Globalizing Japanese Tuna Fisheries
Oceanic Sovereignty in the Twentieth-Century Transimperial Indo-Pacific

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The oceans are our great laboratory
for the making of a new world order[1]

In 1970, Elisabeth Mann Borgese organized the first international conference on the Law of the Sea. An expert in resource management, environmental policy, and maritime law, that same year Mann Borgese also helped draw up the United Nations Convention on the Law of the Sea (UNCLOS), which had been the object of negotiations since 1956. Finally enacted in 1982, this international law established that so-called exclusive economic zones (EEZs) of 200 nautical miles could be subsumed under the national jurisdiction of coastal states, which would have the sole right to exploit those zones' resources. The new regime of the international Law of the Sea thus sought to regulate the extraction, conservation, and management of fish and other marine resources as both global commons and national goods by extending national claims to oceanic territory out from the coastlines into open waters. This process has been identified as a turning point in the legal and historical definition of ocean space, a radical departure from a world in which most of the ocean had been open to everyone and did not belong to states.[2]

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1. Elisabeth Mann Borgese, "The Process of Creating an International Ocean Regime to Protect the Ocean's Resources," in *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony*, ed. Jon M. Van Dyke, Durwood Zaelke, and Grant Hewison (Washington: Island Press, 1993), 23–37, here p. 37.

2. Reinhart Koselleck, "Raum und Geschichte," in *Zeitschichten. Studien zur Historik*, ed. Reinhart Koselleck (Frankfurt am Main: Suhrkamp, 2003), 78–96, here p. 95.

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During the Cold War, the "blue planet"—a new conception of the world as visualized from outer space—faced an unprecedented extraction of marine resources, a scramble for the wealth of the oceans as an essential source of protein to fight hunger and ensure the survival of humanity. However, these intensive practices went hand in hand with fears of overexploitation and scarcity, most famously detailed by Garrett James Hardin in his 1968 theory of the "tragedy of the commons."[3] These anxieties dovetailed with warnings about the planet's limits and calls for global environmental governance, most prominently in the "Limits to Growth" report issued in 1972 by the Club of Rome, of which Mann Borgese was long the sole female member.[4] She was thus among those who argued, with Arvid Pardo (Malta's permanent representative to the United Nations General Assembly from 1964 to 1971), for the ocean as a "common heritage of mankind."[5] Since the 1980s and 1990s, however, Hardin's theory has been superseded by a new dominant paradigm claiming that the commons can be governed in a sustainable way, most famously advocated by the Nobel Prize-winning scholar Elinor Ostrom.[6]

This shift of paradigm, at once legal, economic, and theoretical, raises questions about chronologies and the periodization of the twentieth century. Oceans of ink have been spilled on how to narrate, label, and periodize what we think of as modern history. Some talk of a short twentieth century following on from the long nineteenth century—both terms coined by Eric Hobsbawm.[7] More recently, environmental historians have begun to label the early Cold War period the "Great Acceleration" due to the immense economic and technocratic resource extraction that took place in those years,[8] while the period after the 1970s, with its environmental and social movements, is termed the era of ecology.[9] Others see the end of the Second World War, the beginning of the Cold War, and the onset of decolonization as the most important turning points of the twentieth century. In this article, I propose to explore an alternative narrative based on an oceanic perspective, arguing that the territorialization of the oceans was a fundamental inflection point, transforming the sovereignty of states and profoundly reshaping their territories. In terms of scale, it is the most planetary of the remappings that have marked the twentieth century. A closer study of the globalization of the Japanese tuna industry

3. Garrett James Hardin, "The Tragedy of the Commons," *Science*, n.s. 162, no. 3859 (1968): 1243–48.
4. Donella H. Meadows et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972).
5. Arvid Pardo, "Third World Lecture 1984: Ocean Space and Mankind," *Third World Quarterly* 6, no. 3 (1984): 559–72, here p. 567.
6. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).
7. Eric J. Hobsbawm, *The Age of Extremes: The Short Twentieth Century, 1914–1991* (London: Michael Joseph, 1994).
8. John Robert McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945* (Cambridge: Harvard University Press, 2016).
9. Joachim Radkau, *The Age of Ecology: A Global History* [2011] (Cambridge: Polity, 2014).

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will serve as an emblematic manifestation of this transition and help us to understand why and how this process evolved.

Charles Maier's concept of "territoriality" is a valuable tool for considering the appropriation of the oceans in the twentieth century. First devised around two decades ago to structure what he termed "alternative narratives for the modern era," the concept offered a novel periodization. For Maier, an "age of territoriality" began in 1860 with the formation of the nation-state and ended around 1970 as globalization steadily eroded both those states and the notions of space that underpinned them.[10] I would argue, however, that seen from an oceanic perspective, the age of territoriality did not in fact end in 1970. Rather, the 1970s marked the beginning of a new phase of territorialization of the oceans through national, international, and sub-national attempts to use, exploit, and conserve marine commons. A new kind of maritime territory corresponding to Exclusive Fisheries Zones (EFZs)—generally extending 200 nautical miles off coasts and islands—was gradually proclaimed and asserted during the 1960s and 1970s, and debated at sessions of the third United Nations Conference on the Law of the Sea over the 1970s. The EEZs codified and enacted in 1982 were the fusion of this concept with that of the "patrimonial sea," stressed during those decades by decolonizing and developing states as they affirmed control of their natural resources.[11] Coastal states in particular regained remarkable political and economic power thanks to the establishment of EEZs that considerably increased their national territory. This new phase of territorial expansion was vertical as much as it was horizontal. Even before the mid-twentieth century, both the deep sea and outer space had become central to imaginaries of territory and attempts to gain national sovereignty over it.[12]

My thinking is inspired by what has been dubbed an "oceanic turn" in historiography.[13] This current departs from what is generally subsumed under maritime history, in the sense that it addresses the sea not only as a horizontal space over

10. Charles S. Maier, "Consigning the Twentieth Century to History: Alternative Narratives for the Modern Era," *American Historical Review* 105, no. 3 (2000): 807–31, here p. 816. Maier slightly modified his thesis in his later book *Once within Borders: Territories of Power, Wealth, and Belonging since 1500* (Cambridge: The Belknap Press of Harvard University Press, 2016). On the argument for deepening the analytical value of territoriality by taking verticality into account, see Manu Goswami et al., "AHR Conversation. History after the End of History: Reconceptualizing the Twentieth Century," *American Historical Review* 121, no. 5 (2016): 1567–1607.

11. Donald R. Rothwell and Tim Stephens, *The International Law of the Sea* (Oxford: Hart, 2010), 82.

12. Insightful studies include Gregg Mitman, Michelle Murphy, and Christopher Sellers, "A Cloud over History," introduction to "Landscapes of Exposure: Knowledge and Illness in Modern Environments," ed. Gregg Mitman, Michelle Murphy, and Christopher Sellers, special issue, *Osiris* 19, no. 1 (2004): 1–20; Jerry C. Zee, "Holding Patterns: Sand and Political Time at China's Desert Shores," *Cultural Anthropology* 32, no. 2 (2017): 215–41; Robert Macfarlane, *Underland: A Deep Time Journey* (New York: W. W. Norton, 2019).

13. Elizabeth DeLoughrey, "Submarine Futures of the Anthropocene," *Comparative Literature* 69, no. 1 (2017): 32–44.

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which people or commodities move, nor as a space defined by its connectivity, but as one with its own history, including in terms of its verticality.[14] For many of the historical actors involved in fisheries, verticality mattered substantially. Over the twentieth century, fishers, fisheries scientists, and oceanographers alike came to better know the sea beyond the surface, as increased familiarity with its depths revealed more about the schools of fish living in them and their movements through the ocean currents. This greater understanding of the vertical dimension translated into new fishing techniques and influenced technological changes in fishing gear and vessels. As we shall see, the Japanese Empire and the various actors connected to it played a crucial role in this transformation of fishing practices on a global scale. More generally, historians too increasingly look below the waves, granting agency to oceanic species and various environmental forces and linking changing oceanic ecologies to societal and environmental management and politics more broadly.[15] This shift in perspective means moving beyond the subfields of Atlantic, Indian Ocean, or Pacific studies. Sujit Sivasundaram, Alison Bashford, and David Armitage, for example, suggest conceptualizing the different oceans as a single "world ocean," which in turn implies understanding these waters as global commons from a trans-regional perspective.[16]

The idea of extending states' territory beyond their coastlines led to a scramble for the oceans, and the imaginary of what has been termed "volumetric sovereignty" soon went hand in hand with that of extension into outer space or down into the geological strata of the earth. Fishing regimes played a crucial role in this process—as, of course, did the ecological regimes of the fish themselves. Fisheries have always been about more than just fish. They are an integral component of attempts to gain volumetric sovereignty, to territorialize the sea in order to capitalize on its resources, and, as the Japanese example shows, both the surface and vertical dimensions of fisheries are linked to geopolitical considerations. Yet even as the competition for access to fish led to the creation of new fisheries management systems and the legal framework of the Law of the Sea, these new regimes were undermined and reformed by the fish being hunted and the ecologies they

14. For early thoughts in this direction, see Philip E. Steinberg, *The Social Construction of the Ocean* (Cambridge: Cambridge University Press, 2001); Naomi Oreskes, "Scaling Up Our Vision," *Isis* 105, no. 2 (2014): 379–91; Kären Wigen, "In This Issue," *American Historical Review* 111, no. 3 (2006): 717–21.

15. Markus P. M. Vink, "Indian Ocean Studies and the 'New Thalassology'," *Journal of Global History* 2, no. 1 (2007): 41–62. Studies include Ryan Tucker Jones, "Running into Whales: The History of the North Pacific from below the Waves," *American Historical Review* 118, no. 2 (2013): 349–77; W. Jeffrey Bolster, "Putting the Ocean in Atlantic History: Maritime Communities and Marine Ecology in the Northwest Atlantic, 1500–1800," *American Historical Review* 113, no. 1 (2008): 19–47; Bathsheba Demuth, *Floating Coast: An Environmental History of the Bering Strait* (New York: W. W. Norton, 2019).

16. Sujit Sivasundaram, Alison Bashford, and David Armitage, "Writing World Oceanic Histories," introduction to *Oceanic Histories*, ed. David Armitage, Alison Bashford, and Sujit Sivasundaram (Cambridge: Cambridge University Press, 2017), 1–28, here p. 26.

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lived in, which had little regard for borders and geopolitics. In a sense, then, the territorialization of the sea was both determined and challenged by marine ecologies themselves.

In exploring the global expansion of the Japanese tuna industry, I will also apply a transimperial perspective. Historiography has tended to treat maritime resources such as tuna as national goods or as commodities that move between nation-states or within a particular empire. A transimperial approach, however, makes it possible to discuss imperial competition, cooperation, and connectivity not as separate phenomena but as entangled processes. The point is not to focus on either cooperation or competition but to shed light on how they reinforced each other and how connectivity worked within these tensions. In other words, I do not seek to celebrate connection and foreground instances of imperial cooperation, but rather use a transimperial perspective to open up new scales of analysis that take both connectivity and disconnection into account.[17] It is also important to stress that transimperial entanglements did not end in 1945. Their legacies weighed heavy in the decolonization process that followed, as transimperial histories transcended the so-called Age of Empires to influence the establishment of a new global order and a new oceanic sovereignty.

The ocean was transimperial in multiple ways. Legally, the open sea, where tuna is fished, did not—and still does not—fall under state sovereignty. The first part of this article will focus on the Indo-Pacific as a transimperial "hotspot" in the first half of the twentieth century, situated between the Japanese, British, Dutch, French, and American Empires. More specifically, it will use the lens of tuna fishing to trace how imperial governments, fisheries experts, and fishers as labor migrants participated in intensifying imperial competition for oceanic territoriality. Transimperial "brokers"—both human migrants and migratory species such as tuna—acted across boundaries and created an open oceanic frontier dependent on shifting ecological conditions. Knowledge of the oceans was vital to extracting oceanic resources, and Japanese authority in such matters was recognized by the other powers active in the region. Practical forms of knowledge thus went hand in hand with imperial competition to exploit marine resources and affected oceanic territorialization and management. But the transimperial was not only crucial in terms of space; it also had a temporal dimension. In particular, established hierarchies of knowledge helped sustain Japanese tuna fisheries on a large scale after the rupture of the Second World War, through the Cold War, and into the later twentieth century. The second part of the article will thus consider the role of international aid projects organized by Japanese fisheries associations, increasingly moving beyond the Pacific as decolonization transformed that space from a transimperial one into an assemblage of nation-states, each with claims to oceanic territory and sovereignty.

17. Daniel Hedinger and Nadin Heé, "Transimperial History: Connectivity, Cooperation and Competition," *Journal of Modern European History* 16, no. 4 (2018): 429–51.

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Volumetric Sovereignty in a Transimperial Setting

In spring 1961, the physical oceanographer Michitaka Uda quoted John F. Kennedy in his private diary:

> *The seas also offer a wealth of nutritional resources. They already are a principal source of protein. They can provide many times the current food supply if we but learn how to garner and husband this self-renewing larder. To meet the vast needs of an expanding population, the bounty of the sea must be made more available.*[18]

"Agree," Uda continued. "But Japan has already done this for quite some time." This diary entry is significant in three ways. First, the quote itself points to the Malthusian discourse of the Cold War era and the fear that food (and especially protein) would prove lacking if measures were not taken to secure these resources. Second, the source of the citation, a letter to the United States Senate on increasing the national effort in oceanography, highlights the role of knowledge: not simply mapping the ocean from a government office, but knowing how to govern and use it in ways that recall a certain "resource nationalism" we will encounter again later. Finally, Uda's remark that Japan had established such measures much earlier shows a spirit of competition between the two states in their management of oceanic resources, but also points to imperial legacies and continuities between pre- and post-1945 fisheries. If in the 1960s Japanese fisheries had reached the peak of their global supremacy and extension, it is important to recall that they had already played a significant role in the economy of the empire before 1945.

The figure of Uda personifies these continuities in several ways. Having started his career under the Japanese Empire, he played a key role in ocean studies at an international level during the Cold War years. He was notably a member of various United Nations committees, including the Food and Agriculture Organization (FAO), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the International Maritime Organization (IMO). Though he gained renown beyond the world of ocean studies when he discovered the subtropical countercurrent in the late 1960s, Uda had already enjoyed international prestige among ichthyologists during the interwar period.[19] Over his long career, he was thus pivotal to creating the specific political economy and knowledge regime that underpinned the prowess and global hegemony of Japanese tuna fisheries from the 1930s to the early 1940s, and again from the 1950s to 1980s. Key to

18. Tokyo University of Marine Science and Technology, archives of Michitaka Uda, private notebook; John F. Kennedy, "Letter to the president of the Senate on increasing the national effort in oceanography," March 29, 1961, *American Presidency Project*, https://www.presidency.ucsb.edu/documents/letter-the-president-the-senate-increasing-the-national-effort-oceanography.

19. Albert W. C. T. Herre, "Japanese Fisheries and Fish Supplies," *Far Eastern Survey* 12, no. 10 (1943): 99–101.

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this success was the mobilization of various forms of ocean-related expertise, from environmental knowledge to both artisanal and innovative fishing techniques, and, most crucially, familiarity with fish, their migratory routes across the oceans, and the currents through which they moved.[20]

To understand the imperial legacy and its consequences for the territorialization of the oceans from the 1950s onwards, we must look back to the first half of the twentieth century. The establishment of the Japanese tuna fisheries in these years was embedded in an imperial race for oceanic resources. The process was an essential part of what William Tsutsui has dubbed Japan's "pelagic empire," observing that imperial expansion took place not just horizontally through military ventures but also vertically through fisheries.[21] Although fish had long been harvested along the Japanese coasts, pelagic fisheries only developed in the late nineteenth century, the move offshore prompted by the emergence of fishing vessels capable of safely navigating the open ocean but also by a growing market for marine products. The market conditions and fishing grounds, as well as the logistics and technologies of fishing, differed depending on the species of tuna. Bluefin and albacore became lucrative from the 1930s onwards, with albacore in particular used in canned tuna destined for exportation. Skipjack tuna was consumed and processed earlier, from the turn of the twentieth century, in ways that focused more on markets within the empire itself—mainly in the form of skipjack tuna flakes or *katsuo bushi*, used to flavor soups and other dishes.[22]

How important skipjack had become a few decades later is reflected in an Italian propaganda article from 1941 that dubbed *katsuo* "the fish of [Japan's] victory," a symbol of imperial expansion and success.[23] While sushi and sashimi became a vital international market only during the Cold War,[24] huge amounts of canned tuna were already exported to the United States after the Great Depression and to a few European countries during the interwar years. Little wonder then that imperial competition over tuna fishing and canning became a crucial factor during the Pacific War in the 1940s, a rivalry referred to as a "tuna war" by both contemporary actors and historians.[25] In the years leading up to the

20. Nadin Heé, "Negotiating Migratory Tuna: Territorialization of the Oceans, Trans-War Knowledge and Fisheries Diplomacy," *Diplomatic History* 44, no. 3 (2020): 413–27.
21. William M. Tsutsui, "The Pelagic Empire: Reconsidering Japanese Expansion," in *Japan at Nature's Edge: The Environmental Context of a Global Power*, ed. Ian Jared Miller, Julia Adeney Thomas, and Brett L. Walker (Honolulu: University of Hawai'i Press, 2013), 21–38.
22. Daisuke Miyauchi and Yasushi Fujibayashi, *Katsuobushi to Nihonjin* (Tokyo: Iwanami shoten, 2013).
23. "Katsuo. Il pesce della vittoria," *Yamato: Mensile italo-giapponese* (December 1941), 379.
24. Sasha Issenberg, *The Sushi Economy: Globalization and the Making of a Modern Delicacy* (New York: Gotham Books, 2007).
25. For a more detailed discussion of marine resources as more than simply a means to feed the Japanese population, and of the competition over canned tuna between the United States and Japan, see Nadin Heé, "Tuna as an Economic Resource and Symbolic Capital in Japan's 'Imperialism of the Sea'," in *Animals and Human Society in Asia: Historical, Cultural, and Ethical Perspectives*, ed. Rotem Kowner et al. (Cham: Palgrave Macmillan, 2019), 213–38.

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conflict, the waters around Singapore and the Philippines were important fishing grounds for the Japanese Empire, and Japanese fishers dominated the market in Singapore.[26]

By around 1930, Japan had emerged as the largest fishing power in the world. Both its allies and its enemies agreed that its fishing empire was based on superior technology and expertise regarding the capture and processing of fish. The government in Tokyo promoted the systematic expansion of the fishing industry across the entire empire. As well as the technical knowledge and bodily skills[27] required to handle fishing gear, knowledge production, the claim to authority, and the monopolization of certain environmental expertise played a decisive role in this domination. To improve fishing techniques while simultaneously preserving fish stocks, the Japanese government established research institutions devoted to managing maritime resources in its oceanic spaces. Besides sponsoring multiple institutes across the country's islands, it also invested in widespread research throughout the empire, supported by colonial governments. This was led by the Fisheries Experiment Station, established in Seoul in 1921, and its eleven branches: one in Taiwan, three in Manchuria, six in Sakhalin and Kamchatka, and another on the Micronesian islands.[28]

The rise of Japan as the world's biggest fishery empire was accompanied by increasing tensions with other states. China, Russia, Australia, Norway, Britain, and the United States constantly complained about the dominance of the Japanese fishing industry. By 1934, Japan had practically monopolized the market in Southeast Asia and had begun fishing for tuna in both the South Pacific and the Indian Ocean. Japanese migrants were also prominent in the Californian tuna fisheries, where they played a crucial role in establishing industrial-scale tuna fishing off the southern coasts of the state.

Fisheries migrants moved across oceans for various reasons. Research on transpacific migration has not generally considered environmental factors as a driving force. Yet at the turn of the twentieth century, the Japanese government was already aware of the ecological transformation of coastal waters caused by the depredations of the fishing industry. As part of the modernization policies introduced in the late nineteenth century, the state had abandoned the fisheries regulations then in place. A few years later, this absence of appropriate regulations for fisheries management, combined with a previously unprecedented extraction of marine resources, had caused fish stocks in coastal waters to decline dramatically. To manage the situation, the Japanese state pushed its fisheries offshore into the open sea. Legal measures were taken to incentivize pelagic fishing, including the 1897 Distant Water Fishery

26. Shimizu Hiroshi and Hitoshi Hirakawa, *Japan and Singapore in the World Economy: Japan's Economic Advance into Singapore, 1870–1965* (London: Routledge, 1999), in particular chapter 4.

27. Marcel Mauss, "Les techniques du corps" [1936], in *Sociologie et Anthropologie* (Paris: Presses universitaires de France, 1950), 371–72.

28. Supreme Commander for the Allied Powers (SCAP), "Summation of Non-Military Activities in Japan and Korea," report no. 5, February 1946, p. 17.

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Promotion Act, which subsidized the technical improvement of vessels and fishing gear for offshore operations.

This act was emblematic of conflicting approaches to fisheries management before 1945, torn between an awareness of the limits of marine resources and expansionist programs for the discovery and intensive exploitation of new fishing grounds throughout the Pacific and beyond. The actors involved in the Japanese fisheries oscillated between two stances. On the one side was conservation-related knowledge based on social regulations and the experience of fishers, seen as authoritative in the political epistemology of the Tokugawa shogunate (1603–1868). On the other was a new hegemonic knowledge order imposed by Western fisheries science, then embodied by Thomas Henry Huxley, who proudly announced at the 1883 Fisheries Exhibition in London that most of the deep sea fisheries were inexhaustible.[29] It was perhaps no coincidence that Japan's contributions to the same exhibition were belittled by other participants as "oriental" and unscientific, grouped together with the Chinese exhibits.[30] However, the ambition of a new generation of Japanese scientists to catch up with so-called modern Western science as fast as possible soon yielded fruit. A change in attitudes was apparent at a similar event in Bergen in 1898. In comments on Japan's contribution, for instance, German fisheries experts took an English-language pamphlet by marine biologist Kamakichi Kishinoue seriously, valuing it as providing scientifically sound and useful information.[31] Learning about Japanese fisheries was no longer a question of gazing at an exotic collection of artifacts but of absorbing scientific facts, presented in a manner familiar to an audience of European and American experts.

Kishinoue himself was a key figure in these developments. After studying zoology at Tokyo Imperial University around 1900, he went on to revolutionize marine biological research on tuna worldwide. Acknowledged as an expert by his contemporaries,[32] his work was central to the development of new and improved fishing methods in the first decades of the twentieth century. Going offshore required Japanese fishers to understand the migratory patterns of tuna and environmental factors such as currents in order to track the fish through the oceans. This prompted the discovery that many tuna journey from spawning grounds in the

29. Thomas Henry Huxley, *Inaugural Meeting of the Fishery Congress: Address by Professor Huxley* (London: W. Clowes and Sons, 1883).
30. G. Brown Goode, "The International Fisheries Exhibition," *Science* 1, no. 16 (1883): 447–50; Goode, "The International Fisheries Exhibition – Second Paper," *Science* 1, no. 20 (1883): 564–65; Goode, "The International Fisheries Exhibition – Third Paper," *Science* 2, no. 26 (1883): 129–31; Goode, "The International Fisheries Exhibition – Fourth Paper," *Science* 2, no. 40 (1883): 612–15; note on "Papers of the Conferences Held in Connection with the Great International Fisheries Exhibition," *Journal of the Society of Arts* 32, no. 1623 (1883): 112; correspondence regarding "The International Fishery Exhibition," *Scientific American* 40, no. 6 (1883): 88.
31. Deutscher Seefischerei-Verein, *Abhandlungen des Deutschen Seefischerei-Vereins* (Berlin: Otto Salle, 1898); Kamakichi Kishinoue, *The Fishing Industry in Japan* (Bergen: J. Grieg, 1898).
32. T. W. V., obituary for "Kamakichi Kishinouye," *Science* 71, no. 1833 (1930): 179.

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southern waters of Australia via the Kuroshio current to Taiwan and the Japanese Islands, and from there to the waters off the west coast of the United States. Their migration patterns depend on changing environmental conditions, such as shifts in the Kuroshio current or alterations in climate due to the southern oscillation of El Niño winds known as the ENSO phenomenon.[33]

To improve methods and equipment and open up new tuna fishing grounds, scientists such as Kishinoue dedicated themselves to the study of migratory fish in institutions and on research vessels throughout the Japanese Empire and beyond, pioneering studies on tuna in the 1910s and 1920s.[34] They worked in tandem with physical oceanographers such as Uda, who studied the Kuroshio current, and cooperated with fishers to test new techniques at sea. Their results combined proven local fishery techniques with new scientific insights.[35] Apart from the optimization of pole and line skipjack fishing gear and techniques for catching baitfish, most revolutionary was the development of longlines, which for the first time enabled the capture of tuna species that migrate along warm currents at a depth of 200–300 meters, including bluefin and bigeye. As the scientists' collaboration with fishers suggests, it was not just bureaucrats and fisheries experts that were involved in this process. Migrant fishers were transimperial actors, crisscrossing the Pacific and circulating within and beyond the Japanese Empire. They played a crucial role in pioneering and refining tuna fishery techniques during this period, making it possible to overcome the problem of depleted coastal or local fishing grounds and to discover and open up new ones.

In their quest for improved tuna catching methods and gear in the South Pacific, the Indian Ocean, and the waters around South Africa, Japanese experts based in research institutes all over the empire conducted surveys comparing the equipment, techniques, and marine biology research of different empires.[36] Though their main focus was on fishing activities around their own imperial territories, materials on the Mediterranean and other waters were also collected and studied. Japanese scientists even went so far as to explore the potential of waters off Africa for future fishing grounds.[37] Various associations linked to fisheries or founded to "develop" what the Japanese called the "southern oceans" or

33. Robin Allen, James A. Joseph, and Dale Squires, *Conservation and Management of Transnational Tuna Fisheries* (Hoboken: Wiley, 2010).
34. See, for example, Kamakichi Kishinoue, "Maguro Katsuo No Kenkyū," *Suisankai* 466 (1921): 22–25. See also sketches of the migratory routes of tuna and other species on loose, unnumbered pages in private notebooks, Tokyo University of Marine Science and Technology, archives of Michitaka Uda.
35. Michitaka Uda, "Kuroshio No Ryūikika Ni Okeru Kaisuisō No Sōjū Jōtai Ni Tsuite," *Umi to sora* 9, no. 11 (1929): 175–82.
36. For overviews of the structure of Japan's imperial fisheries, see in particular Yasuhiro Itō et al., eds., *Teikoku Nihon No Gyogyō to Gyogyō Seisaku* (Tokyo: Hokuto Shobō, 2016), chapter 1. For an account of the main research bodies, see SCAP, Department of Natural Resources, ed., *Japanese Fisheries before 1945* (Tokyo: SCAP, 1950).
37. For instance, Nanyō suisan kyōkai, ed., *Afurika No Suisan* (Tokyo: Nanyō suisan kyōkai, 1936).

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nanyō (encompassing parts of the South Pacific and the Indian Ocean) compiled data and published volumes on fisheries abroad. As well as statistical surveys,[38] these included collections of articles from journals on fisheries and economic development, along with information booklets published by associations providing subventions for fisheries migrants.[39] These projects involved state bureaucrats and fisheries scientists, but also migrant fishers, private companies, and adventurers seeking to make a profit by establishing new business abroad. Of particular interest were the fishing activities and research conducted by the French and the Dutch in the South Pacific.

Japanese experts also carried out in-depth research on existing fisheries techniques and fishing grounds in their overseas colonies, the Philippines, and the waters around Singapore. One of the most important figures in the establishment of fisheries in Singapore was Itaro Takayama, a fisheries expert sent to the British Crown Colony by the Japanese Ministry of Agriculture and Commerce in the 1910s. Having identified opportunities to access new fishing grounds, he recommended that the government invest in fisheries in the region, where they would obtain licenses with ease. He mentioned in his report that other nations were also conducting research in the same waters: a British hundred-ton trawler, the *Golden Crown*, had steered through the waters of the Malacca Strait equipped with a crew of Chinese and Malay fishers. Takayama judged, however, that the British mission was impeded by their lack of experience in handling fishing gear and their poor choice of potential fishing grounds.[40] Japanese research vessels were certainly much more successful in their exploration of new fishing grounds and techniques, particularly for tuna. There was nevertheless a conflict between private and state actors, for even as the vessels of various state-financed institutes crisscrossed the oceans, huge Japanese fisheries companies also invested in their own research vessels in the race to open up new fishing grounds.[41]

European colonial governments were concerned by the Japanese success in the waters surrounding their empires. At the same time, they recognized the superiority of Japanese environmental knowledge, fishing skills, and technology. In the transimperial hotspot of Indo-Pacific waters, the degree to which these colonial authorities experimented with new fishing techniques or supported private actors to do so varied. British Burma did little to rival the sophisticated system of the Japanese, while the government of the Dutch Indies sat somewhere in between. The French in Indochina (using a research vessel called *Lassane*), as well as some American and Philippine scholars,[42] conducted surveys of Japanese fisheries in

38. For example, Kaiyō gyogyō kyōkai, ed., *Sekai suisan tōkei 1933–1937* (Tokyo: Kaiyō gyogyō kyōkai 1937).
39. For example, Nanyō suisan kyōkai, Kaiyō gyogyō shinkō kyōkai, Suiseikai, ed., *Kaigai Gyogyō Jijō* (Tokyo: Nanyō suisan kyōkai, 1937).
40. Itaro Takayama, *Nanyō No Suisan* (Tokyo: Dainihon Suisankai, 1914), 324.
41. Nanyō suisan kyōkai, Kaiyō gyogyō shinkō kyōkai, Suiseikai, *Kaigai Gyogyō Jijō*.
42. For research by a Philippine expert, see Claro Martin, "Tuna Fisheries and Long-Line Fishing in Davao Gulf, Philippines," *Philippine Journal of Science* 67, no. 2 (1938): 189–98.

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general, and more specifically tuna fisheries, due to their advances in the South Pacific and adjoining waters during the 1930s.[43]

There were also transpacific events where various experts could share knowledge both formally and informally. The Pan-Pacific Science Congresses, for instance, took place on a regular basis and aimed not only to improve relations among Pacific nations but also to develop scientific solutions to problems shared throughout the Pacific world. Apart from fisheries, discussions covered issues such as agriculture, the geological and geographical features of the Pacific, and the management of earthquakes and tsunamis. When the third congress was held in Tokyo in 1926, the delegates included both the American ichthyologist Albert W. C. T. Herre and Kishinoue, who presented a paper on tuna.[44]

Over this period, shared, transimperial knowledge gradually emerged regarding fishing vessels, fisheries technologies, and fishing grounds. States monopolized or attempted to keep secret certain forms of expertise, while the sharing of others was mobilized in diplomatic exchanges. Kishinoue traveled to California in 1920 with a group practicing "experimental fishing" and promoting the "jap-pole method," as this form of pole and line fishing came to be known after its appropriation in California. Taught in this way, the technique was positioned as authoritative knowledge. At the same time, Kishinoue sought to obtain new information about unknown tuna species, having realized that the samples fished during this mission differed from the stocks found off the Japanese coast and in the Mediterranean.[45]

Another example of Japanese knowledge treated as authoritative was the so-called *muro-ami* technique of reef fishing with divers and weighted nets. More difficult than pole and line fishing, this method required refined bodily knowledge, experience, and skills that took time and effort to master. It was used to catch small fish, but was also crucial to supplies of baitfish for pole and line and longline tuna fishing. Used mainly by Okinawa fishers from the town of Itoman, this technique became one of the driving forces behind the success of Japanese fisheries in Singapore.[46] The fisheries station in Batavia, the capital of the Dutch East Indies, hired a Japanese team to demonstrate it to the islanders in 1933, though the technology transfer was unsuccessful due to the complexity of the diving and artisanal skills involved.[47]

Japan's global success in tuna fisheries was thus a result of environmental, artisanal, and technical knowledge. In the first half of the twentieth century, following tuna through the oceans, learning migratory patterns, and studying environmental factors such as currents enabled the Japanese to fish not only in coastal

43. John G. Butcher, *The Closing of the Frontier: A History of the Marine Fisheries of Southeast Asia, c. 1850–2000* (Singapore: ISEAS Publications, 2004), 124 and 138–67.
44. Paris, UNESCO archives, D IV 46, program of the Third Pan-Pacific Science Congress, Tokyo, October 30–November 11, 1926.
45. N. B. Scofield, ed., "Commercial Fishery Notes," *California Fish and Game* 6, no. 4 (1920): 172–76, https://www.biodiversitylibrary.org/item/53575#page/34/mode/1up.
46. Hiroshi and Hirakawa, *Japan and Singapore in the World Economy*.
47. Butcher, *The Closing of the Frontier*, 150.

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waters but also on the open seas. This in turn led to a particular political ecology of fisheries, made possible within the framework of the empire but also within a process of the definition of authoritative knowledge and its hierarchization at a transimperial level.

The globalization of tuna fisheries as a form of political ecology was part and parcel of transimperial capitalism. As empires simultaneously cooperated and competed over knowledge and resources—in the form of both labor migrants and moving marine species—the commodity frontiers that emerged were necessarily transimperial in nature. Canned tuna production in Borneo, then divided between the British and the Dutch, was a case in point. The island's canneries produced both skipjack tuna flakes for the Japanese market and cans of albacore tuna in oil, mainly for export to America and Europe. Borneo Suisan, the company operating the factories, was a subsidiary of the biggest marine products company in the world before 1945, Nippon Suisan K. K., which also had subsidiaries in the Japanese colonies of Taiwan, Korea, and Manchuria, as well as in Argentina and the Philippines.[48] It reemerged from the chaos of the late 1940s and remains one of the largest global seafood companies today, operating under the name Nissui. During the 1930s, its Borneo subsidiary cooperated with the Harrison Line, one of the principal British shipping companies, to export its cans. Harrison's connected Borneo with Europe, but was also one of the main actors to connect Southeast Asia in general with Europe and Latin America, another market into which Nippon Suisan was expanding[49]: it established Nanbei Suisan K. K. in 1932, and obtained a fishing license in 1933 through a joint venture with the Compaña Argentina Commercial e Industrial de Pescheria (CACIP). The company also established joint ventures in other regions. Among the most important for tuna fisheries was Nanyo Suisan K. K., established in 1934 in Zamboanga in the Philippines, where it developed skipjack and other fisheries. A local company called Seafood Cooperation was subcontracted for the fishing, while the Japanese company processed and canned the catch. This arrangement came to a halt in December 1941, however, when Nanyo Suisan was seized by the United States.[50]

All imperial powers active in the Indo-Pacific relied on Okinawa migrant labor within their fisheries. More generally, they also depended on the labor of migrant fishworkers from the rest of Japan, China, and sometimes India to supply both the fresh fish market and canned tuna for export. In contrast to Australia, which targeted Japanese migrants in its Immigration Restriction Act of 1901, or the United States, whose Johnson-Reed Immigration Act of 1924 effectively barred Japanese migration until 1952, British Malaya and the Dutch Indies made extensive use

48. US Department of the Interior, Fish and Wildlife Service, ed., "Japan's Big Fishing Companies," *Fishery Leaflet* 268 (1947), 3.
49. Nanyō suisan kyōkai, Kaiyō gyogyō shinkō kyōkai, Suiseikai, *Kaigai Gyogyō Jijō*, 205–209. For a history of the Harrison Line, see Graeme Cubbin, *Harrisons of Liverpool: A Chronicle of Ships and Men 1830–2002* (Gravesend: Ships in Focus, 2003).
50. Naoya Kakizoe, *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.*, preface to the English edition by Norio Hosomi (Tokyo, Nissui Group, 2012), 66–70.

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of cheap foreign labor for extracting resources and infrastructure development.[51] As late as 1941, the fisheries department of the Japanese conglomerate Mitsubishi proposed using not only Japanese migrant fishers but also Chinese workers to fuel the expansion of South Pacific tuna fisheries.[52] Nippon Suisan relied on Taiwanese fishers to crew the high-tech tuna longliners that departed from southern Taiwan to fish in the South China Sea and Indian Ocean. The strategy of relying on these transimperial actors for cheap labor was common to all the imperial powers vying with Japan for marine resources.

This phenomenon can be ascribed to what Ann Laura Stoler has called the "imperial politics of comparison." Stoler has shown that rather than existing in isolation, empires actively compared themselves to one another. Indeed, even as they vaunted their supposed uniqueness and exceptionality, they were sharing up-to-date knowledge on colonial governance in their pan-imperial efforts to prevent disorder.[53] In the case of fisheries, imperial powers had a mutual interest in exploiting marine resources effectively. At the same time, the rivalry over fishing grounds and the best technology for extracting fish from the waters was very much part of an inter-imperial competition that got fiercer as the resources got scarcer.

The industrialization of Japan's fisheries in the early twentieth century led to a sharp increase in the possibilities for capitalizing on fish. When, around the turn of the twentieth century, Japanese tuna fishers recognized that skipjack stocks in the country's coastal waters had declined, they moved on with their catch, following the migrating fish through the oceans. This movement was registered by other imperial powers. In 1909, a Dutch daily paper reported that the Japanese had issued new regulations regarding coastal water fishing and increasingly operated in Korean and Russian waters. According to the *Leidsch Dagblad*, eight thousand vessels were fishing in Korean waters alone, making three million yen a year.[54] The following year, a French study of imperial Japan's economy raised concerns that the country's own fisheries were dwindling due to a lack of enforcement of legal regulations.[55]

On the scale of the empire as a whole, the *nanyō* came to be considered a new frontier for transimperial migrants in need of fresh tuna fishing grounds. This development aligned more broadly with political and military ambitions of a southward expansion. In 1939, the fisheries economist Ninagawa Torazō (who after 1945 would resign from his chair at Kyoto Imperial University to become governor of Kyoto Prefecture), described Japan's Indo-Pacific tuna fisheries and canneries as the most promising sector of future seafood production in light of the

51. Hiroshi and Hirakawa, *Japan and Singapore in the World Economy*, 18.
52. Tokyo, Mitsubishi archives, microfilm MZ-597, Fisheries Department of Mitsubishi Company, *Nanyō ni okeru suisangyō*, 1941.
53. Ann Laura Stoler, "Tense and Tender Ties: The Politics of Comparison in North American History and (Post) Colonial Studies," *Journal of American History* 88, no. 3 (2001): 829–65.
54. "De Japansche visscherij," *Leidsch Dagblad*, April 24, 1909, p. 20.
55. Joseph Dautremer, *L'Empire japonais et sa vie économique* (Paris: E. Guilmoto, 1910), 139.

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war.[56] As the frontier of the fishing grounds moved, the race for tuna became fiercer and involved both immigrants and inhabitants of the regions concerned. This was not least because other imperial powers, including the French, Dutch, and British, were becoming increasingly worried about the exhaustibility of tuna resources and the sharing of the commons.

In the late 1930s Pierre Chevey, director of the oceanographic institute in French Indochina, complained about Japanese vessels in Indochinese waters, equipped so powerfully that local fishers could not compete. He expressed the urgent need for international management and regulation of marine resources, in particular the enactment of a law that would extend French territorial sovereignty at least ten nautical miles into the sea.[57] The conservation of marine resources, especially migratory fish such as tuna, was a recurring point of discussion at the Pan-Pacific Science Congress.[58] During the same period, a Dutch newspaper article entitled "Japanese economic penetration in the Indies?" considered whether the "open door policy" of the Dutch Indies was the right approach toward Japanese immigrants, emphasizing that there were 700 Japanese fishers "in Batavia, Padang, and Menado" alone.[59] Around 1939, the British authorities, particularly in Singapore, began to drastically restrict licenses for Japanese fishers.[60] The *Leidsch Dagblad* commented on their widescale dismissal by the British authorities, drawing on Japanese sources:

> *1,000 Japanese fishermen in Malacca are out of work due to measures taken by the British authorities. Malacca's Japanese fishing industry brought in five million yen each year in Singapore alone. This industry is now threatened with destruction by the drastic measures taken by the British authorities against the Japanese fishermen.*[61]

As Japanese vessels were still allowed to fish on the open seas, this was foregrounded as a solution by advocates of the empire's fisheries. They touted the industry's future in the *nanyō*, a move that they saw as both retaliation for foreign machinations and crucial to feeding the Japanese population in wartime.[62]

The same year, Kumatarō Atsumi, who had set up a Japanese tuna fishery company in British Borneo as a sub-branch of the conglomerate Mitsubishi, would

56. Ninagawa Torazō, "Nihongyogyō no mondai," in "Gyogyō Imin Tokushū," special issue, *Umi Wo Koete* (August 1939): 2–3, here p. 2.
57. Pierre Chevey, *Rapport sur le fonctionnement de l'Institut océanographique de l'Indochine pendant l'année 1937–1938* (Saigon: Gouvernement général de l'Indochine, 1939), 14.
58. Paris, UNESCO archives, D IV 46, program of the Third Pan-Pacific Science Congress, Tokyo, October 30–November 11, 1926.
59. "Economische Penetratie van Japanners in Indie?" *Leidsche Courant*, May 12, 1930, p. 10.
60. Kew, The National Archives, ADM 1/11142, "Activities of Japanese nationals in British waters in Indian Ocean: Fishery protection and supervision of activities," 1939–1941. See also Hiroshi and Hirakawa, *Japan and Singapore in the World Economy*, in particular p. 118.
61. "Ontslag aan Japansche visschers op Malakka?" *Leidsch Dagblad*, July 13, 1939, p. 2.
62. Sangyo Tokei, Kenkyujo, ed., *Nanpo Shigenron* (Tokyo: Toado, 1940), 25.

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complain with increasing vehemence about the lack of management and restrictions in the region, stating that vessels run by the Japanese and the British were ruining the fishing grounds not simply for the species they aimed to catch but for all fish. As such, he worried that his company and its migrant workers would have to move on again and again as fishing grounds were devastated.[63] In this, he echoed other Japanese fisheries economists urging their government to develop a more reasonable plan for the future of the sector.[64] These fears were not limited to experts: tuna fishing communities based in Micronesia, then part of the Japanese Empire, seem to have very much shared anxieties about overfishing, the devastation of marine life, and the need to regularly move on to new fishing grounds.[65]

The question of overfishing in the *nanyō* and the status of fisheries migrants prompted reflection on the role of legal measures in the regulation of fisheries, as well as political reactions from other imperial powers. Fisheries migrants considered that the efficient exploitation of marine resources required the kind of regulation and management that came with states' sovereignty over their waters.[66] The question, however, would not in the end be addressed by the Japanese state in response to environmental issues. Instead, the British, French, and Dutch Empires restricted fishing licenses for Japanese vessels for political reasons, fearing market competition and suspecting that some fishing vessels were crewed by military spies. Some even banned Japanese fishing boats from their harbors completely,[67] causing Okinawa migrants working for Borneo Suisan to worry that illegal fisheries would intensify the exploitation of tuna and force them to leave their settlements for new fishing grounds. These concerns aligned the migrant fishers with various parties, including in some cases the Japanese government's expansive mission and ideology. Opening up new tuna frontiers was not just a question for fishing communities scattered along the empire's coasts, but was very much tied to a broader militarized discourse of opening up the Pacific as a Japanese imperial space.

This ideology emphasized a particular kind of masculinity characterized by physical strength and bodily skills. For advocates of imperial expansion through fisheries, fishermen fighting with tuna for the sake of the Japanese Empire became a powerful topos.[68] Even fishery migrants from Okinawa, generally perceived as a peripheral region within Japan itself, were praised as "sons of the nation of the sea, full of courage."[69] These discourses were often echoed by other imperial voices, including in Italy, the United States, and France.[70] But perhaps more remarkably, the same topos seems to have circulated explicitly among migrants

63. Kumatarō Atsumi, *Watashi no hansei* (Kyonan: by the author, 1995), private archives of Fukuhara Norio.
64. Torazō, "Nihongyogyō no mondai," 2.
65. See the special issue "Gyogyō Imin Tokushū," *Umi Wo Koete* (August 1939), 18.
66. Ibid., 12f.
67. Hiroshi and Hirakawa, *Japan and Singapore in the World Economy*.
68. Tōichi Kuwata, *Suisan Nihon* (Tokyo: Dai-Nihon Yubenkai Kōdansha, 1942).
69. Nobu Asato, *Okinawa Ken Jin Nanpō Hatten Shi, Nan'yō Shiryō*, vol. 106 (Tokyo: Nanyō keizai kenkyūjo shuppanbu, 1942), 19.
70. Atsumi, *Watashi no hansei*.

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themselves. In 1927, the *Maui Newspaper*, published from 1906 to the early 1940s by the Japanese community in Hawai'i, produced a piece entitled "An actual report of manly skipjack fishing." The hypermasculine image was evident in its description of the fishers: "It felt as if I had the figure of a brave Samurai from the olden days right in front of my eyes."[71]

That same year, the head engineer of Mitsubishi's shipbuilding branch, Uhei Matsumoto, attributed tuna fishers a crucial role in "colonizing the Pacific" (*taiheiyō no kaitaku*). By using the term *kaitaku*, meaning "colonizing" or "opening up," Matsumoto echoed the vocabulary used by the many agents of the empire seeking to propagate settler colonialism within and beyond imperial Japan. He endorsed opening up the Pacific to generate a stronger Japanese economy, as in his eyes the potential of tuna fisheries was enormous but still untapped. Matsumoto also considered that tuna fishers would contribute to defending the nation in Pacific waters—once again merging imaginaries of vertical and horizontal expansion. The "Pacific problem," he declared as early as the 1920s, "is for the state, first of all, a problem of national defense," suggesting that skipjack tuna fishing vessels be installed as assistant patrol boats in the region.[72]

However, there was also opposition to such rhetoric among fishers. Looking back on this period, Atsumi recalled that he wanted nothing to do with the Japanese Empire's "stupid" politics, and instead proposed negotiating new fishing grounds with various parties in the region, in particular the British and Dutch governments.[73] It is easy to see why. Before 1943 Atsumi had been able to leverage and capitalize on his transimperial mobility, but when the Japanese navy confiscated his fishing vessels in the middle of the Second World War, his ability to move across borders was massively constrained. Nonetheless, as we will see, many transimperial actors like Atsumi would play an important role when it came to the reemergence of tuna fisheries in the Indo-Pacific in the early 1950s.

Decolonizing Transimperial Waters and Nationalizing Oceanic Sovereignty

As emphasized in Truman's famous proclamation of 1945, the sea, and with it fish as a vital source of protein, was high on his government's agenda. In the early years of the Cold War, the United States stressed the scientific aspect of optimizing fishing yields on the international stage.[74] Soon, however, the "tuna wars" that developed

71. "Danseiteki Katsuotsuri Jikkenki," *Maui Newspaper*, May 13, 1927.
72. Uhei Matsumoto, *Sangyō Rikkoku Shugi to Gendai Shakai* (Tokyo: Ōsakaya goshoten, 1927), 162f.
73. Atsumi, *Watashi no hansei*.
74. Carmel Finley, *All the Fish in the Sea: Maximum Sustainable Yield and the Failure of Fisheries Management* (Chicago: University of Chicago Press, 2011). See "Proclamation 2668: Policy of the United States with respect to coastal fisheries in certain areas of the high seas," September 28, 1945, https://www.archives.gov/federal-register/codification/proclamations/02668.html.

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between the United States and some Latin American countries were accompanied by a scramble for these same resources in the Indo-Pacific. Although the United States government helped reinstate the prewar Japanese fishery industry after the turmoil of the 1940s, it also used its occupation of Japan to boost its own scientific fishing expertise. A lack of American research meant that the United States' tuna fisheries relied extensively on studies carried out within the former Japanese Empire. This was reflected in the American industry's enduring vision of imperial-style volumetric expansion: it hoped to "conquer" the waters surrounding the Mariana Islands, transforming erstwhile Japanese possessions into American fishing grounds. At the same time, fishers from the US west coast, scientists, and policymakers alike stressed the need for conservation to the point of making it a diplomatic issue and part of the peace treaty negotiations.[75] Despite the United States' attempts to compete with the Japanese industry, however, the latter recovered and from the 1950s started to dominate global fisheries once again.

These two powers were not the only actors to share visions of volumetric sovereignty when it came to tuna fisheries. In the early 1980s, the United Nations sought to incorporate the volumetric dimension of territorial sovereignty into its regulations, as indicated in article 2 of UNCLOS, which seeks to fix the "legal status of the territorial sea, of the air space over the territorial sea, and of its bed and subsoil."[76] As various examples of "tuna wars" and conflicts over the management of moving marine resources show, these regulatory ambitions encountered obstacles not only in terms of the imaginary of oceanic territory but also and in particular when it came to its governance. This is clear in the paragraph of UNCLOS concerned with tuna management, subsumed under the term "highly migratory species":

> *The coastal State and other States whose nationals fish in the region for the highly migratory species listed in Annex I shall cooperate directly or through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone. In regions for which no appropriate international organization exists, the coastal State and other States whose nationals harvest these species in the region shall cooperate to establish such an organization and participate in its work.*[77]

Tuna migrate thousands of miles through different regions and time zones, and across the lines inscribed on the ocean's surface by UNCLOS. Nations' claim to sovereign rights over living resources within 200 nautical miles of their coasts, as specified in

75. Sayuri Guthrie-Shimizu, "Occupation Policy and the Japanese Fisheries Management Regime, 1945–1952," in *Democracy in Occupied Japan: The U.S. Occupation and Japanese Politics and Society*, ed. Mark Caprio and Yoneyuki Sugita (London: Routledge, 2007), 48–66.
76. United Nations Convention on the Law of the Sea, 1982, article 2, p. 27.
77. United Nations Convention on the Law of the Sea, 1982, article 64, p. 48.

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international sea law, becomes difficult to apply in the case of such migratory and therefore border-crossing species. These fish travel through the EEZs of various nation-states, including where they overlap, as well as the high seas where marine life becomes in principle available to everyone, being legally defined as the "common heritage" of humanity, or more recently as a "global commons."

If migratory marine species could not be constrained by the new borders being demarcated in the turbulent middle years of the twentieth century, however, they were not entirely beyond the reach of global politics, and techno-political management regimes had a profound impact on their numbers. Fish, specifically the families of Pacific tuna (*Scombridae*) and Atlantic cod (*Gadus morhua*), became vehicles of United States geopolitics, symbolizing ideals of development through modernization and technology, and the victory of capitalism over communism during the Cold War.[78] At the same time, the race to extract energy from the harvest of marine species saw the Soviet Union quickly industrialize its fishing industry from the Second World War onwards.[79]

From the 1970s, the race for tuna in the South Pacific increasingly involved the new Pacific Island states, which claimed their own EEZs and thereby national rights over tuna in their coastal waters. In this context of resource nationalism, both the United States and the Soviet Union competed with Japan for fishing rights and access to the newly established nation-states' exclusive zones through fishing aid projects. These arrangements fed into the development of what scholarship has generally called "fisheries diplomacy," since under UNCLOS multiple nations could stake ownership of migratory living resources such as tuna. Without such agreements, Japan risked losing access to its former fishing grounds as vast tracts of once open sea were subsumed into different EEZs. In the South Pacific, which supplies around a third of the world's tuna, the establishment of 200-mile zones by the twenty-two self-governing island nations that emerged after decolonization has created an area of densely intermeshed economic territories that spans four time zones and twenty-five degrees of latitude.[80]

The process of decolonization and the establishment of EEZs meant that Japanese fisheries experts and oceanographers were able to join an international scientific community soon after the war, with some of them becoming major figures in international organizations thanks to the authoritative knowledge still recognized by other powers. Above all, it was through fisheries development funding and technical aid programs that the Japanese tuna industry was able to return to the former fishing grounds of the lost empire. United Nations-funded projects even enabled Japanese experts to continue research in the South Pacific and Indian Ocean begun during the imperial era. The new knowledge gained made it possible to expand their fishing and testing grounds and refine their fishing techniques.

78. Carmel Finley, *All the Boats on the Ocean: How Government Subsidies Led to Global Overfishing* (Chicago: University of Chicago Press, 2017), 3.
79. Demuth, *Floating Coast*.
80. Robert Gillett, *A Short History of Industrial Fishing in the Pacific Islands* (Rome: FAO, 2007).

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Japanese actors thus became part of a larger framework of cultural diplomacy and scientific cooperation within the United Nations.[81]

While this was an advantage in the 1950s and 1960s, when most of the waters of the South Pacific and the Indian Ocean were still uncontested by national claims, the situation changed. The early 1970s marked a severe crisis for Japanese tuna fisheries, as the legal limitation of fishing grounds coincided with the 1973 oil crisis. Although this is when most scholarship begins to speak of "fisheries diplomacy" and "fisheries development aid," from Japan's perspective this was not generally a form of state-driven aid or "technological cooperation," especially in its early years. Instead, the category of "grant aid" for fisheries was introduced to secure access to the fishing grounds of developing countries, as well as support for fisheries-related joint ventures. Involvement in other nations' fisheries was also sometimes a way for Japan to settle claims to war reparations. More broadly, this adjustment process shows the continued engagement of many imperial-era (fisheries) conglomerates and companies in these joint ventures.

Continuities also existed at the personal level, with individual fisher migrants maintaining their role as transimperial brokers. Although migrant fishers and experts as the driving actors of fishery work seem to be less visible in the postwar period, they continued to play a role in the transfer of knowledge that was by no means limited to technological know-how. Some even worked for the American fisheries while also participating in the endeavors of the Japanese tuna industry. One such example is Hiroshi Nakamura, employed by the Allied Occupation forces directly after 1945, who went on to work in Taiwan, where he had been stationed during the war, and then in the United States during the Cold War. This fisheries expert emphasized the role of his fellow migrants, proudly proclaiming that "all of the warm seas from the central Indian Ocean east across the whole Pacific have been developed by Japanese or by Americans of Japanese origin."[82]

Alongside these personal continuities, the extraction of tuna resources in the Indo-Pacific continued to involve joint ventures in the form of so-called technical aid projects among former imperial rivals. In 1982, the Overseas Fishery Cooperation Foundation of Japan (OFCF) launched one such aid project in Tahiti, French Polynesia, focused on skipjack tuna fishing. Established in 1973, the OFCF works with the Japanese fishery industry and various government ministries, but also with United Nations subcommittees including the FAO and UNESCO, and has been involved in most of Japan's fisheries aid programs from the Cold War era to the present.[83] If we look at the process of negotiation for the Tahiti project and

81. Michitaka Uda and Yasuaki Nakamura, *Hydrography in Relation to Tuna Fisheries in the Indian Ocean: A Special Publication Dedicated to Dr. N. K. Panikkar* (Tokyo: Marine Biological Association of India, 1973).

82. Hiroshi Nakamura, *Tuna Longline Fishery and Fishing Grounds* [1951], trans. W. G. Van Campen, Special Scientific Report: Fisheries, no. 112 (Washington: US Department of the Interior, Fish and Wildlife Service, 1954), 15.

83. Kaigai gyogyō kyōryoku zaidan, *Kaigai gyogyō kyōryoku zaidan nijunen no ayumi* (Tokyo: Kaigai gyogyō kyōryoku zaidan, 1993).

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the justifications given in the reports produced by the OFCF, it is clear that the Tahiti government hoped to access knowledge that Japanese experts had gathered during the prewar era, along with information gained through transimperial fisher migrants. As well as citing the Japanese fishers' technological proficiency, the reports refer to their particular skills and environmental knowledge, including their familiarity with fishing grounds, migratory routes, and the seasonal fluctuations of tuna stocks. More concretely, the Tahitians were keen to learn the technique of *muro-ami* fishing for small baitfish as part of the technology transfer.[84] Though France was a partner in the project, it closely monitored the activities of Japanese longline tuna vessels in the waters of Tahiti's EEZ.[85] The imperial politics of comparison were still very much alive even in the 1980s. While the French granted Japanese vessels the license to fish in their territorial waters, they nevertheless remained suspicious of their behavior and sought to meticulously keep track of the economic profit extracted from it.

While this continuing transimperial dimension is vital, such transmissions of knowledge and technology cannot be understood simply from a neocolonial angle. Nor were they merely a symptom of knowledge flows shifting from a West-East axis to one conceived around the so-called Global North and Global South, the new framework for development aid established during the Cold War. As an illustration, we can consider a technology transfer project for tuna fishing agreed between the OFCF and the Portuguese government in the waters around Madeira. The Japanese side was able to claim that they had secured access to the "Atlantic tuna routes," since their contract stipulated that thirty of the hundred vessels in operation before the enactment of EEZs in the area could continue their activity. The Portuguese government was also pleased with the project, as local fishers in Madeira were eager to learn to operate longliners and explore new fishing grounds beyond the coastal waters traditionally fished with artisanal methods.[86] In such cases, the customary paradigms of "West to East" and "Global North to Global South" make little sense, encouraging us to think differently about marine extraction regimes. The same is true of a long list of joint ventures and fisheries aid projects carried out by Japanese tuna fisheries around the globe—whether in the Mediterranean with Italy or in the Pacific and Atlantic with various Latin American countries—particularly in the 1980s. What the participants in these ventures did share was an anti-imperial vocabulary directed against the United States' tuna fisheries. On the Japanese side at least, this can be seen as a reaction to accusations that their own fishing operations amounted to an "imperialism of the sea."[87] At the

84. Tokyo, company archives of the Japanese OFCF, unnumbered reports in Japanese and English, 1982.
85. Papetee, ORSTOM Tahiti, oceanography archives, 83-12, Jacques Chabanne, Pierre Couput, and Louis Marec, "La pêche palangrière japonaise dans la ZZE de Polynésie française en 1982."
86. Tokyo, company archives of the Japanese OFCF, several unnumbered reports in Japanese and English on tuna fisheries aid within the Portuguese EEZ by Japanese longline fishing vessels, 1982–1985.
87. Georg Borgstrom, *Japan's World Success in Fishing* (London: Fishing News, 1964), 273.

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same time, it is also a sign of the enduring legacy of transimperial capitalist structures. As we saw above, Nippon Suisan was already involved in joint ventures, for instance in Latin America, before the Second World War, and revived its business ties after the conflict with the reemergence of the Japanese fisheries.

These examples of tuna extraction show conflicting visions that oscillate between resource imperialism and resource nationalism. Fishing nations have become global hegemonic players with a planetary vision of the oceans as part of the "global commons." Japan in particular relies on environmental knowledge to follow the migratory routes of tuna not only through the oceanic territory of its former empire but also across the Atlantic and the Mediterranean. The Japan Tuna Fisheries Cooperative Association, for instance, sees 1957 as a watershed for the move to Atlantic tuna fisheries, as that year the Ministry of Fisheries published a new strategy and guidelines, essentially to counter American tuna fisheries.[88] Such expansionist visions were shared by the United States, which notably refused to sign up to UNCLOS in the 1980s. Yet they clashed with the interests of developing states hoping that the newly nationalized territory of the EEZs would finally let them make headway in the international scramble for resources. This was one of the goals of the New International Economic Order advocated by so-called Third World states, which sought to wrest effective territorial and institutional sovereignty over economic resources and development strategies from the former global powers: a counter-imperial project of political-economic sovereignty that extended territoriality in the vertical sense by foregrounding questions of the ownership and management of natural resources, from marine life to rare-earth minerals and fossil fuels. Paying no heed to the tensions between the discourse of the "commons" and attempts at national territorialization rationalized in the Law of the Sea, the fish themselves constantly undermined these spatial logics, crisscrossing the newly mapped out national territories.

Seen through the prism of Japanese tuna fisheries, the twentieth-century remapping of the planet via the territorialization of the oceans was in no way a linear process. There was no smooth progression from empires to nation-states to a globalized planet with softening borders and no tensions over national sovereignty. Tracing the political ecology of tuna fisheries has shown that humans had to follow the non-human resources they sought to extract and that the lines drawn on the map by UNCLOS could not prevent migratory species from constantly undermining the international Law of the Sea. During the first half of the twentieth century, a transimperial framework was key to determining what was considered authoritative knowledge when it came to extracting marine resources. Although the decolonizations of the century's second half created new nation-states with new oceanic territories and new forms of resource nationalism, practices such as fisheries development

88. Koide Isao, *Nikkatsurenshi*, ed. Nihon Katsuo Maguro Gyogyōsha Kyōkai, 2 vols. (Tokyo: Nihon Katsuo Maguro Gyogyō Kyōdō Kumiai Rengōkai, 1966–1967), 2:81f.

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aid, joint ventures, and technology transfers show that this was counterbalanced by enduring imperial notions and issues relating to volumetric sovereignty.

For offshore tuna fisheries, concepts of horizontal and vertical expansion and imaginaries of sovereignty continue to play a role, even as migratory species disregard the spatial principles of both EEZs and "global commons." The massive acceleration of the tuna industry after the Second World War had devastating results for the ocean. It was not the legal establishment of 200-nautical-mile exclusive zones that enabled humans to better plan and maximize their exploitation of the oceans, but rather a profound technological transformation of tuna fisheries driven by global capital. As access to marine global commons became increasingly dependent on technological prowess rather than individual skill, resource nationalism and the attempt to secure national sovereignty over the sea likewise took on a new intensity as processes of acceleration transcended both empires and nation-states.

In this sense, the globalization of Japan's tuna fisheries could be interpreted as the triumph of transnational capitalism. However, we have seen here that the conditions necessary for the capitalist harvesting of tuna were transimperial rather than transnational in nature. Considering the capitalist extraction of marine resources from a transimperial perspective brings to light the different motivations of transimperial fishers, privately owned fisheries companies, and imperial and post-imperial states. There were multiple ways of capitalizing on oceanic resources. Migrating fishers were to a certain extent able to profit from their transimperial mobility by crossing borders to reach fishing grounds in the territories of various empires. Nevertheless, their scope of action was very limited and they were exploited as cheap labor throughout the transimperial hub of the Indo-Pacific. In contrast, the role of private fishing companies such as the giant Nippon Suisan shows that private capital has worked hand in hand with nation-states in a way that has had a lasting impact on the world, especially the ocean environment. In the history of tuna and its exploitation, globalization does not represent the end of nations and empires. Rather, it has ushered in new forms of partnership between private and state actors that have made marine ecologies accessible to an extent that neither could have achieved alone, and it has had devastating consequences.

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