big events ... partly, I suspect because they have the funding and partly, I suspect because they are on the i-Site committee’. As these influential members were generally involved in tourism activities based on marine-mammals and the marine environment more generally, land-based operators felt they struggled for visibility in marketing and promotional campaigns.

More than three years after the earthquake, interviews with smaller tourism operators revealed strong emotions when recounting their inability to get government grants or council support in the aftermath of the earthquake. For example, some operators had been denied the government subsidy available to small businesses as assessors had determined their businesses were ‘not viable’ as no full-time salary was being drawn, while other businesses which did not fulfil the funding criteria (e.g. length of operation) or had substantial economic reserves received the subsidy. This situation had a devastating effect, as one business operator explained: ‘It was a huge mental blow at the time, because as you were struggling to

come through everything associated with the earthquake, you’ve then got someone standing there telling you you’re not viable.’

Another operator was at his wits-end after his rural tourism venture had been significantly impacted by the council granting of a license for an industrial site to be established along the road from his business for the period of infrastructure redevelopment resulting in a loss of peace and tranquillity on which his business was marketed. Other tourism operators teetered on the brink of financial collapse, struggling to claw back losses from a year or more without visitors. As one of these operators explained:

For us smaller operators who haven’t got reserves behind us we just felt forgotten ... we had got to the point where we knew we didn’t count; there were only a handful of businesses that counted and everything was geared up to their success.

There was a belief in some quarters that KITI (Kaikōura Information and Tourism Incorporated) Board and Destination Kaikōura had not only ignored the needs of smaller operators, but hospitality or retail operators as well (Wilson and Simmons 2018). This was given as part the reason for the establishment of a new business association in the township, Future Kaikōura.

Even the much-praised NCTIR project and the jobs it created had some negative consequences, with reports of tensions and fights between local residents and NCTIR personal, with a sense of ‘us vs them’ as one respondent told Rushton et al. (2021, p. 10): ‘They look different and they’re employed in our town therefore someone might be missing out on a job. They might chat up our women, drinking our beer, they’re in our favourite stool at the bar’. Beyond these social tensions, many business owners and the local business association discussed the difficulties in getting hospitality and retail staff, due to the high wages being paid by NCTIR (Wilson and Simmons 2018). If staff could be recruited, finding accommodation for seasonal workers was extremely difficult, meaning hospitality workers were housed in backpackers, or were sleeping in tents, campervans or even their cars. This led to a situation where some cafés were forced to reduce their opening hours for lack of staff and accommodation providers closed rooms because they could not find cleaners (Wilson and Simmons 2018).

This last point perhaps highlights some longer-term barriers with building community resilience in Kaikōura, a peripheral destination distant from major population centres. As outlined above, the district also has a small population, and limited facilities and services (Cradock-Henry et al. 2019). While additional funding for Te Ha o Mātauranga has addressed some of the post-school educational needs of Kaikōura rangitahi

(youth), the lack of career-path opportunities in the community sees many young people leave the district for employment and study or remain with few employment ambitions. Reflecting on the situation in early 2022, some in the community felt the town had ‘become more insular’ since the earthquake, NCTIR works and Covid-19 lockdowns, with many young people hesitant to leave the town, as one community worker said: ‘they don’t want to leave Kaikōura no more ... they’re not ready to leave’.

In an echo of the old adage ‘absence makes the heart grow stronger’ during interviews in 2017 and 2018 a number of tourism stakeholders told the researchers that there was a new appreciation about the significance of tourism to the town within the wider community. While the 2016 earthquake had made many Kaikōura residents acutely aware of the town’s reliance on tourism, this lack of economic diversification was seen as a key vulnerability for the community to address and rectify, rather than accept (Cradock-Henry et al. 2019). To date, there is limited evidence of this eventuating, although it remains a key goal in the *Kaikōura Long Term Plan 2021–2031* (KDC, 2022b) which has recently been approved. While the rural sector continues to be important economic contributor, difficulties in transporting agricultural products in the aftermath of the earthquake, closure of the fishery due to contamination concerns, and the loss in 2016 of the local cheese factory and 22 jobs had further highlighted this issue (Hutching and Dangerfield 2016; Cradock-Henry et al. 2018).

There are many residents in the community who, while resigned to the ongoing economic significance of tourism, would prefer this were not the case; one community worker recently going so far as to confide that she ‘hated tourism’. She explained:

It’s really hard when we talk about tourism, because obviously we do rely on tourism ... [but] for me personally it’s not my favourite way of a town making money, so in some respects, the earthquake and now Covid; I quite like the change of focus.

There are many reasons why the tourism industry is viewed negatively by some in the community, including crowding and traffic at the height of the tourism season leaving locals feeling the town is not their own. There is also a perception that prices in Kaikōura are more expensive for locals because of the tourist industry (Wilson and Simmons 2018), and tourism is perceived as an industry offering few career opportunities, or ‘progressing jobs’ as one community member explained it. The seasonality of the industry also makes it difficult to keep people in the town year-round, meaning a reliance on a transient workforce, traditionally made up of international visitors on working holiday visas, a council employee acknowledging to Wilson and Simmons (2018) that the ‘reliance

on overseas workers was an issue’ and that they ‘need to find ways to build the home population to fill job vacancies’ (p. 30). However, the highly seasonal and generally low-paid employment created in the industry meant there are few career opportunities, and the hours of work in the tourism and hospitality industries meant many locals preferred to work in retail.

In the first few years after the earthquake there were many discussions of the potential of new tourism products which might unite the community and reduce tourism seasonality, whilst also spreading the benefits of tourism to the primary sector (see Cradock-Henry et al. 2018; Fountain et al. 2021). For example, the potential of the region’s food produce, and particularly seafood, in tourism experiences was frequently highlighted as an option that would both diversify the tourism product and strengthen rural-tourism networks but to date, little has eventuated, and it seems that the opportunity for transformation initiated by the disaster remains largely unrealised. In fact the annual iconic event, Seafest, which was an important attraction for domestic visitors, ceased to operate after 23 years in 2018 due to problems with crowd behaviour, damage to the township, and a sense that the event had lost its core focus and community support (Brown 2018).

Over the last two years, Kaikōura has faced its second major crisis in less than a decade, when in March 2020, the New Zealand government’s aggressive lockdown response to COVID-19 once again stopped the flow first of international tourists, and then all visitors to the region. While some of the iconic marine mammal attractions in the town have received substantial government financial backing, for other operators business support packages have ended, and businesses face an uncertain future once again. The lack of staffing for tourism and hospitality businesses has been severely exacerbated by border closures, stemming the flow of seasonal workers from overseas. Kaikōura’s dependence on tourism – and its corollary vulnerability – is evident with the community’s designation as one of five destinations in New Zealand most negatively impacted by the pandemic, and the recipient of specific funding allocated to these regions (Nash 2021).

In both the mainstream media and academic literature, much has been written about the transformative potential in the wake of this pandemic (Hynes et al. 2020). While these opportunities for transformation are posited for many aspects of our lives the tourism industry has garnered particular attention (e.g. Benjamin et al. 2020; Cave and Dredge 2020; Higgins-Desbiolles 2020; Prayag 2020; Prideaux et al. 2020; Jamal and Higham 2021; Rastegar et al. 2021). It has brought into stark relief the impacts of neo-liberal agendas and over-tourism on environmental degradation and social licence to operate in many tourism-dependent

communities, whilst also highlighting an over-reliance on tourism, or specific market segments and a lack of diversity in some local economies (Benjamin et al. 2020; Cave and Dredge 2020; Higgins-Desbiolles 2020, Rastegar et al. 2021).

During this time of upheaval, there has been recognition that a resilient and regenerative tourism system must be 'responsive and answerable to the society in which it occurs' (Higgins-Desbiolles 2020, p. 617). In the case of Kaikōura, many residents understand the issues, and have suggestions for what *should* be done to enhance community resilience, much of will require addressing the vulnerabilities facing the district, including over-dependence on the tourism industry. This will not be as easy in practice as it seems in theory; as Carr (2020) has said 'theory does not pay the bills and feed hungry mouths' (p. 8). The pathway to transformation is marked by uncomfortable economic realities, systemic inequalities, and governance structures resistant to change. Furthermore, there is a strong sense of exhaustion and wariness amongst many of Kaikōura's residents at the current time and managing the ongoing psychological distress of loss and uncertainty – from the earthquake, and from the pandemic – will be critical (Fountain and Craddock-Henry 2019).

## Conclusion

Lessons and insights from Kaikōura's post-quake recovery can provide a basis for further transformation, and helpfully inform work considering the challenges, risks and opportunities facing other regional and rural communities. While aspects of the recovery created opportunity and prompted innovation, results were uneven, and have not gone far enough in preparing the community for future challenges. Response and post-quake recovery did strengthen some existing networks and encourage new ones to develop, however not all in the community were empowered through this process. Continuing mobilisation of existing community resources and the development of new ones by community members will be required to further enhance community resilience. Confronting the region's overdependence on tourism will also be critical to this process. Fundamental to conceptualisations of resilience is the need for diversity, of economic activities and heterogeneous perspectives. Diversity can provide a community, household, or region with a larger pool of resources that can be helpful in dealing with unexpected problems (van Knippenberg and Schippers 2007). To effectively enhance community resilience, it will be necessary to closely consider the needs, risks and opportunities associated with Kaikōura's natural environment as well

as consider new economic pathways on the road ahead.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

This work was supported by Ministry of Business, Innovation and Employment [Resilience to Nature's Challenge, Rural Theme].

## Data availability statement

Due to the nature of this research, participants of this study did not agree for their data to be shared publicly, so supporting data is not available.

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