

## Epilogue

### The Unending Kuroshio Frontier

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My sweet girl in Palau's district no. 5  
Each time I give you a friendly look  
You embarrass me with your smile  
Whenever you come out  
You unvarnished beauty  
A mere glimpse of your hips  
Robs my sleep at night

Folk song of the Bonin Islands

With the lowering of the stars and stripes over the Bonin Islands naval facility on June 26, 1968, for the first time since the collapse of the Japanese empire, an occupied piece of territory was restored to Japanese sovereignty. American military personnel, local administrators, and the teacher of the local school – also an employee of the US Navy – departed the islands for good.<sup>1</sup> The community of some two hundred stateless civilians, classified as Bonin Islanders under the American administration, became once again Japanese subjects, an ethnic minority in a country that understood itself as racially homogeneous.<sup>2</sup> Used to being strangers in their own land, the Bonin Islanders had oriented themselves toward Guam while under US occupation, the only place their status allowed them to travel for business and training. With the reversion, those inter-island relationships were severed, replaced by an occasional ferry straight from Tokyo. The Bonin Islands, once the nexus between Japan proper and its colonies in the “South Sea,” had become a periphery where exclusive borders wove back and forth over ocean and islands.

The reversion of the Bonin Islands was a milestone in Japan's path to regaining full sovereignty, and a test run for the return of the much larger Okinawa four years later.<sup>3</sup> Implemented amidst the

<sup>1</sup> Eldridge, *The Origins of U.S. Policy in the East China Sea Islands Dispute*, 2014a, v.

<sup>2</sup> Chapman, *The Bonin Islanders, 1830 to the Present*, 2016b, 137.

<sup>3</sup> Robert Eldridge has shown how the reversion served as a legal rehearsal for the reversion of Okinawa in 1972. Eldridge, “Prelude to Okinawa,” 2008, 5–24.

high economic growth period of the 1960s, Japan's reclamation of its holdings in the Pacific harnessed a new atmosphere of pride and confidence to a moment of national reinvigoration: With the Bonin Islands came the three islands of Iōtō (known in English as "Two Jima") some 200 kilometers further south, the outlier of Minami no Torishima 1,230 kilometers to the east, and the reef of Oki no Torishima, some 950 kilometers to the southwest. Encompassing these remote isles, the administrative community of Ogasawara Village, centered on the two inhabited islands of Chichijima and Hahajima, today encompasses an exclusive economic zone (EEZ) that makes up approximately one-third of Japan's entire sovereign space. Under the UNCLOS of 1982, which defines this EEZ, the country now claims an oceanic space twelve times as large as its land surface.<sup>4</sup>

The memory of Japan's lost colonial empire, at the heart of the country's complicated relationship with recent history and its continental neighbors, is kept alive among the island communities that constituted the points of departure, places of transfer, and sites of refuge for repatriated "South Sea" colonists. At the close of the nineteenth century, the Bonin Islands had contributed labor, experience, and capital to colonial ventures bound for islands between the South China Sea and Hawai'i and later facilitated the incorporation of the Japanese "South Sea" mandate into the burgeoning empire.<sup>5</sup> Many of the "old islanders" or *kyū-tōmin*, as the descendants of the islands' ethnically Japanese prewar residents now call themselves, returned in the years after the reversion. With the arrival of a new generation of settlers who decided to leave behind crowded cities and corporate hierarchies, the local community of Ogasawara today invokes a curious merger of imperial nostalgia and more fluid local identities. The presentation of the *Nan'yō odorī* or "South Sea Dance," performed in bast skirts and floral garlands accompanied by march music in foreign tongues, forms the climax of the annual festival of Hachijō and Bonin Islanders, tied by kinship bonds and the residues of a once-common dialect, but separated by the absence of an inter-island ferry line (see Figure E.1). When I attended the festival in the summer of 2018, Ōhira Kyōko (b. 1925), one of the last islanders who had seen the islands' prewar life, performed the *Nan'yō* song

<sup>4</sup> This figure, propagated by the Japanese coast guards, includes the waters around the Senkaku/Diaoyu islands contested by Taiwan and China, as well as Takeshima/Dokdo and the southern Kuril Islands, which are currently under Korean and Russian control, respectively. Kaijō Hoanchō, "Nihon no ryōkai gainenzu," 2022. The EEZ Japan claims is based on the UNCLOS of 1982, which Japan signed in 1996. Tokyo University Ocean Alliance ed., *Umi no daikoku Nippon*, 2011, 19.

<sup>5</sup> Peattie, *Nan'yō: The Rise and Fall of the Japanese*, 1988, 23–33.



Figure E.1 Performance of the “South Sea Dance” at the 2018 Hachijō–Ogasawara friendship festival in Chichijima, Bonin Islands. Author’s photo.

while a mixed group of old islanders and recent immigrants presented the dance. Supposedly brought to the islands in the prewar period by commuters between the Bonins and Japanese Micronesia, the practice tells as much of colonial intimacies as it does of “othering” and cultural appropriation. In the year 2000, the “South Sea Dance” and songs that tell of these colonial encounters were put under the protection of Tokyo Prefecture.<sup>6</sup> Just like the outrigger canoes that populate the beaches of the Bonin Islands, or their motorized versions in the harbor of Hachijō, colonial remembrance in the islands of the Kuroshio Frontier tells of subaltern encounters, movements, and intimacies across the ocean and its currents.<sup>7</sup> Revisiting modern Japanese history as seen from these Pacific outliers raises questions about ethnicity, periodization, and the very boundaries of “Japan” itself.

### The Pacific’s Place in Japanese History

Changing conceptions of the ocean had a special bearing on the way people in the archipelago constituted and reconstituted their cultural identities across time. This book has offered an account of the ambivalent relationship between communities along the Kuroshio and their marine environment both in metabolic terms, and in terms of the ocean’s scientific and ideological uses. Over the course of just over a century – from

<sup>6</sup> “Ogasawara no Nan’yō odori,” in: *Tokyo bunkazai jōhō database*, keyword “Nan’yō odori;” Ibid., keyword “Ogasawara no min’yō.”

<sup>7</sup> Goto, “Oceanic Encounter with the Japanese,” 2013, 164; Kramer and Kurihara Kramer, “Hawaiian Outrigger Canoes of the Bonin Archipelago,” 2015, 179–96.

the emergence of Russian naval threats on the northern frontier in the late eighteenth century, to the industrial whaling boom that ensnared Japan in the decades leading up to its so-called “opening,” and on to Tokyo’s annexation of a vast sea of scattered islands beyond the Kuroshio in the wake of the country’s imperial reinvention – the ocean has assumed vastly different meanings for those who traveled, worked, and lived on it, and for those who observed and analyzed it from afar. The appearance of a coherent “Pacific Ocean” on Takahashi Kageyasu’s world map of 1811, defined by continental rims and insular places of passage, prompted intellectuals to revise the metageography of oceans and continents and Japan’s place in-between. Rather than continents or *shū*, however, the cardinal categories in the Japanese language remained terraqueous regions labeled with the character *yō* or “ocean.” The meta-geographical shift from oceanic to continental categories was never conducted in full as the oceanic binary of *seiyō* (occident) and *tōyō* (orient) in the modern language illustrates.

Until recently, the focus of maritime historiography in East Asia was centered on the intensely plied and semi-bounded seas west of the Philippines, Taiwan, Ryukyu, and the Japanese islands. Early modern nativists believed that the sea protected Japan from Mongolian invasions and Chinese hegemony, but by the turn of the twenty-first century, historians regarded the early modern “Asia-Pacific” as a chain of “interlinked sea zones” or an “East Asian Mediterranean.”<sup>8</sup> The East Asian archipelago’s southern and eastern rims, meanwhile, continued to figure in historiography as the limits of Japan’s known world. By shifting the focus to the eastern boundaries of maritime East Asia, I have chosen to study a hydrological phenomenon that has historically structured the region and to let it frame the history of the western North Pacific. The historical dynamics that become apparent at local and regional levels reveal the limitations of worn-out East–Western dualisms. Places become relevant in the upstream in the Kuroshio, further west in the Australasian Monsoon system, or deep in the island Pacific, demonstrating how every historical experience is embedded in complex networks of local, regional, and global causations that can neither be repeated nor predicted in their outcome.

Dominated by seasonal winds and the powerful Kuroshio current, the western North Pacific was a challenging zone for navigation. At the same time, early modern Japan’s most essential routes of commerce, the

<sup>8</sup> Hamashita, “Changing Regions and China,” 2001, 335–36. On the “East Asian Mediterranean,” see: Haneda and Oka eds., *A Maritime History of East Asia*, 2019; Gipouloux, *La Méditerranée asiatique*, 2009; Schottenhammer, *The East Asian “Mediterranean,”* 2008.

densely traveled “aorta of Edo,”<sup>9</sup> as a contemporary observer has called it, led along and into the current. For the islanders of Hachijō, the only patch of shogunal lands to the south of the Kuroshio’s common flow, shipping was dominated by the seasonal rhythm of summer and winter monsoons. Though only contacted by regular vessels on an annual cycle, the islanders understood the current as part of an international oceanic geography. A regular influx of drifters and flotsam in the Kuroshio, growing in volume as Japan’s economic center shifted east, gave rise to an institutionalized system of repatriation I call a “castaway economy,” and it engendered a cultural identity rooted in both legendary and historical arrivals from the continent.

Meanwhile, the expansion of marine economies – commercial fisheries and shipping businesses – turned specific sites in the ocean into hotspots of early industrialization. The nutrients allocated by the abundant Kuroshio and Oyashio currents created an offshore geography of fishing and whaling grounds that was attentively studied by state and private investors. Besides marine foodstuffs, oceanic marine businesses also produced fertilizers that were shipped to the agrarian core lands. Resource extraction thus connected sea and islands in a metabolic sense, enabling agrarian growth and the concentration of over a million people in Edo by 1720, making it the largest metropole of the early modern world. This oceanic history is inherently global, since it was the globe-spanning competition over migrating marine resources that shrank the vast ocean into a bounded Pacific, and subjected it to the gaze of scientific cartography. Regardless of maritime prohibitions and political introversion under the Tokugawa shogunate, the ocean constituted a frontier space for Japan’s terraqueous economy.

The term “frontier” describes sites of extraction and reveals them as vital components of an economic system that powered commercial growth in the metropole. Some historians avoid the term “frontier” because it implies a marginality or a state of being left behind on a normative trajectory of development and incorporation.<sup>10</sup> In an ecological sense, however, the continuous shift to ever-new frontiers constitutes an essential condition for economies of extraction and accumulation. Based on a similar observation, David Howell challenges the assumption that the agrarian and industrial core lands of Japan were the source of all important social and economic impulses. Instead, he locates critical changes in social and economic relations in ostensibly

<sup>9</sup> Lit. “Edo no yakkō.” *Izu no kuni go-biba no gi ni tsuki zonjiyose mōshiagesōrō kakitsuki*, in: EGAN.

<sup>10</sup> Hämäläinen and Truett, “On Borderlands,” 2011, 338.

“backward” areas like Hokkaido’s proto-industrial fisheries regions – a divergence that in fact was integral to metropolitan modernization.<sup>11</sup> Howell rejects the frontier concept based on the well-known problem of perspective, that this “essential word ‘frontier’ requires a point of view, a center, by which that ‘other place,’ out there, separate from the center, becomes the ‘frontier.’”<sup>12</sup> I believe that as a tool of eco-critical analysis, the frontier concept helps analyze and undermine those very hierarchies. It can evidence systemic problems related to ideological bias and material inequality between sites of extraction and centers of consumption in a spatial dimension, sprawling beyond the borders of formal rule and extending into a liminal space of ambiguous state control. Challenging political geography by focusing on resource bases and catchment areas is particularly relevant in the age of transnational corporate capitalism, in which the social and ecological costs of economic growth in one place are often paid elsewhere. The making of the Japanese economy represents an important chapter in this story. The very possibility of analyzing local events in their inter-regionally connected context, along networks of migration and border-crossing power lines of commercial agents, helps re-center people, places, and the environmental costs of modern life that are otherwise dismissed as small, remote, and unimportant.

True, what lay beyond the horizon for early modern Japanese was mainly the object of speculative geographies. Yet the redrawing of Japan’s maritime geographies over the nineteenth century was the product of a debate that transpired in conversation with international developments across the Pacific. At the close of the eighteenth century, it was Russian incursions into the Sea of Okhotsk that prompted Hayashi Shihei to dispense with the idea that Japan was surrounded by an “impregnable sea,”<sup>13</sup> and instead to call for naval preparedness. The provocation apparent in his theses carries through: Shihei in 1785 remapped Japan at the center of an archipelagic realm connected by shipping lanes and frontier zones, a world for which China was a mere cartographic rim. His “uninhabited” *Munin* or “Bonin” Islands beyond the Kuroshio were soon firmly anchored in the broader geographical vernacular. The promise of frontier islands awaiting subjection inspired Satō Nobuhiro’s *Secret Plan for Unification* (1823), an aggressive strategic outline for Pacific expansionism, but it also informed more conventional dreams of agrarian settler colonialism. Time and again, such enterprises were aborted

<sup>11</sup> Howell, *Capitalism from within*, 1995, xii, 16.

<sup>12</sup> Worster, “‘The Legacy of Conquest,’ by Patricia Nelson Limerick,” 1989, 317.

<sup>13</sup> Endō, “The Cultural Geography of the Opening of Japan,” 2007, 29–30.

before takeoff. In 1839, the renowned painter Watanabe Kazan was questioned and put under house arrest over alleged plans to start a private colony in the Bonin Islands. He died two years later, still in confinement. From the entry of Atlantic whalers into the “Japan Ground” in the 1820s, the offshore had become a space of international mingling. The sudden appearance of foreign vessels first off northeastern Japan, and by the 1840s, all over the archipelago, triggered a reflexive pivot by the shogunate into the strictest seclusion policies of the Tokugawa period. In short, debates over Japan’s reorientation within a rapidly converging Pacific world evolved at the center of growing tensions between official and vernacular cells of the public sphere.

Changing perceptions of the oceanic environment have time and again inspired geopolitical hopes and fears, in Japan and elsewhere. For those Russian and American explorers who scrutinized Japanese maps in search of the warm “river” Kuroshio, the current offered the tantalizing prospect of a shipping route to Kamchatka, or even guarantee an open polar passage to the Atlantic.<sup>14</sup> With the systematic sounding projects tackled in the latter half of the nineteenth century and the laying of deep-sea telegraph cables in the latter half of the nineteenth century came an increasingly detailed picture of geological relationships between islands, continents, and the places in-between. Science thereby opened the oceans’ third dimension to territorial claims – at both spatial and temporal scales.<sup>15</sup> As deep-sea sounding data and the analysis of geological movements were integrated into a coherent, geotectonic structure, proponents of expansionism integrated geophysics and national ambition into a scientifically argued determinism.

Toward the century’s end, as frontier settlements appeared throughout the Kuroshio region, a similar negotiation between commercial and state agents tested the limits of Japan’s new role in the international environment of the Pacific world. Takahiro Yamamoto has argued that establishing control over frontier spaces in the Meiji Period, from Sakhalin to Tsushima and Okinawa, was made possible by an international “balance of favor.” In order to prevent imperial competitors from seizing land exclusively, the principal treaty powers created a favorable environment for semi-sovereign Japan to police frontier islands as a proxy.<sup>16</sup> The state developed its colony in the Bonin Islands with experimental plantations, growing exotic fruits and useful species

<sup>14</sup> Bent, “An Address Delivered before the St. Louis Mercantile Library Association,” 1872, 41.

<sup>15</sup> Rüegg, “Oceanic Knowledge and National Space-Time,” 2024, 122–25.

<sup>16</sup> Yamamoto, “Balance of Favour,” 2015, 23–24.

such as cinchona bark – experiments that in turn granted access to the scientific community at international agrarian conferences. This era of state-led expansion was followed by a moment Hiraoka Akitoshi calls the “bird rush” to frontier islands, in pursuit of albatrosses that were processed into fertilizer and fashion products.<sup>17</sup> This dynamic provided the political backdrop against which island enterprises entered into a competition between a new sort of state and commercial agents. Some colonies on remote isles at the fringes of state control developed their autonomy to the point of issuing their own currencies.<sup>18</sup> In this sense, a rush to the Kuroshio Frontier, driven by thirst for resources and fueled by ideals of adventure, discovery, and colonial riches, paved the way for a new scale of corporate capitalism.

The oceanic component of this expansive resource base has long gone unexamined, eclipsed by the more prominent agrarian puppet state of Manchuria, referred to in contemporary propaganda as “Japan’s life-line.”<sup>19</sup> Both marine fertilizer extraction through whaling and fisheries, and agrarian colonialism on the continent were part of what Toshihiro Higuchi calls an “organic empire.”<sup>20</sup> With the expansion of Japanese influence on the continent, imports in organic nutrients from Korea and northeastern China surged, mostly in the form of soy bean cake. The energy-intensive production of synthetic nitrogen, which expanded gradually in the 1920s, was also closely tied to hydroelectrical projects in the colony of Korea.<sup>21</sup> But marine products remained central to the imperial metabolism. By the 1930s, Japanese factory ships were harvesting virtually every corner of the Pacific, constituting what William Tsutsui calls a “Pelagic Empire.” Of course, Japan did not lose access to the ocean despite the loss of its land-borne colonies in 1945. After the collapse of Japanese marine industries during the Pacific War, the Supreme Command of the Allied Powers (SCAP) sanctioned the revival of whaling as a cornerstone of Japan’s economic recovery by means of “her domestic resources” and alleviating dependence on American food aid. MacArthur authorized a first Antarctic whaling expedition in 1946. The American policy of feeding the unpalatable whale meat to

<sup>17</sup> Hiraoka, *Ahōdori to teikoku nihon no kakudai*, 2012, 108–14; Kreitman, “Feathers, Fertilizer and States of Nature,” 2015, 66–68.

<sup>18</sup> E.g. in Pratas or “Nishizawa” Island and in Tamaoki’s Daitō island. Hiraoka, *Riō kenkyū*, 2013, 228–29; Hiraoka, *Ahōdori o otta Nihonjin*, 2015, 166–68; Ishihara, *Nihon Shihei shūshū jiten*, 2005, 234–35. These corporate islands were comparable, at a smaller scale, to the “chartered company governments” Steven Press describes in *Rogue Empires*. Press 2017, 7.

<sup>19</sup> Young, *Japan’s Total Empire*, 1998, 88.

<sup>20</sup> Higuchi, *Japan as an Organic Empire*, 2015, 139–57.

<sup>21</sup> Travis, “Globalising Synthetic Nitrogen,” 2017, 21.

the population of a bombed-out country carried a symbolic weight that, as Jakobina Arch points out, significantly shaped cuisine and cultural identity for postwar generations.<sup>22</sup>

These histories of resource extraction are engraved in land- and seascapes throughout Japan's former empire and beyond, and they live on in the divergent vernacular memories of these places. In the twenty-first century, as major geopolitical transformations and unambiguous manifestations of climate change become apparent across the Asia-Pacific, the construction and reconstruction of oceanic political and economic regionalities in and around the Pacific becomes (again) a battlefield of discursive hegemony. When Japanese prime minister Abe Shizō (1954–2022) began propagating his vision of an “Indo-Pacific” region in 2013, he quietly removed China from the conventional “Asia-Pacific,” while keeping Japan at the apex of a sea of US-allied islands. Despite China's protest, the term gained currency and is now widely in use as a framework around which diplomacy and policy exchange – and perhaps someday, trade agreements – construct the region's economic realities.<sup>23</sup> What few observers may have noticed at the time is that by drawing together Southeast Asia and the western Pacific, Abe breathed new life into the old figure of *Nan'yō*, the archipelagic metageography warped around Japan's colonial ambitions in the Pacific and Southeast Asia until 1945.

### The Ocean Frontier in the Age of Climate Change

Japan's oceanic expansion bridges the conventional divides of early modern and modern, shogunal and imperial, insular and global. The renegotiation of the ocean and of human ambitions pertaining to it continues today, and may become accentuated as meteorological patterns and regional geographies of risk are set in motion during the twenty-first century. The object of historically evolving commercial and political interests, the archipelago's watery frontiers remain a site of international resource competition and technology-driven expansion. Governments and corporations of rim states remain invested in a commodified picture of oceans as allegedly inexhaustible wellsprings of energy, nutrients, and the very minerals that are required in the shift to renewable energies.<sup>24</sup> Ironically, these hopes rest on a continuous,

<sup>22</sup> Arch, “Whale Meat in Early Postwar Japan,” 2016, 470.

<sup>23</sup> Katada, “Japan's Geoeconomic Challenges,” 2022, 10–12.

<sup>24</sup> METI, “Kaiyō enerugii,” 2019, 17–18. Noticeably, the quest for rare minerals, driven by conventional resource corporations such as Japan Oil, Gas and Metals National

technology-driven expansion toward the bottom of sea which will perpetuate and accentuate the international competition for marine resources. The smoldering conflict between China and Japan over fossil fuel deposits beneath the Senkaku/Diaoyu Islands is but one example of such emerging frictions.<sup>25</sup> The rare earth minerals found in the deep sea around Japan are of growing geopolitical significance: The country's electronic industries rely heavily on precious metals and rare earth minerals, over which China has hitherto enjoyed a virtual monopoly.<sup>26</sup> With many living resources dwindling or exhausted beyond commercial viability, oceanic frontier competition is now witnessing a shift toward inanimate resources.

Under the UNCLOS of 1982, resource extraction within the EEZ is only allowed with permission of the respective nation state. Despite Japan's extensive EEZ, the principle has drawn criticism from right-leaning Japanese authors, who assert Japan's historical interest in fewer rather than more regulations on the world's oceans.<sup>27</sup> To secure control over deep-sea deposits of strategic resources, Japan, claims "extended continental shelf" privileges that extend its supposed EEZ beyond the customary 200 nautical miles to encompass rare earth fields between Okinawa and the Bonin Islands, west of Minami no Tori island, as well as south of Oki no Tori reef (see Figure E.2).<sup>28</sup> Bold estimates expect as much as 126 billion m<sup>3</sup> of methane ice, and a value of around 100 billion USD in rare minerals within Japan's EEZ.<sup>29</sup> The sheer quantity of sought-after resources in its territorial waters underscore that Japan is anything but the allegedly resource-poor island nation as which it often presents itself.

Meanwhile, the physical realities of the western Pacific are changing, and this change announces itself chiefly through declining catch rates and shifting meteorological patterns. Even optimistic scenarios predict that by the end of the century, sea levels will rise by up to 110 cm at a global average – though regional experiences may vary widely. Rising

Corporation (JOGMEC), is inextricably tied to the exploration of subaqueous fossil fuels. JOGMEC, *JOGMEC Corporate Profile*, 2020.

<sup>25</sup> Drifte, "The Japan-China Confrontation over the Senkaku/Diaoyu Islands," 2014, 7–8.

<sup>26</sup> China controls the vast majority of worldwide rare metal production, and it has a monopoly on separation and purification of rare mineral ores. As of 2018, 58 percent of Japan's rare earth imports originated directly from China. DeWit, "Decarbonization and Critical Raw Materials," 2021, 7.

<sup>27</sup> Yamada Yoshihiko, for example, portrays the UNCLOS as a ticket for irresponsible states to exploit globally shared maritime resources in an unsustainable manner, and at Japan's expense. Yamada, *Kanzen zukai umi kara mita sekai keizai*, 2016, 112–16.

<sup>28</sup> As outlined in the "Submissions to the Commission: Submission by Japan," in: The Government of Japan, *Japan's Submission to the Commission*, 2008; Tokyo University Ocean Alliance ed., *Umi no daikoku Nippon*, 2011, 28.

<sup>29</sup> Yamada, *Kanzen zukai umi kara mita sekai keizai*, 2016, 86; 98.

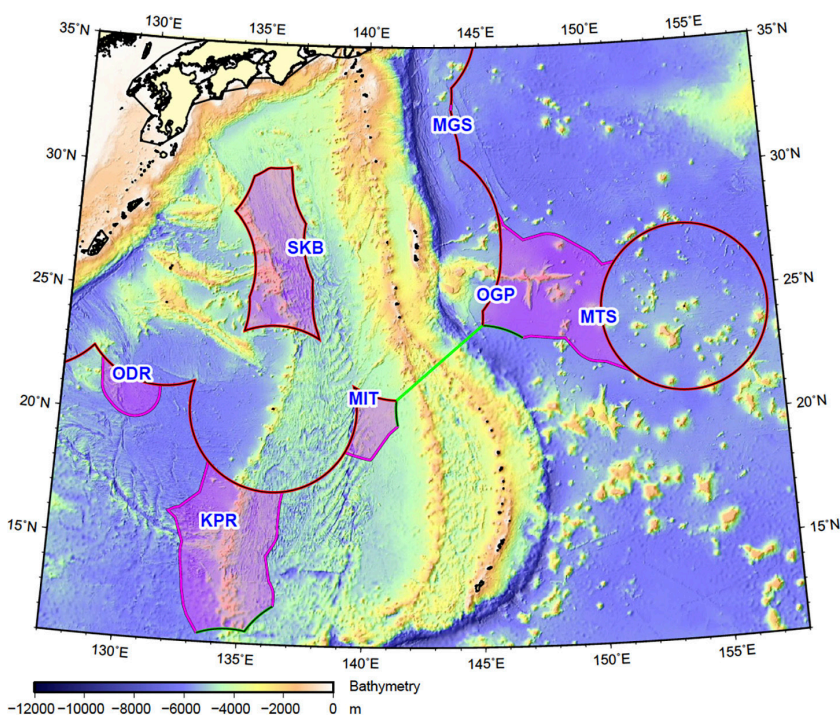


Figure E.2 Japan's claimed "extended continental shelf" (shaded areas) beyond the customary 200 nautical mile zone stipulated by the UNCLOS. In: The Government of Japan 2008, 6.

sea temperatures contribute more energy to the tropical cyclones or "typhoons" that strike the region every summer. In October 2019, typhoon "Hagibis" released up to 1,000 millimeters of precipitation onto eastern Honshu in only seventy-two hours, destroying infrastructure, killing dozens, and sending hundreds of thousands to seek shelter.<sup>30</sup> Later in the same year, the Intergovernmental Panel on Climate Change (IPCC) observed that an increase in extreme tropical cyclones is already evident and that, especially in the western North Pacific, cyclone tracks will gradually shift north onto Japan.<sup>31</sup> In 2022, the panel added that extreme weather events now occurring once in a century must be expected on an annual basis by 2050 in "many low-lying cities and islands at all latitudes."<sup>32</sup> With many of its most fertile plains and

<sup>30</sup> Kishōchō, "Reiwa gannen Higashi Nihon taifū," 2019.

<sup>31</sup> IPCC, *The Ocean and Cryosphere in a Changing Climate*, 2022 [2019], 591.

<sup>32</sup> Ibid., 324.

densely populated areas not far from the shore, storms, salination, and inundation will surely trouble the archipelago over the decades to come.

Changes in speed and flow of maritime currents can have sweeping effects on temperature and precipitation, as well as local manifestations of sea level rise. The Kuroshio Extension, to take one example, is believed to have already shifted north by half a degree in latitude over just the last century. According to palaeoclimatologist Stephen Gallagher, the Kuroshio is expected to accelerate its flow by 30 cm/s under the impact of global warming.<sup>33</sup> Rising sea levels not only threaten coastal communities but also challenge Japan's claims to some 410,000 km<sup>2</sup> of EEZ around Oki no Tori reef, 1,700 km south of Tokyo. The reef, which Japan claims as an inhabitable island, in fact reaches just a few centimeters above the surface in two locations, and is certain to be drowned in the foreseeable future. Anticipated changes originating from the ocean environment have inspired Tokyo University's Hajime Kayanne, for example, to call on his government to stimulate the growth of corals "*naturally* rather than by constructing islands of concrete."<sup>34</sup> According to his proposals, cement tetrapods installed on the reef shall help accumulate shoals of drifting corals to the point that palms can be grown and ultimately produce an inhabitable island.<sup>35</sup>

Other governments with more limited means have come to acknowledge that most low-lying islands in the Pacific will likely be uninhabitable by mid-century.<sup>36</sup> Preparing for the loss of its ancestral territory, the government of Kiribati, for example, has purchased land on the more elevated Fiji, primarily to enhance food security, but implying a plan of evacuation that could materialize within the next few decades.<sup>37</sup> Tuvalu, likewise, has started a campaign that redefines national sovereignty as independent of the existence of an inhabitable territory, and amended its constitution to read that Tuvalu "shall remain in perpetuity in the future, notwithstanding the impacts of climate change or other causes resulting in loss to the physical territory."<sup>38</sup> While the ramifications of climate change are now perceived around the globe, the imminent disappearance of entire nation states in Oceania forces a fundamental redefinition of the nation and its relationship with space and time.<sup>39</sup>

<sup>33</sup> Gallagher et al., "The Pliocene to Recent History of the Kuroshio and Tsushima Currents," 2015, 18.

<sup>34</sup> Tokyo University Ocean Alliance, *Umi no daikoku Nippon*, 2011, 24.

<sup>35</sup> Ibid.

<sup>36</sup> Storlazzi, "Most Atolls Will Be Uninhabitable," 2018, 1.

<sup>37</sup> Hermann and Kempf, "Climate Change and the Imagining of Migration," 2017, 232.

<sup>38</sup> Constitution of Tuvalu, 2023, Part I, paragraphs 2 (1), 2 (5), and 2 (6).

<sup>39</sup> Rüegg, "Oceanic Knowledge and National Space-Time," 2024, 127.

To understand the historical processes that direct state and industrial interests to specific places within the dynamic seascapes of currents, habitats, and mineral deposits, it is important to understand human relationships with the ocean in their historically constituted, volumetric dimension. As three-dimensional fluid landscapes of currents, catchment areas, migrating fish, and whales, oceans complicate territorial notions of sovereignty, empire, and the roots of historical change. Like the arrival and disappearance of Atlantic whalers in the Kuroshio Extension during the 1830s, the emergence of short-lived bird hunting colonies in the late nineteenth century, or the vertical expansion of tuna fisheries by means of deep-sea radar in the twentieth century show, modern resource extraction proceeds in a spatially and temporally layered manner. These layers are being worked through one by one as a result of an ideological commitment to limitless expansion. Like the “bomb-lance” whale gun, technological innovation often enhanced extraction amidst declining abundance, rather than prioritizing social and ecological sustainability. Similarly, the pursuit of vertical frontiers today affirms the short-termed logic of continued growth and accumulation: indifference to planetary boundaries and inter-generational justice.

The history of the Kuroshio Frontier and its ongoing incorporation into the land-borne economy is therefore also a history of the Anthropocene. With the first industrial revolution in Asia, Japan’s imperial emergence exists in the upstream of present ecological transformations. Revisiting the histories of these transformations by means of a maritime current offers new ways to think about the relationship of past and present across greater entities of space and time. If the Kuroshio was once described as a compact “river” in the sea or a bold arrow pointing in a firm direction, contemporary models represent moving water masses as myriad tridimensional vectors. Likewise, the linear stories of progress and national historiography have given way to an overwhelming picture of unique and positionally relative causations. As Prasenjit Duara has pointed out, human histories are not circular but circulating, subject to contingency and yet recognizable as patterns in their totality.<sup>40</sup> The drift in these currents is subject to minimal differences in initial conditions that are amplified as time elapses, devolving into divergent trajectories. Similarly, historical causations may be apparent, but not predictable in isolation and, especially, not reproducible. The accidental drift of Otokichi from Owari to the village of Ozette in Washington, or Nakahama Manjirō’s stranding on the isle of Torishima in a southward recirculation of the

<sup>40</sup> Duara, “Circulatory Histories of the Nation-State,” 2021a, “Oceans as the Paradigm of History,” 2021b, 3.

Kuroshio could have sunken into oblivion as personal destinies without any historical significance. Instead, their stories circulated and were retold as consequential moments in the genealogy of modern Japan. Just like the radioactive water released in the aftermath of the meltdown at Fukushima Daiichi, the memory of these moments of chance continues to circulate along the currents of a history with an uncertain destination. It is my hope that this attempt at unpacking Japan's ambivalent relationship with the ocean will help shed light on the systemic problems in the greater human–environmental relationships that define the Anthropocene.