In late 2018, just days after the Japanese government announced its decision to withdraw from the IWC, I visited Ayukawa one more time. While politicians in Tokyo and in some of the whaling towns such as Hachinohe or Kushiro, enthusiastically proclaimed a new age of Japanese whaling, people in Ayukawa were less optimistic. Certainly, like the other whaling towns, Ayukawa had fought hard for the past thirty years to reverse the IWC moratorium on commercial whaling. At the time, the reconstruction of Ayukawa after the 2011 tsunami was steadily progressing, the groundwork for the new harbour area with the whaling museum had just been laid. It seemed like the timing for a resumption of commercial whaling could not have been better.

However, the locals I spoke with expressed concern that Ayukawa would not be able to compete with other regions that wanted to participate in whaling. As Ayukawa had lost most of its infrastructure and working population due to the tsunami, the town was no longer a prime candidate for a whaling place. Situated at the tip of the Oshika Peninsula and with no access to a train system, reaching the hamlet remained inconvenient. In the past, its remote location was more than compensated with the fact that the Sea of Kinkazan had been brimming with cetaceans. After a hundred years of hunting, only ruins of the former 'castle of sperm whales' remained, however. The whales, it seemed, had moved elsewhere. To make matters worse, the recently rebuild whaling station had been constructed with the restrictions of the moratorium in mind, who had only allowed the hunt of some smaller-sized whales. Animals larger than eight metres could not even be processed effectively at the station. For the locals, it, therefore, seemed likely that commercial whaling will move to ports with better infrastructure and location.

It is too early to tell whether coastal whaling will be able to become commercially viable again. However, looking at the present-day debates, it becomes clear that there is little doubt for people in Hachinohe or Ayukawa that they are representatives of Japan's 'national whaling culture'. Older forms of human–whale interactions that existed in the region prior to the introduction of industrial whaling have disappeared completely from the collective memory. We can further exemplify this shift in the role of the whale god Ebisu. During one of my interviews with a former whaler from Ayukawa, I noticed a small Ebisu household altar (*kamidana*) in his living room. When I commented on this, he looked very surprised, as he could not recall the meaning of the altar and so he asked his wife about it. As it turned out, the couple were not aware that their household altar was dedicated to Ebisu and did also not know the cultural background apart from vaguely remembering him as a 'god of fishing'. Similarly, at the present-day whale festival in Ayukawa, Ebisu does not play any major role.

The lost knowledge of how to live peacefully side-by-side is of course only one of many side-effects of the anthropogenic takeover of the cetosphere. Industrial whaling in the twentieth century decreased the worldwide whale stocks so drastically that the cetosphere ceased to exist. Only in the past fifty years have NGOs and other concerned voices called for a restoration of the cetosphere by ending commercial whaling and setting up 'whale sanctuaries'.¹ Bringing back the cetosphere may also come with some risks, however, as the oceans have become part of the anthroposphere and there will potentially be a conflict of interest between cetaceans and commercial fisheries.²

In this regard, some pro-whaling nations articulate the view that humans and whales are in contest over the same marine resources and that the culling of marine mammals is necessary to ensure a sustainable harvest of fishery products.³ Japanese scientists from the Institute of Cetacean Research calculated that whales consume roughly 280 to 500 million metric tons of marine animals annually, while commercial fishing constitutes 'only' 90 million metric tons.⁴ Norwegian scientists found that the increase in minke whales after the end of commercial whaling led to a decrease in certain fish species in the Barents Sea, where cetaceans consume over 100,000 metric tons of cod each year.⁵

¹ For more on the disputes surrounding the Southern Ocean Whale Sanctuary, see Mossap, 'When Is a Whale Sanctuary Not a Whale Sanctuary'; Berger-Eforo, 'Sanctuary for the Whales'.

² For the effect of commercial fishing on marine mammals stocks, see Read, 'The Looming Crisis'.

³ Martinsen, 'Whales in Norway'; Gerber et al., 'Should Whales Be Culled to Increase Fishery Yield?'; Morishita, 'What Is the Ecosystem Approach for Fisheries Management?'; Lavigne, 'Marine Mammals and Fisheries'.

⁴ Numbers cited after: Komatsu and Misaki, *The Truth Behind the Whaling Dispute*, 11.

⁵ Planque et al., 'Who Eats Whom in the Barents Sea'; Lindstrøm et al., 'Modelling Multi-Species Interactions in the Barents Sea Ecosystem with Special Emphasis on Minke Whales and Their Interactions with Cod, Herring and Capelin'; Schweder, Hagen, and Hatlebakk, 'Direct and Indirect Effects of Minke Whale Abundance on Cod and Herring Fisheries'.

In the view of these scientists, restoring the whale stocks to their previous levels could only be done at the cost of the fishing industry and, therefore, humans have no other choice than to set up a small-scale sustainable whaling program to prevent the collapse of the current fishing regime.

Other scientists, mainly from anti-whaling nations, have rejected this interpretation by arguing that marine mammals mostly eat squid and fish that are not harvested by humans while providing necessary services to the marine ecosystems that humans cannot easily imitate.⁶ A return to the cetosphere would produce a more diversified and abundant marine ecosystem and would be, in the long run, more beneficial for humans as well.⁷

What can environmental histories like the one presented in this book contribute to these debates? The historical perspective taken here reveals that some coastal communities in northeast Japan (and possibly in other regions of early modern Japan) have lived closely with whales without being in direct competition with them. Indeed, the local ecological knowledge of how to benefit from the cetosphere was widespread among the villages and can be traced in historical documents, folk stories, and material objects since the early Edo period. This study has revealed that early modern Japan possessed not one singular whaling history but several competing whale-human cultures.

While many coastal communities regarded whales as divine beings, the reason they refused to conduct whaling was not that they saw intrinsic value in the animals,⁸ but because the cetosphere had tangible socio-economic and cultural benefits for the coastal communities. Killing whales threatened the long-term survival of the community as they would no longer bring sardines and bonito closer to the shore and the outflowing whale blood and oil polluted the coastal ecosystem. Instead of seeing whales only as a resource

⁶ Ruzicka et al., 'Dividing up the Pie'; Corkeron, 'Marine Mammals' Influence on Ecosystem Processes Affecting Fisheries in the Barents Sea Is Trivial'; Trites, Christensen, and Pauly, 'Competition between Fisheries and Marine Mammals for Prey and Primary Production in the Pacific Ocean'.

⁷ Estes et al., 'Megafaunal Impacts on Structure and Function of Ocean Ecosystems'; Clapham, 'Managing Leviathan'; Roman et al., 'Whales as Marine Ecosystem Engineers'.

⁸ In the framework of philosopher Arne Naess, the historical anti-whaling movements in northern Japan would be classified as 'shallow ecology', while the present-day anti-whaling movements spearheaded by Western NGO's, such as Greenpeace, show many characteristics of 'deep ecology'. According to Naess, proponents of the deep ecology movement protect non-human animals not because of the benefit they provide for humans, but because of their inherent value as living beings on this planet. For more on 'deep ecology', see Kopnina, 'The Lorax Complex'; Drengson, 'The Deep Ecology Movement'; Naess, 'The Shallow and the Deep, Long-Range Ecology Movement'.

that can be harvested for meat and oil or as an unwanted competitor that disturbs the human-managed fishing regimes, the humancetacean relationship was much more nuanced and layered. 'The gods of the sea' could bring wealth and prosperity in one region and 'curse' a whole community in another. This book has mostly looked at how early modern coastal communities imagined the effect the cetosphere had on them. To this day, the question of whether sei whales bring sardines and capelin closer to the shore has not been definitively answered. Furthermore, many of the feedback loops a whale-dominated coastal ecosystem provided have probably been lost for good. At this point, it is questionable if humanity has the ability to restore the whale stocks to pre-industrial whaling levels and thus reinstate the cetosphere. As this book has shown, however, it seems likely that it would lead to a more diverse marine ecosystem from which humanity and many nonhumans would profit in many different ways.