



The challenges of a new biodiversity strategy for social impact assessment

Nick Taylor, Principal Partner, Nick Taylor and Associates

Introduction – the biodiversity challenge

Threats to biodiversity sit alongside climate change as a challenge for New Zealand society. The Department of Conservation (DoC) is in the process of renewing New Zealand's biodiversity strategy, with a new plan to be in place by 2020. The discussion document (DoC, 2019) notes that as a biodiversity "hotspot" many of New Zealand's plants and animals are unique and play an important part in biodiversity at an international level. They also note how our biodiversity is under threat with ecosystems and species challenged by human uses, introduced species and climate change. These pressures, they note, have impacts on environments and people. They comment that:

"The state of our biodiversity is a legacy that we leave for future generations. We don't want to be the last generation to look up at a rātā tree or spot Maui dolphins in our seas. All New Zealanders want our mokopuna ... to be part of a healthy natural environment."

The Department refers to the systems and social structures that manage our biodiversity and invokes kaitiakitanga as a "spiritual and environmental ethos" that provides for protection of the mauri underpinning our natural heritage. Consistent with themes across government, DoC indicates that nature is fundamental to our identity, cultures, way of life and social wellbeing. Their approach is consistent with the importance of natural assets in Treasury's Living Standards Framework and the effort to increase the wellbeing of all New Zealanders. It is also consistent with the UN's 17 Sustainable Development Goals and in particular Life Below Water (Goal 14) and Life On Land (Goal 15).

In addition to formal organisations such as territorial authorities and iwi that have a key role in managing to protect our biodiversity, it is important to recognise the important role of community organisations in the biodiversity system. Within this system there are a number of management tools available including various types of planning tools. We might expect that impact assessment, and especially social impact assessment, will have a key part to play amongst these tools. Yet, to date, social impact assessment has played only a limited role in the development and implementation of strategies, plans, programmes and specific projects.

In this short paper I consider the use of SIA in conservation management and some of the challenges raised by this particular focus for SIA. I suggest that SIA, and by implication SEA, should play a more active part in the development of strategies, policies, plans and programmes and the projects that emanate from these strategic applications. The Predator Free NZ (PFNZ) strategy is a case in point with an SIA on Rakiura-Stewart island (henceforth Rakiura) providing a case study.

SIA and conservation management

Looking back, SIA in NZ has been used in the designation of new areas of national parks under the Conservation Act. Examples include an assessment of Punakaiki National Park (Stephens and Wells, 1983), relatively early in the development of SIA in this country. Another is an assessment of the social and local economic impacts of the proposed Kahurangi National Park (Taylor et al., 1999). Booth and Leppens (2002) undertook a study of the baseline social environment prior to the establishment of Rakiura National Park. Impacts identified in these studies included increased use of walking tracks and visitor facilities, and benefits for local tourism businesses, such as accommodation providers. There is considerable social science research on visitors and the visitor experience on conservation land (Lovelock, et al., 2011) and on recreation and tourism more generally (Booth and Mackay, 2007).

Wouters (2011) researched the ex post economic impacts of Tongariro, Abel Tasman and Fiordland National Parks. She found that tourist activity based on concessions to operate in these parks generated employment for the “gateway” communities in particular. Other research by DoC has considered wider social issues and impacts such as crowding in popular locations and the issue of social carrying capacity, especially on key walkways such as the Milford Track (Booth et al., 2011). The Department has also given consideration to how they should work with their host communities and key stakeholders (Cosslett, et al., 2004) and to social impacts on conservation lands generally (Cessford, 1992).

Another example is the assessment of the social impacts of marine reserves in New Zealand (Cocklin, and Flood, 1992; Craw and Cocklin, 1997; Taylor and Buckenham, 2003). These ex post assessments found there are a number of impacts, both positive and negative, evident for marine reserves. The major initial impact of a marine reserve tends to be focussed, in the early stages of consultation for a proposed reserve, on the fishers who previously fished the waters of the reserve. The prohibition of extraction from their local waters is considered by recreational fishers as the further loss of a diminishing resource and additional costs of time and money by commercial fishermen. Both groups perceive a potential loss of property rights. Nevertheless, it is also evident, even in the early stages of planning a marine reserve, that some stakeholders consider there will be an increase in the number and size of fish in the reserve as the ban on extraction takes effect, and that this increase will give rise to a spill-over effect that benefits both commercial and recreational activities beyond the boundaries of the reserve in the longer term. Those in favour of marine reserves also identify beneficial, long-term effects as they offer protection to a major part of New Zealand’s natural heritage and help to sustain marine resources for future generations. As with national parks, there are clear benefits to local economies and gateway communities from increased visitor numbers and associated tourist facilities. Although, as also found in national parks, the increase in visitors can challenge facilities such as parking and cause crowding issues at popular spots.

Predator-free New Zealand

Predator-free New Zealand (PFNZ) is a potentially transformational programme in respect to the status of our biodiversity, public perceptions of native flora and fauna, affecting a range of values including cultural uses, outdoor recreation and tourist activity. The programme also has positive effects on public involvement in activities such as predator control and restoration of habitats. The [Predator Free NZ Trust](#), for example, is “ *a private charitable organisation established to encourage, support and connect New Zealanders in their efforts to control and eradicate introduced predators including rats, possums, and mustelids so our native species’ populations can increase in our lifetime.*”

The focus in New Zealand to date is on eradication of mammalian predators from uninhabited islands, which provide for sanctuaries for endangered species and ecological restoration. Under PFNZ, this effort is shifting to smaller inhabited islands and small areas of the main inhabited islands, known as mainland islands; some with fences such as Zealandia in Wellington City, and others are unfenced such as Ark in the Park in west Auckland. These efforts garner considerable community support and direct participation through voluntary effort in eradicating and monitoring pests.

Island ecosystems present great potential and particular problems in the management of endangered species. Eradication of non-native mammalian predators from an inhabited island is a particular challenge, one that requires consideration of both ecological and social feasibility (*Russell et al. 2017*). Where the eradication of small mammalian predators, especially rodents, is particularly problematic socially is in the aerial distribution of toxins, including 1080. These activities have a history of contention around issues such as Treaty obligations, community consultation, human rights, animal welfare and public health. The issues involve risk perceptions around the potential side-effects on non-target species including hunting animals, livestock and domestic pets. There is potential for social conflicts to emerge over proposed predator control operations and these responses raise the flag that SIA could assist in strategic planning, decision making, programme design and implementation.

An interesting additional aspect is the debate around the social acceptability of pest management and the science behind predator control. Public concerns give rise to the need to establish the level of community support and consent in the sense of a ‘social licence to operate’, in addition to any consents and conditions on consents required under the Resource Management or Conservation Acts for particular control operations (*Fitzgerald, 2009*).

The SIA of Predator Free Rakiura-Stewart Island

A recent example of SIA for planning a predator eradication programme on an inhabited island was completed for the predator-free programme on Rakiura the third largest island in New Zealand. The proposal is eventually to free Rakiura of mammalian predators such as rats, possums, hedgehogs and feral cats, which cause extensive degradation of native wildlife including birds, reptiles and insects (*Russell K., et al., 2018*).

The focus of the Rakiura SIA was on the intended and unintended social consequences, both positive and negative, of predator control leading to eradication of mammalian predators on Rakiura. The assessment was a strategic SIA, one focused on developing a

programme of conservation work rather than a single project. The SIA concluded that predator-free Rakiura is best framed as a programme of conservation work that is likely to include a number of eradication projects over time. In this context, social impacts can include effects on people and communities, including employment and livelihoods, local economy, outdoor recreation and amenity values.

The assessment explored the likely impact of PFR on the visitor sector and associated infrastructure as the assessment found that visitor numbers are widely expected to increase as a result of predator-free status for the island. However, views differ as to the benefits of tourism for the island. Many residents and businesses see tourism as an essential component of Rakiura's economy and livelihoods, as well as adding richness to the community and available services on the island. On the other hand there are those who are critical about the utility of further tourism growth on the island, questioning any potential disruption to the island's 'way of life', including the natural and social-cultural environments.

A strong finding from the SIA was therefore that the long-standing interest in conservation on the island, alongside an active interest in the ecological benefits of predator control from a range of stakeholders including deer hunters, is an important building block for the proposed programme, one that could be facilitated by a dedicated programme manager on the island. There is clear evidence that local people value the intrinsic ecological values of the island and the specific ecological benefits of predator control for particular species. These values are consistent with Rakiura being a focus for conservation management and an ambitious eradication programme.

Another important finding from the Rakiura SIA was the reiteration of particular social and economic characteristics of small island communities that provide a starting point for future social assessment of conservation policy, plans and programmes on our inhabited islands. These characteristics include a community that is highly motivated and engaged around conservation and many other issues affecting island life. Working with this feature of social life is essential for success in designing and implementing the programme, including mitigating any potential effects on livelihoods and ways of life, including fishing and recreational hunting.

SIA is now recognised as a pre-requisite for programmes of pest management (*Russell J. et al. 2017*). Inhabited islands such as Rakiura, or Aotea or Waiheke in the North, provide unique forms of human-ecological systems that challenge SIA practice. In particular, they force SIA practitioners, conservation managers and biologists to address issues of integration between their areas of work.

Conclusions – the challenge for SIA applied to future biodiversity planning

Looking forward, protection and enhancement of the biodiversity of Aotearoa New Zealand is a major societal challenge. Programmes to control or eradicate invasive species such as PFNZ, or to enhance freshwater management as with proposals to strengthen the national policy statement on Freshwater Management, or to support regeneration of native forests for carbon sequestration, or implement the Billion Trees Programme, are transformational. SIA can help to design and implement these transformational strategies, and the plans and specific projects that follow them. To make such a contribution, social impact assessors need to work alongside ecologists and conservation managers, finding ways to understand human-ecological systems better, to integrate their different approaches, and to work with affected communities and stakeholders.

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