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Title: Colonization, Statemaking, and Development: A Political Ecology of the Saru River Development Project, Hokkaido, Japan.

Abstract approved:

______________________________________________________

Bryan D. Tilt

Although dam construction has been an integral tool in development initiatives for nearly a century, dams can have significant negative impacts on local residents, particularly those who are permanently displaced from their homes and must be resettled elsewhere. Dams have unique impacts on indigenous peoples. As a result, many dam construction projects become flashpoints for organized resistance among indigenous peoples. This thesis examines a case that exemplifies indigenous resistance to dam construction: the Saru River Development Project in Hokkaido, Japan, involving the Nibutani Dam (completed 1997) and the Biratori Dam (under construction). This project has been famously opposed by indigenous Ainu landholders. Although much has been written about the legal and political significance of the Ainu’s resistance to the Saru River Development Project, information on the project’s impacts on local Ainu residents is scattered across many disparate sources, and no comprehensive English-language account has yet been produced. This thesis seeks to fill this gap in the literature by cataloging the impacts of the Saru River Development Project as comprehensively as possible and synthesizing available facts into a holistic account.

This thesis organizes these impacts according to the newly-published Matrix Framework (Kirchherr and Charles 2016), enabling it to be more easily compared with other case studies of
dam construction around the world. This thesis documents the ways in which inadequate social impact assessment and mitigation efforts may compound the effects of an enduring colonial legacy, contributing to resentment and resistance against development projects on the part of indigenous peoples. It suggests important lessons for improving social impact assessment and mitigation measures, not only for the Saru River Development Project itself, but for any future development project involving indigenous peoples. It also contributes to anthropological knowledge regarding the role of development projects as primary drivers of cultural change in indigenous communities.

The roots of the Saru River Development Project originate in the history of Japan’s colonial invasion of Hokkaido. Political ecology provides a powerful lens through which to examine this history, allowing its influence on Hokkaido’s present-day social-ecological systems to become apparent. In this thesis, I develop a theory of statemaking and subjectmaking that is used to analyze the historical continuities that exist between colonial-era modernization efforts and contemporary development projects, including this one. This historical focus is especially crucial, given the current political climate and the international rise of the far-right, which has increasingly come to embrace a romanticized view of colonial history. By producing historical accounts that shed light on colonial violence, anthropologists can play an active role in combating the resurgence of colonial governmentality. Such historically-focused anthropology, with an explicit focus on “decolonizing” the discourse of contemporary development, is therefore of critical importance—perhaps now more than ever.
Colonization, Statemaking, and Development:
A Political Ecology of the Saru River Development Project, Hokkaido, Japan

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Michael J. Ioannides, Author
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NOTE ON SPELLING OF FOREIGN-LANGUAGE NAMES AND WORDS

Throughout this thesis, many names and words appear that originate from the Japanese or Ainu languages. Japanese and contemporary Ainu names are rendered according to the Japanese convention, with family name appearing first, followed by given name. The identities of all named persons that appear in this paper, such as the plaintiffs of the Nibutani Dam case, are matters of the public record, and pseudonyms have therefore not been used. Unfamiliar terms in both Japanese and Ainu are italicized. Following the commonly-used modified Hepburn romanization rules, Japanese terms use macrons to indicate long vowel sounds, except for well-known place names such as Tokyo and Hokkaido. For a detailed explanation of the modified Hepburn romanization system, see Kudo (2011).

In contemporary usage, many Ainu words have been somewhat distorted to fit with the orthography of katakana, and as a result have been romanized differently across various sources. In this thesis, I have attempted to use the most accurate romanization of Ainu words available, based on the quality and recency of the source for a given word. For a detailed explanation of standard romanization of Ainu-language words, see: Lewallen (2006), xii-xiii. One notable exception to the standard romanization for Ainu language words that appears in this paper is the term chinomishir, for which I have been unable to uncover a romanization that fits the accepted convention for the Ainu syllabary. Based on my understanding of the standard romanization rules, I believe the spelling might be cinomisir, but as I am not a linguist, I have opted to use the romanization chinomishir as it originally appears in Levin (1999).
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Chapter 1: Introduction

Dam construction has been an integral tool in domestic and international development initiatives for nearly a century. Dams provide many benefits in the form of water storage for irrigation, flood control, and the generation of hydroelectric energy, in addition to sometimes bringing ancillary benefits like improved transportation infrastructure and jobs to local communities. Dam construction is likely to continue to be a major priority in the immediate future, as states feel increasingly pressured to develop hydropower into renewable energy in response to global climate change. Although hydropower is attractive to policy makers and development planners for its untapped potential for green energy production, the construction of dams and the resulting flooding of vast swathes of land by reservoirs is known to have significant negative impacts on local residents, particularly those who are permanently displaced from their homes and must be resettled elsewhere.

Previous studies have documented the negative environmental, economic, and socio-cultural impacts suffered by populations displaced by dam construction projects (World Commission on Dams 2000; Tilt 2015; Kirchherr, Pohlner, and Charles 2016; Tilt and Gerkey 2016; Scudder 2012; Tilt, Braun, and He 2008). Other studies have shown that dam construction has unique impacts on marginalized groups and indigenous peoples that are worthy of special consideration, particularly when flooded areas include burial or sacred sites (Downing & Garcia-Downing 2001; Hall & Branford 2012; Ribeiro 2015). Because many indigenous cultures have strong ecological, economic, and spiritual ties to specific locations and landscape features, displacement due to dam construction can threaten the transmission of traditional knowledge to new generations, jeopardizing entire ways of life. As a result, many dam construction projects become flashpoints for organized resistance among indigenous peoples.
While much of the research into the social impacts of large dams and indigenous resistance against dam construction has been done in the context of the developing world, less attention has been paid to the impacts on indigenous peoples in highly-developed countries; for example, in Japan, a prosperous country boasting the world’s third largest economy (World Economic Forum 2017). Part of the reason for the relative inattention paid to this issue in Japan may arise from the persistent narrative that Japan is a monoethnic nation with no ethnic minorities. This narrative, espoused by politicians, intellectuals, and the popular media for over a century, overlooks and erases the lived experiences of ethnic minorities by omission. As a result, little scholarly attention has been paid to the unique impacts of development projects on Japan’s ethnic minority groups, such as the indigenous Ainu people of the northern Japanese island of Hokkaido. However, Japan’s recent adoption of the United Nations Declaration on the Rights of Indigenous Peoples in 2007 and its subsequent acknowledgement of the Ainu as an indigenous people of Japan in 2008 may signal a shift toward a more candid treatment of minority issues in academic and political discourse.

This study examines a development project in northern Japan that exemplifies such indigenous resistance against dam construction: the Saru River Development Project (J: "Sarugawa Sōgō Kaihatsu Jigyō"). Initially proposed in 1969, this project involves the construction of two dams: the Nibutani Dam and the Biratori Dam, located in the Biratori district of Hokkaido’s Hidaka sub-prefecture (Maruyama 2012, 65-66). Hokkaido—the northernmost of contemporary Japan’s four main islands—is the ancestral home of the indigenous Ainu people. Increasing Japanese settlement on the northern island starting around 1650 put unsustainable pressure on Hokkaido’s environment and triggered intense changes in Ainu society. Like indigenous peoples in other highly-developed countries such as the United States, Canada,
Australia, and New Zealand, the Ainu suffered immensely in the 19th and early 20th centuries under a colonial regime designed to assimilate them into mainstream Japanese society. In the decades following World War II, Ainu activists have been active participants in the global indigenous rights movement, lobbying for cultural revitalization and political recognition of the Ainu as the indigenous people of Hokkaido. Some local landholders feared that the Saru River Development Project would compromise these efforts, and began to express opposition to the project. This indigenous resistance culminated in an eight-year legal battle in the Sapporo District Court, *Kayano et al. v. Hokkaido Expropriation Committee* (hereafter, the Nibutani Dam case). Despite the high media profile of this resistance by Ainu landholders, cultural leaders, and activists, the Nibutani Dam was ultimately completed in 1997.

Although the negative social impacts associated with dam construction elsewhere have been well documented, and much has been written about the legal and political significance of the Nibutani Dam case, no comprehensive English-language account of the Saru River Development Project’s impacts on local Ainu residents has yet been published. Because the planning and construction of the Nibutani Dam was carried out with little consideration for the inevitable impacts on local Ainu (see Section 1.3), the precise magnitude of these impacts is poorly understood. Thus, one of the ultimate objectives of this study is to fill this gap in the literature, cataloging the impacts of the Saru River Development Project as comprehensively as possible by synthesizing information from a variety of textual sources and organizing them according to a newly-published framework—Kirchherr’s and Charles’s (2016) Matrix Framework.
1.1 The Scope of this Study

True to the holistic vision of the discipline of anthropology, this study will contextualize the Saru River Development Project within the history of Japan’s colonization of Hokkaido, and the resulting impoverishment and marginalization of the Ainu people. In doing so, this study will document the ways in which inadequate social impact assessment mitigation efforts may compound the lasting effects of history, which in turn may contribute to resentment and resistance against development projects on the part of indigenous peoples. This knowledge will provide important lessons for improving the social impact assessment and mitigation measures for dam construction in the future. Because dam construction in Hokkaido is slated to continue with the construction of the Biratori Dam, it is critically important to better understand the impacts of the Nibutani Dam in order to mitigate any potential negative impacts and to affirm Japan’s commitment to indigenous rights.

In light of the severity of their impacts, massive infrastructure projects like large dams commonly trigger profound cultural change in host populations. While development-focused anthropology today has an overwhelmingly applied focus, fewer anthropologists have produced “thick” accounts of development projects or engaged in anthropological theory-crafting through development-focused case studies. As social scientists interested in the ways in which humans create and respond to cultural change, anthropologists should devote more time and attention to dams, pipelines, mines, nuclear facilities, and other important drivers of cultural change. Beyond its practical importance in the realm of development policy and its particular application to the Ainu rights struggle, this study’s historically-situated analysis of the Saru River Development Project will be a fertile source of new anthropological knowledge regarding the role of development projects in driving cultural change among indigenous communities.
This study of the Saru River Development Project adopts an in-depth approach which attempts to holistically evaluate this particular project on its own terms, and embedded within its unique historical context. This study does not treat the construction of the Nibutani and Biratori Dams as isolated incidents, whose post-construction impacts can be considered separately from Hokkaido’s environmental and political histories. Instead, it adopts a political ecology approach, which necessitates close attention to the inextricable relationship between environmental and social changes. According to Paul Robbins (2012), political ecology is a “community of practice” whose goal is to “address the condition and change of social/environmental systems, with explicit consideration of relations of power” (Robbins 2012, 20). Political ecology, in Robbins’s view, “stresses not only that ecological systems are political, but also that our very ideas about them are further delimited and directed through political and economic processes” (Robbins 2012, 20). In other words, a political ecology approach recognizes the importance of systems of wealth, power, and knowledge production in the shaping of social-ecological systems.

This approach provides many advantages for understanding social-ecological changes linked to the Saru River Development Project, “offering both a ‘hatchet’ to take apart flawed and problematic accounts, and a ‘seed,’” to grow into deeper and more nuanced understandings of the project’s linked social and environmental impacts (Robbins 2012, 20). A political ecology approach therefore prompts the researcher to try to understand the interconnected nature of legal and political institutions; scientific knowledge; economic production; and popular discourse about social-ecological systems. Thus, the ultimate result is to “‘denaturalize’ certain social and environmental conditions, showing them to be the contingent outcomes of power, and not inevitable” (Robbins 2012, 99).
Existing studies of the social impacts of dams have all too often adopted a narrow temporal perspective, focusing primarily on impacts that occur immediately following a dam’s construction (Kirchherr and Charles 2016, 103). Kirchherr and Charles (2016) advocate for expanding the timescale of studies into the future, to include dams’ longitudinal impacts. However, existing studies also frequently ignore the ways that historical interactions have produced the material conditions from which development-induced social and environmental changes arise. In order to fully embrace Kirchherr’s and Charles’s call for an expanded temporal scope in studies of dams’ social impacts, it is also necessary to critically engage with the past, through a detailed examination of the history of the dam’s host region. Since political ecology is tasked with scrutinizing environmental and social changes in an attempt to denaturalize them, gaining a deep understanding of the historical roots of these changes is of crucial importance (cf. Robbins 2012; Warner 2010).

Anthropologist Arturo Escobar (1999), writing in favor of such a historically-attuned political ecology approach, argues that “there is no nature outside of history” (Escobar 1999, 2). For Escobar, an effective political ecology is that which closely examines the ways “the biophysical and historical are implicated with each other” (Escobar 1999, 4). Recognizing this fundamental truth, some scholars have called for expanding the temporal scope of studies of social-environmental change to incorporate historical data stretching back centuries (Moore 2017; Williams 2001). Such an outlook makes abundantly clear the fact that environmental changes in the present do not just happen, but arise from the material conditions created by historical interactions between people and the environment (Brumfiel 2003, 207). Political ecology therefore provides a powerful lens through which to examine the history of Hokkaido—one which will allow the impact of historical interactions on Hokkaido’s social-ecological
systems to become apparent. Any account of the impacts of the Saru River Development Project is therefore impoverished if it does not situate it fully within Hokkaido’s social-ecological history.

The roots of the Saru River Development Project originate in the history of Japan’s colonial invasion of Hokkaido, which remains one of the most controversial chapters in Japanese history. Inhabited for centuries by the indigenous Ainu people, Hokkaido became the site of the Japanese Empire’s first colonial enterprise and found itself at the center of Japan’s rapid transformation into a modern, industrialized nation-state and economic powerhouse. In this study, I develop a theoretical lens that can be used to explain the ways in which the Saru River Development Project builds upon the modernizing project of Japan’s past colonial regime, resulting in similar economic, political, socio-cultural, and environmental transformations. Drawing from the work of indigenous and non-indigenous anthropologists, continental philosophers, and substantivist social scientists, I argue that colonialism and contemporary development share ideological and material underpinnings that unite them both under the dual historical processes, statemaking and subjectmaking. While statemaking is primarily concerned with the establishment and legitimation of state control over geographic space, subjectmaking involves the shaping of individuals and societies into “populations” that can be more easily managed or controlled by the state. Although colonialism and contemporary development each represent distinct facets in the history of the world’s political economy, I argue that they partake of a shared ideology (authoritarian high modernism) and engage in similar processes of statemaking (through capitalist accumulation and radical simplification) and subjectmaking (through interpellation and discipline).
Using the theory of statemaking and subjectmaking, this study examines the history of Japanese colonialism in Hokkaido, as well as the island’s continued development in the post-WWII era. Modernization and development efforts initiated during throughout these periods have had devastating effects on the environment of Hokkaido and the Ainu people who relied upon it, and this has in turn shaped the impacts of the Saru River Development Project. The negative social and environmental changes that occurred in Hokkaido prior to WWII created the context in which contemporary development projects like the Nibutani and Biratori Dams are brought to fruition. Ultimately, Japanese colonial administrators’ authoritarian high modernist discourse and emphasis on scientific agriculture played a role in the radical simplification of Hokkaido’s complex social-ecological system, helping to cement the Japanese state’s administrative control over the island’s economic and political capital. Simultaneously, Ainu subjects were interpellated and disciplined according to the needs of the state, first as non-human barbarians, then as former-natives, and finally as “primitive” Japanese subjects. These efforts were instrumental in legitimizing Japan’s control over Hokkaido, justifying the destruction of Ainu traditional lifeways and triggering profound environmental damage.

Rather than being beside the point for a discussion of the social impacts of dam construction in contemporary times, historical facts like these, buttressed by the indigenous knowledge of local residents, are absolutely critical to any discussion of development-induced impoverishment involving indigenous peoples, especially one rooted in political ecology. Development initiatives in the post-war period have in many ways replicated the material and ideological conditions of the colonial era, with the effect of perpetuating Hokkaido’s status as an economic colony of Japan. Post-war development projects have consistently been carried out largely for the benefit of state and corporate interests. Projects like the Saru River Development
Project reenact the colonial process of radical simplification when they incorporate only cursory impact assessments and adopt a narrow temporal scope that views development projects in a historical vacuum. As a result, significant impacts can escape official notice until after the damage has already been done, and when indigenous peoples are involved, systemic inequality and historical injustices are perpetuated. In the case of the Saru River Development Project, developers failed to recognize the negative environmental and social impacts the project would have until it was too late. This study’s application of the theory of statemaking and subjectmaking to Hokkaido’s more recent history shows that, when it comes to the ways that Ainu are treated in the context of contemporary development projects, not much has changed since colonial times. Thus—rather than simply retelling the conventional narrative of Hokkaido’s history—by choosing to interpret this history through the lens of statemaking and subjectmaking, this study provides an innovative, empirical analysis of the impacts of development on indigenous people within a highly-developed nation.

On another level, the historical focus of this study in political ecology is especially crucial given the current political climate and the international rise of the far-right. Increasingly, politicians and academics have come to embrace a romanticized view of colonial history, such as when a major French presidential candidate argued that colonialism in northern Africa was beneficial to local people (Middle East Monitor 2017). In a similar vein, some Japanese politicians have favored a revisionist history that whitewashes Japan’s imperialist expansion, such as Hokkaido assemblyman Onodera Masaru who, in 2014, claimed that “our ancestors have not done reckless unreasonable things to the Ainu” (McKinney 2014; Lewallen 2016c, 25-30). Echoing this sentiment, a recent article by political scientist Bruce Gilley (2017) entitled “The
Case for Colonialism”\(^1\) puts forth the argument that colonialism was “as a general rule, both objectively beneficial and subjectively legitimate in most of the places where it was found” (Gilley 2017, 1). Gilley calls for re-embracing the “civilizing mission without scare quotes” of Western colonialism, citing economic development and the construction of infrastructure as among its primary benefits (Gilley 2017, 1-4). Such an argument, however persuasive it might be to those without a firm grounding in the history of colonialism, ignores the ways that colonial governmentality has always been inseparable from the power structures of racial hierarchy and imperialist hegemony that formed its ideological bases during the “golden age” of colonialism in the 19\(^{th}\) and early 20\(^{th}\) centuries. By producing historical accounts like this study that shed light on colonial violence and the ways that colonial-era projects ultimately failed to bring “development” to colonized people, anthropologists can play an active role in combating the resurgence of colonial governmentality, which threatens to undo the gains colonized peoples have made in recent decades, however modest they might be. Such historically-focused anthropology with an explicit focus on “decolonizing” the discourse of contemporary development is therefore of critical importance, perhaps now more than ever.

1.2 Research Questions and Methods

This study seeks to answer five main research questions:

\(^1\) Almost immediately upon its publication, Gilley’s article came under intense criticism from both within and beyond the academic community. This controversy resulted in a broad debate about the ethics of the peer review process and academic censorship, as well as the resignation of fifteen members of the Third World Quarterly’s editorial board (Zamudio-Suaréz 2017; Flaherty 2017a; Flaherty 2017b). In October 2017—in the midst of my writing of this thesis—Gilley’s article was officially retracted by the journal’s publisher Taylor & Francis (Flaherty 2017c), who issued the following statement:

“This Viewpoint essay has been withdrawn at the request of the academic journal editor, and in agreement with the author of the essay. Following a number of complaints, Taylor & Francis conducted a thorough investigation into the peer review process on this article. Whilst this clearly demonstrated the essay had undergone double-blind peer review, in line with the journal’s editorial policy, the journal editor has subsequently received serious and credible threats of personal violence. These threats are linked to the publication of this essay. As the publisher, we must take this seriously. Taylor & Francis has a strong and supportive duty of care to all our academic editorial teams, and this is why we are withdrawing this essay” (Taylor & Francis 2017)
• What broad trends can be observed from an examination of other case studies of dam construction, both globally and within Japan, that can help to contextualize the Saru River Development Project?

• What are the social and environmental impacts of the Saru River Development Project, as organized under the Matrix Framework?

• What can the theory of statemaking and subjectmaking reveal about the material and ideological continuities between historical colonialism, on the one hand, and contemporary development, on the other?

• How have the environmental and social impacts of the Saru River Development been shaped by Hokkaido’s unique history under Japanese statemaking and subjectmaking?

• What changes can be made to improve the Saru River Development Project’s outcome for local Ainu residents?

In the course of attempting to answer these questions, a variety of textual sources were examined, including Japanese law and policy governing environmental impact assessment, land expropriation and compensation measures, energy siting, water management, and regional development; anthropological and historical writings on Japan’s colonization of Hokkaido; and legal materials relating to litigation against the Nibutani Dam, which were collectively published by plaintiff Kayano Shigeru and plaintiff’s attorney Tanaka Hiroshi in a volume entitled *Ainu minzoku don hanran: Nibutani Damu saiban no kiroku* (1999). English-language materials were primarily considered due to my limited Japanese reading ability at the time of this writing, but Japanese sources were examined where possible, including these published materials from the Nibutani Dam case.

Since the potential impacts of dams are complex and play out across a wide variety of spatial and temporal scales, previous researchers have found it useful to create conceptual frameworks for organizing these impacts. One recently published framework by Kirchherr and Charles (2016), called the “Matrix Framework”, was based in part on a meta-synthesis of over 217 widely-cited articles on the impacts of dams. Kirchherr and Charles found that, although
older, influential frameworks such as Scudder and Colson’s Four Stage Framework (1982) and Cernea’s Impoverishment Risks and Reconstruction model (1997) are widely identified by scholars and practitioners as being important to the field, only 55 (25%) of the articles included in the sample used a framework. Moreover, of the 55 articles that used frameworks, 27 different frameworks were represented (Kirchherr and Charles 2016, 101-102). This lack of a commonly used framework has meant that researchers working on various case studies often have no systematic basis for interpreting and comparing their findings.

Because this study elects to perform an in-depth analysis of a particular development project, it runs the risk of producing another study that, while interesting in its own right, is difficult to compare to other cases. While political ecology provides a powerful lens through which to view social and environmental changes, it does not provide an organizational framework that can allow different case studies to be meaningfully compared. The Matrix Framework, which provides such an organizational basis, is therefore compatible with—and can even be said to enhance—a political ecology of dam construction. By integrating the most useful aspects of influential, older frameworks and synthesizing the accumulated knowledge of the impacts of dams, the Matrix Framework represents the state-of-the-art when it comes to analyzing dams impacts and, for these reasons, has been chosen as the organizational basis for this study.

Data from textual sources was supplemented by geospatial analysis I performed as a part of my Master’s Degree coursework. Using software such as ArcGIS and Envi, this spatial analysis considered two primary data sources: (1) hand-drawn maps from the Nibutani Dam court case, and (2) satellite imagery of Nibutani from both before and after impoundment by the Nibutani Dam’s reservoir. I examined two satellite images from the US Geological Survey’s
(USGS) Landsat 4-5 c1 Level 1 collection, which have a pixel size of 30 meters. Although aerial photographs of the Saru River region taken in the years 1956-1988 are said to exist—and it is likely that additional aerial photographs taken after the dam was completed also exist—I was unable to them (Aipassa 1991, 377-378). While aerial photographs would have been much better suited to an in-depth analysis of the dam’s impacts, satellite images are freely available for public use through the USGS Earth Explorer platform, making them easy to acquire. I georeferenced and georectified hand-drawn maps from the Nibutani Dam case, which showed cultural sites expected to be submerged by the reservoir, using ground control points shared with satellite image to geographically line them up. I overlaid these two data sources to confirm whether the cultural sites had, in fact, been submerged beneath the reservoir. Because this geospatial analysis did not yield many groundbreaking results, not much time will be spent describing it here. However, it did provide a valuable opportunity to think about the impacts of the dam in a new way. It also enabled the identification and mapping of the precise locations of important sites impacted by the Nibutani Dam.

In short, while most of the data on the Saru River Development Project’s impacts come from secondary sources, the particular synthesis presented in this study and its organization under the newly-published Matrix Framework is original, in that it brings together scattered pieces of information into a cohesive and holistic account. Additionally, this study’s use of a political ecology approach and its application of the theories of statemaking and subjectmaking distinguishes it from previous studies of the Saru River Development Project. Where data is scarce, this study provides suggestions for avenues of future field research that will likely yield

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additional data. Thus, this study is intended to serve as a comprehensive literature and policy review that can provide a basis for future, long-term ethnographic fieldwork, including the PhD dissertation research that I myself intend one day to conduct.

In the remainder of this chapter, I give an overview of the Saru River Development Project, as well as the major disputes involved in the Nibutani Dam case, highlighting one particular dispute over the Ainu’s indigenous knowledge that provides a fitting point of departure for a political ecology approach to the Saru River Development Project. In Chapter 2, I discuss the role of dam construction in the global crisis of development-induced displacement and resettlement, examining major trends in dam-induced displacement and related impacts, as well as trends in mitigation and compensation strategies employed by states, both globally and within Japan. In Chapter 3, I provide a comprehensive analysis of the impacts of the Nibutani Dam, along with the predicted impacts of the Biratori Dam, which I organize according to Kirchherr’s and Charles’s Matrix Framework. In Chapter 4, I develop the theory of statemaking and subjectmaking that will serve to guide my interpretation of Hokkaido’s history in Chapter 5. After explaining how the Saru River Development Project has imbibed and perpetuated the legacy of colonial statemaking and subjectmaking, in Chapter 6, I present my conclusions and policy suggestions for improving the outcome of the Saru River Development Project, and advocate for a new paradigm of sustainable development rooted in indigenous knowledge.

1.3 Overview of the Saru River Development Project

Present-day Ainu in Nibutani and throughout Japan continue to suffer the legacy of three and a half centuries of Japanese settler-colonialism in the form of poverty, limited access to educational opportunities, and racial discrimination (Siddle 1996; Advisory Council for Future Ainu Policy 2009). The impacts of this legacy have been severe: according to recent figures, the
number of Ainu households receiving public assistance is 1.5 times higher than the Hokkaido average and 2.5 times higher than Japan’s the national average, while the Ainu’s college dropout rate is a staggering 9 times higher than the national average (Advisory Council for Future Ainu Policy 2009, 16; Nozaki 2011b, 65-68). Although these socio-economic effects have been universally experienced by all Ainu to some degree, Ainu communities in certain locations were able to maintain their distinct cultural identities and preserve certain elements of Ainu language and culture. The village of Nibutani is one such location. While the village’s population today is only about 500 people, about 80% of the population is Ainu, making it the only municipality in Japan with a majority Ainu population (Hokkaido Ainu Association 1999; Okada 2012, 6). Nibutani is also notable as one of the few places in Japan where Ainu landholders managed to maintain the title to their ancestral homelands in the wake of land reforms during the colonial and post-war eras (Siddle 1996, 185, Maruyama 2016, 103).

The area surrounding Nibutani is also noteworthy for several other reasons. It is home to several important archaeological sites, including the remains of hillside fortifications (A: casi) that were likely built in the 17th and 18th centuries in response to increasing competition over trade resources demanded by the Japanese (Levin 1999, 412; Walker 2001). The village is also the location of the boat launching festival (A: cipsanke) an important annual religious festival which takes place in dugout canoes (A: cip) on the Saru River (Levin 1999, 412). Additionally, many areas around Nibutani, called chinomishir, hold sacred significance for Ainu residents. Although two impact assessments were performed by for the Nibutani Dam—one 1975 and one in 1982—the cultural significance of the region to the Ainu people was not investigated (Maruyama 2013, 76).
When it was proposed in 1969, the Saru River Development Project was originally intended to provide industrial water to the East Tomakomai Industrial Park, ambitiously planned to be the world’s largest steel and oil refinery facility. In the early 1970s, a branch of the national Ministry of Construction called the Hokkaido Development Bureau began implementing the Saru River Development Project in conjunction with the Hokkaido prefectural government. However, due to the international oil crisis, the East Tomakomai project’s scope had to be significantly limited after 1973. Although the Nibutani and Biratori Dams were no longer needed for their original purposes, the Hokkaido Development Bureau secretly changed the stated purpose of these dams behind closed doors to flood control, river maintenance, municipal water supply, and hydropower generation (Levin 1999, 409-410; Maruyama 2012, 65-66).

Although the collapse of the East Tomakomai project was not announced to the public until 1990, the Biratori municipal government was aware of the Tomakomai project’s collapse as early as March 1984, when it was revealed that the project had a deficit of sixty billion yen (252.7 million USD). Nevertheless, the Biratori municipal government approved the Nibutani and Biratori Dam projects in September 1984 as a prerequisite for a 2.1-billion-yen (8.8 million USD) grant from the national and prefectural governments for local development and maintenance (Maruyama 2012, 75). Local politicians later confessed that they had been pressured into approving these dams under the threat of revocation of government subsidies for road maintenance and education (Maruyama 2012, 67). As a result, the Nibutani Dam, located on the main stem of the Saru River at Nibutani village, was completed in 1988 and opened in 1997 despite resistance by the indigenous Ainu people living in the vicinity (Iwasaki-Goodman and

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3 All currency conversions are based on historical exchange rates obtained from Fxtop.com (2017).
It is 35 meters tall and 550 meters long, with a catchment area of 1,215 square kilometers (Maruyama 2016, 93). Meanwhile, the construction of the Biratori Dam, located about 25 kilometers upstream of Nibutani village on a tributary called the Nukabira River, remains incomplete as of this writing. When completed, this second dam will be even larger than the Nibutani Dam, at 56.5 meters tall and 660 meters long.

In 1984, the Hokkaido Development Bureau entered into individual compensation negotiations with local landholders, as is the standard practice in Japan (Levin 1999, 400). While most local landholders in Nibutani ultimately agreed to sell their land to the government due to financial hardship, two landholders—Kayano Shigeru and Kaizawa Tadashi—refused to sell. In 1989 the government expropriated Kayano’s and Kaizawa’s land, in spite of their refusal (Okada 2012, 6; Maruyama 2012, 65-68). This land dispute between Ainu landholders and the Japanese government resulted in Kayano and Kaizawa filing suit in the Sapporo District Court, which would go on to becomes the famous Nibutani Dam case.

The plaintiffs of the Nibutani Dam case, Kaizawa Tadashi and Kayano Shigeru, were indisputably pillars of the local Ainu community and had played an active role in Ainu cultural revitalization and efforts toward recognition of Ainu indigeneity since the mid-20th century. Partly as a result of their combined efforts, the village of Nibutani is widely considered today to be the cradle of the Ainu cultural revitalization and indigenous rights movements, and is the home of Japan’s oldest Ainu culture museum, which was established in 1972 by plaintiffs Kayano and Kaizawa, as well as its oldest Ainu language school, which was established in 1983.

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4 Three different sites were considered for the Nibutani Dam: one site located downstream of the village of Nibutani, near the mouth of the Saru River; one site located in the river’s middle reaches directly adjacent to the village; and one site located upstream of the village. Ultimately, the middle site was chosen “because the place prevailed economically and physically, with a narrower river width, higher banks, stronger ground structure, and fewer obstructing properties” (Levin 1999, 405; Kayano and Tanaka 1999, 546).
by plaintiff Kayano (Maruyama 2014, 162). Kayano Shigeru also holds the distinction of being the second Ainu person to receive a PhD and has published material about Ainu culture and history in both Japanese and English (Maruyama 2012, 70). Throughout the 1980s, he was involved in the revitalization of Ainu language through efforts such as publishing an Ainu-language dictionary in 1996 and broadcasting Ainu-language radio classes from 1987 to 1992 (Kayano 1994, 162; FRPAC Website). Kayano was also politically active, serving as a member of the Biratori town council from 1975 to 1992, and in 1994 was elected to the Japanese Diet as the first (and so far, only) national legislator of Ainu descent (Kayano 1994, 162; Kawashima 2004, 37).

Kaizawa Tadashi, for his part, served as the Vice President of the Ainu Association of Hokkaido (the main advocacy group for Ainu affairs in Japan) for twenty years, from 1972 until his death in 1992 (Maruyama 2012, 70). In this role, he was instrumental in forging political alliances between the Ainu and other indigenous peoples throughout the world. On several occasions, Kaizawa traveled internationally to confer with the leaders of indigenous and minority groups, including trips to China in 1973 and Alaska in 1978 (where he was accompanied by Kayano Shigeru) (Maruyama 2014, 160). Kaizawa also traveled throughout Japan in order to build solidarity with other domestic minority groups, such as the National Convention on Buraku Liberation (Siddle 1996, 159). After his death in 1992, Kaizawa’s claim in the Nibutani Dam case was taken up by his son, Koichi.

Following in his father’s footsteps, Kaizawa Koichi was and remains actively involved in the movements for Ainu indigenous rights and cultural revitalization. He organized and hosted an international conference for indigenous peoples in 1993 (the Nibutani Forum), and served as the Secretary General of the Association of Biratori Ainu Culture Preservation for many years.
Serving on the council of the Foundation for Research and Promotion of Ainu Culture (FRPAC), Kaizawa has been involved in a number of research projects including the Centre for Indigenous Peoples’ Nutrition and Environment’s (CINE’s) Indigenous Peoples’ Food Systems for Health Program, as well as the cultural impact assessment for the Biratori Dam (Iwasaki-Goodman 2013, 223). In addition to his political and cultural endeavors, Kaizawa Koichi is also involved in environmental conservation through his non-profit, National Trust Chikornai, which aims at the reforestation of Biratori district in order to promote traditional Ainu culture and subsistence practices, “as his father Tadashi dreamed” (Maruyama 2012, 70; Maruyama 2014, 170-171).

After eight years of litigation, the Sapporo Court ruled on March 27, 1997 that the Nibutani Dam had been constructed illegally, in violation of local Ainu’s rights as an indigenous minority under Article 13 of the Japanese constitution and Article 27 of the International Covenant on Civil and Political Rights (Levin 1999, 395). The court agreed with the plaintiffs that the Nibutani Dam had flooded a sacred landscape that had been used by Ainu people for generations, and deprived them of their ability to engage in important cultural traditions (Levin 1999, 425-429). This landmark decision was the first open acknowledgment of the indigenous status of Ainu people by the Japanese government, set a precedent for acknowledging the loss of non-tangible aspects of indigenous Ainu culture through dam construction, and put pressure on the Japanese government to involve public participation in development projects.

5 “All of the people shall be respected as individuals. Their right to life, liberty, and the pursuit of happiness shall, to the extent that it does not interfere with the public welfare, be the supreme consideration in legislation and in other governmental affairs” (Constitution of Japan, Article 13).

6 “In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language” (ICCPR, Article 27).
However, the Sapporo Court also ruled that removing the Nibutani Dam would not be in the public’s interest, and the dam was ultimately completed and, paradoxically, allowed to flood the very same areas that had just been ruled to be culturally-significant (Levin 1999, 429). Meanwhile, the progress of the projects second dam—the Biratori Dam—was significantly slowed, as the court’s ruling now required a more significant environmental and cultural impact assessment to be conducted, with the full participation of local Ainu residents (Iwasaki-Goodman and Kaizawa 2004, 1; Kaizawa 2005, 138). The first phase of this assessment was carried out from 2003 to 2005 and provided a more detailed understanding of the Biratori Dam’s predicted impacts. However, despite the court’s historic ruling and the passage of three pieces of legislation that same year that offered the potential for meaningful Ainu participation in local development projects (the Ainu Cultural Promotion Act, the Amended River Act, and the Environmental Impact Assessment Law), the findings of this assessment have not necessarily been reflected in the project’s ultimate outcome. Although it has stalled, the Biratori Dam officially remains under construction as of this writing (Maruyama 2016, 98).

1.4 Indigenous Knowledge and Political Ecology

In the course of the Nibutani Dam case, the issue of the dam’s purpose became an important point of contention between the two parties. After abandoning the original purpose of the dam to provide industrial water for the now-defunct East Tomakomai project, the government argued that the Nibutani Dam was necessary for flood control, pointing to several historic floods in the Saru catchment system that had occurred during the 20th century (Levin 1999, 406-409). The Ainu plaintiffs countered, noting that the majority of the floods cited by the defendants took place on the Saru River’s upstream tributaries, and thus could not have been prevented by the Nibutani Dam, located downstream (Maruyama 2012, 74; Levin 1999, 406-
The plaintiffs argued that, in fact, no significant flooding had occurred on the Saru River since the construction of an embankment in 1970—which the Hokkaido Development Bureau had previously promoted as sufficient to prevent the catastrophic floods that were expected to happen once every 100 years (Maruyama 2012, 73-74; Kaizawa 2005, 138). The plaintiffs further argued that flooding on the Saru River, rather than being a purely natural phenomenon, had intensified as a direct result of Japanese colonization and development in the region, which had degraded the local environment’s natural capacity to cope with flooding and erosion. This argument, rooted in the Ainu’s indigenous knowledge, was a matter of common sense for the plaintiffs and, likely, many other local Ainu.

Plaintiff Kayano—already a local celebrity at the time of the trial—had written in his 1980 memoir Our Land Was a Forest (1994) that, prior to Japanese colonization, Nibutani had been a densely-wooded area boasting trees more than two meters thick (Kayano 1994, 8). Deforestation became a serious issue in the wake of colonial land-grabs in the late 19th and early 20th centuries (Maruyama 2012, 66-67; Howell 1995, 55-56; Simmons 1973, 284; Irish 2009, 130; Lie 2001, 91). Kayano argued that Japanese colonizers “came up with arbitrary ‘laws’ that led to the destruction of the beautiful woods of Nibutani for the profit of ‘the nation of Japan’ and the corporate giants… [and] half of the Nibutani region ceased to be a land of natural bounty” (Kayano 1994, 9). Supplementing Kayano’s narrative, fellow-plaintiff Kaizawa Tadashi wrote in his 1991 formal objection to the Nibutani Dam that “Japanese timber dealers…made a huge profit on logging timbers in the Saru River Catchment Area…[and] the mountains…were stripped of all vegetation…so that the lands in the Catchment Area allotted to the Ainu…suffered

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7 Kayano also puts forward the theory that the name “Nibutani” actually derives from nitay (A: wood, forest, jungle), which further supports the argument that Nibutani had been a densely-forested area in pre-colonial times (Kayano 1994, 8).
flood damages” (Maruyama 2016, 102). These man-made floods contributed to erosion and riverbed degradation, with the combined result of increasing the amount of sediment in local waterways. This has become a serious issue on the Saru River, which is well-known by local residents for its muddy waters. 8 Due to the resulting buildup of this sediment behind the Nibutani Dam, the 1975 impact assessment warned that the dam would be rendered completely unusable within 20 to 30 years (Maruyama 2012, 75). Further, the 1975 assessment stated that since the dam was originally intended as a water supply and was built in a downstream part of the river, it clearly cannot control flooding in areas upstream (Maruyama 2012, 75). In spite of these arguments, the court nevertheless agreed with the defendants that “the Nibutani Dam is undeniably necessary for flood control,” noting that “the utility of dams for flood control [in other locations] cannot be denied” (Levin 1999, 408).

With regard to the controversial issue of regional flooding, the plaintiffs’ position was rooted in indigenous ecological knowledge and an acute awareness of the region’s political history. This position has since been supported by suggestive studies that show flood frequency to be positively correlated with the loss of natural forest cover (Mouri, et al. 2016, 289). Other studies have shown that landslide frequency and river sedimentation have also increased in Hokkaido’s deforested areas (Aipassa 1991, 406, Ahn, et al. 2006, 330). Although the plaintiffs’ argument was perhaps too advanced for the court to accept, it provides a fitting point of departure for a political ecology of the Saru River Development Project. While floods, such as those that the Nibutani Dam was claimed to prevent, are conventionally thought of as “natural disasters,” Huber and colleagues (2016) argue that this term is inadequate to capture the distribution of impacts that constitute a “disaster.” Instead, they propose the term “capital-driven

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8 In the Ainu language, the Saru River’s name Sisirimukar, which means “the estuary is blocked with sediment in case of torrential rain” (Maruyama 2012, 75).
destructions” to indicate “the particular socio-economic configurations and political forces that drive decisions in the run-up to a potential disaster” (Huber, et al. 2017, 50). Although the dams of the Saru River Development Project are claimed to prevent disastrous floods, a detailed examination of Hokkaido’s environmental history will reveal that regional floods are “neither natural nor neutral,” but are instead capital-driven destructions that have result from the complex history of social-environmental interaction brought about by Japan’s colonization of the island (Huber, et al. 2017, 51).

Conventional narratives about the history of Hokkaido’s colonization have tended to strongly emphasize a pioneer narrative of peaceful migration and benevolent technological transfer from the Japanese heartland to the northern island. In actuality, modernization and development efforts in Hokkaido initiated under Japanese colonialism had devastating effects on both the natural environment and the Ainu people who relied upon it. The social and environmental changes that occurred over the centuries of Hokkaido’s colonization together created the material context in which the Saru River Development Project was brought to fruition in the late-20th century. This project—which has had, and is expected to continue to have, significant negative impacts on the infrastructure, livelihood, and community of Ainu residents—represents only the most recent chapter in the long history of Japanese colonization of Ainu lands, causing capital-driven destruction to Hokkaido’s social-ecological system (Maruyama 2014, 156). Seen in this light, it becomes necessary to interrogate the ways in which the structures and practices initiated under the colonial regime may persist and continue to shape the direction of Hokkaido’s development today. Such an examination rooted in indigenous knowledge and political ecology enables us to question this direction, and to begin to move toward an indigenous paradigm of sustainable development.
Chapter 2: Dams and Development-Induced Displacement

2.1 Introduction

The impacts of development projects throughout the world have been widely studied by social scientists and international NGOs, whose work has coalesced beneath the umbrella-term, Development-Induced Displacement and Resettlement (DIDR) studies. Previous studies of DIDR have taken a variety of approaches ranging from broad, comparative studies of large numbers of development projects, to in-depth case studies of individual projects. In my capacity as a graduate student in the department of anthropology at Oregon State University, I became involved in the creation of the OSU Dam Impacts Database (hereafter, the OSU Database), a multi-year effort to create a global database which tracks the social and ecological impacts of dam construction projects around the world by synthesizing information from the wide literature of DIDR studies. This project is a collaborative effort between Oregon State University and The Nature Conservancy (TNC), and was conceived in 2014 under the leadership of Dr. Bryan Tilt, a well-known environmental anthropologist and expert on development-induced displacement in East Asia.

The OSU Database project grew out of Dr. Tilt’s experience working on the Integrative Dam Assessment Modeling (IDAM) project. The IDAM project, which initially focused on two watersheds in southwest China, was designed as a decision-support tool that provides insight into how people and the environment are affected by dams. What the IDAM project did not provide, however, was a macro-level understanding about broad trends related to population displacement from dam construction projects around the world. Although some researchers have compiled partial databases of large dams, such as the TNC, International Rivers (IR), and International Commission on Large Dams (ICOLD) databases, most of this work has focused either on
physical characteristics (such as dam height, location, or catchment size), or on environmental impacts (such as effects on aquatic species or flow regime). In comparison, relatively little attention has been paid to social impacts. The OSU Database project is intended to track social impacts of dam construction,\(^9\) to enable a macro-level understanding about the broad trends related to population displacement from dam projects around the world, and to answer questions that remain unanswered: do resettlement outcomes differ across countries or regions? Are resettlement outcomes getting better or worse over time? Do resettlement outcomes differ across management authorities, like international financial intuitions, domestic government agencies, or private firms?

Any project of this scale inevitably presents serious challenges. Because there is no central repository of dam-related records currently in existence, simply finding out what dams exist and where they are located was itself a challenge. After careful consideration, the McGill University Global Reservoirs and Dams (GRAND) database was chosen as a starting point for the OSU Database project, which had an initial sample size of nearly 7,000 dams. To pare this

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\(^9\) For the OSU Dam Impacts Database, basic information was collected, such as the dam’s name, location, technical specifications, and funding sources. Data on environmental impacts were provided by TNC, so our work mainly focused on social impact variables. The most basic social impact variable was the number of people displaced by a given project. Variables related to compensation were also of interest, so monetary and non-monetary compensation (such as land allocation) figures were gathered when available. We were also interested in tracking whether and how vulnerable populations, indigenous peoples, or minority groups were affected by a project. Finally, we were interested in tracking the degree of public participation, as well as whether a social impact assessment was performed.

Because there is no central repository for information on dam projects or displaced persons currently available, we decided to cull information for the database from any available source, whether online or in print. These included peer-reviewed publications, government reports, “grey literature” like financial institution and industry reports, and media reports with sources provided. Although peer-reviewed articles were considered most reliable, most peer-reviewed studies have been in-depth case studies focusing on a relatively small number of famous dams. Thus, it was often necessary to turn to other sources such as government reports and gray literature to find information about dams that are not as well-known. However, due to wide variation in the amount of attention devoted to dam construction and the level of transparency employed by different governments and agencies, information for some projects was much easier to come by than for others. While it was usually easy to find information on World Bank-funded projects, projects funded by domestic governments or private companies proved much more difficult. As a result, many dams in the database still have incomplete information at the time of this writing.
number down to a more manageable size, the sample was limited to dams built in developing countries between 1960 and 2010. However, limiting the sample to developing countries meant that many industrialized countries with large numbers of dams, such as Japan, were not included. Since the OSU Database contains data from many different cases around the world, an additional challenge is how to make the data useful for comparative purposes. This inevitably involves some sort of categorization or “binning” of the data into various levels or ranks. But categorizing a project as “low impact” simply because it only resulted in the displacement of, say, 200 people may not accurately reflect the true magnitude of its impacts. This then begs the question of whether and how projects of different scales can be compared at all.

As a result of methodological challenges such as these, the research team is still working hard to develop the structure and presentation of the OSU Dam Impacts Database to make it useful for comparative analysis. In an ideal situation, this chapter examining major trends in dam-induced displacement and other related impacts would have performed a quantitative analysis using the OSU Dam Impacts Database’s innovative potential as a DIDR research tool. Unfortunately, the timeline of a master’s program tends to proceed much more quickly than that of a multi-year collaborative research project, meaning that the OSU Database is not yet ready for use in quantitative analyses at the time of this writing. However, through my experience with the project, I had the opportunity to examine the OSU Database’s numerous data sources in considerable depth. In this chapter, I draw on these data sources to describe global trends in dam-induced displacement and related impacts, supplementing this knowledge with a focused examination of how these trends reflect in the context of Japan and, specifically, Hokkaido. This

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10 The current total number of dams contained in the OSU Dam Impacts Database is 582.
discussion will contextualize the Saru River Development Project within a much broader social crisis, which is currently playing out at the regional, national, and global scales.

2.2 Global Trends

Dams have played an important role throughout human history. Bryan Tilt (2015) has argued that “the case can be made that the successful rise of all large-scale civilizations depended to a great extent upon states’ ability to mobilize resources and labor for allocating water where it is most needed,” and that dams have played an instrumental role in water management regimes for thousands of years (Tilt 2015, 38-39). Records indicate that early dams were built in present-day Jordan around 4000 BCE, while the oldest known dam remains, dated to around 2600 BCE, belong to the Sadd el-Kafara in Egypt (Tullos, Tilt, and Liermann 2008, S203). Spain’s Proserpina Dam—built during Roman rule—is the oldest dam that remains in contemporary use, at nearly 2,000 years old (Öhman 2016, 63). Today, over half (172 out of 292) of the world’s largest river systems have been influenced by the construction of dams and, as a result, reservoir storage exceeds annual water discharge in at least six of these rivers (Li, et al. 2010, 707; Tullos, Tilt, & Liermann 2008, S204). In total, there exist about 50,000 large dams in the world today, which the International Commission on Large Dams (ICOLD) defines as dams greater than 15 meters in height or having a storage capacity greater than 3 million cubic meters. Up to 800,000 smaller dams have also been built (Tilt and Gerkey 2016, 153; Li, et al. 2010, 706).

The construction of large dams is one of the most well-studied drivers of development-induced displacement (DID), in part because of the sheer magnitude of dams’ impacts. Of the various types of DID, displacement due to dam-construction is the largest in scale and has the

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1 Other water engineering projects still in use today are even older, such as China’s Dujiangyan irrigation system (Tilt 2015, 45).
greatest impact on local people (Hamamoto 2013, 145). Over the past twenty years, 200 to 300 million people have been displaced around the world due to development and related issues, at a rate of 10 to 15 million people per year (Kirchherr and Charles 2016, 100; Kaida and Miah 2015, 73; Randell 2016, 385; Cernea 1997, 1570). It is estimated that, of these 200 to 300 million people, up to 80 million people have been displaced worldwide due to the construction of large dams, a figure that itself may be an underestimation due to its exclusion of the world’s many smaller dams from its calculus. Broadening one’s focus beyond displacement itself, to include related social impacts, paints a similarly striking picture: experts have estimated that as many as 472 million people have been affected by the 7,000 largest dams alone (Richter, et al. 2010, 177).

These impacts are felt in a variety of ways, and may be positive or negative. Dam construction promises many positive benefits by storing water for such purposes as flood control, irrigation, and hydropower generation. The total hydroelectric potential of the world’s rivers is estimated at 15.9 trillion kWh, of which 2.6 trillion kWh (16.3%) is already being harnessed; indeed, in many developing countries the construction of large dams was seen as “the necessary and the only effective response to growing energy needs” (Terminuski 2014, 66). However, previous research has shown that these benefits are frequently distributed unfairly. Although many of these internally-displaced persons (IDPs) reside in developing countries where economic development and poverty alleviation are considered top policy priorities, development-induced displacement has the potential to leave IDPs impoverished and marginalized, contrary to the very goals of development itself (Cernea 1997, 1570). Bogumil Terminski (2014) noted that “investment-caused displacement” seems a more appropriate term given the fact that so many so-called development projects end up leaving local people worse off.
In a famous statistical study of 50 large dams, anthropologist Thayer Scudder (2012) found that although 23 of the 50 dams in the sample had a significant irrigation component, a serious attempt to integrate resettled IDPs within the project’s irrigated command area was made in only three cases (Scudder 2012, 62). Furthermore, although dams are frequently promoted as local development initiatives, Scudder found no statistical evidence that outcomes for resettled IDPs improved over time; in fact, socio-economic living conditions worsened for the majority of resettled IDPs in 82% of cases (Scudder 2012, 46). These worsening conditions reflect the many negative changes that dam-induced IDPs frequently face, which include changes in household size and structure; changes in employment and income generating opportunities; changes in land and water access and use, changes in social networks and community integrity; changes in the nature and magnitude of various health risks; and changes in psycho-social well-being (Tilt, Braun, and He 2008, S254). The impacts of these changes can be severe, leading to threats to land, income, housing, health, education, community, and cultural identity. Research has shown that women, children, the elderly, and members of ethnic minority groups are particularly susceptible to these risks (Cernea 1997, 1576; see also Chen 2008). Although some of the largest and most impoverished IDP populations are found in countries which are state parties to important United Nations human rights conventions, and although an international consensus is emerging on their rights and entitlements, there has been no effective international mechanism for protecting those rights (Pettersson 2002, 18; de Wet 2006, 6).

Previous research has also shown that dam construction has unique impacts on indigenous peoples that are worthy of special consideration, since their needs are usually “completely different” from the needs of non-indigenous IDPs (Terminski 2014, 453; Downing and Garcia-Downing 2001; Hall and Branford 2012; Ribeiro 2015). For indigenous peoples, the
negative impacts of dam construction may compound longstanding socio-economic and political struggles, rooted in their encounter with colonial powers over the past four centuries. Throughout history, indigenous peoples have been repeatedly displaced from their homelands and relocated at the behest of colonizing powers, and their socio-economic well-being has been severely neglected in recent decades. Indeed, for many indigenous peoples, the implementation of development projects marks the beginning of state interest in their situation (Terminski 2014, 368). Because many indigenous cultures have strong ecological, economic, and spiritual ties to specific locations and landscape features, displacement due to dam construction can threaten the transmission of traditional knowledge to new generations, jeopardizing their entire way of life (cf. Oliver-Smith 1991, 133). The impacts of dam-induced displacement can be particularly severe when flooded areas include irreplaceable cultural sites, such as sacred areas or burial sites. As a result, many dam construction projects became flashpoints for organized resistance among indigenous peoples.

Although only a small handful of dam construction projects become politically controversial at the national or international levels, Oliver-Smith contends that “a very high percentage” of cases involve resistance at the local or regional levels and characterizes resistance to resettlement as a “normal” and “expected” response (Oliver-Smith 1991, 134; quoting Cernea 1988, 15). Many of the most famous cases of resistance against dam construction projects have involved indigenous communities. In Brazil, for example, the construction of the Belo Monte Dam was halted in 2012 due to developers’ failure to consult with local indigenous communities, of whom as many as 20,000 people were expected to be displaced, although the court’s ruling was later overturned and construction has since resumed (Terminski 2014, 239). Outcomes like this one characterize the vast majority of cases, and most indigenous resistance movements
ultimately fail to halt the development project in question (Oliver-Smith 199, 142). Nevertheless, Oliver-Smith (1991) argues that “even failed resistance movements have led to forms of empowerment” since the threat of displacement “may mobilize a population to action as few other threats can” (Oliver-Smith 1991, 133). Anti-dam movements, according to Oliver-Smith (1991), can serve as “fertile contexts for political socialization for people who have been traditionally marginalized from formal political structures,” which frequently “has the effect of uniting people in defence of territory, community and culture” (Oliver-Smith 1991, 133, 139). For indigenous peoples, this often means deeper engagement with a broader cultural revitalization movement, since the “ties between ancestral lands and all that they signify for ethnic identity in terms of resources, burial grounds, heritage, religious symbols, become more vibrant and meaningful in the face of external threats” (Oliver-Smith 1991, 139). In a few cases, indigenous resistance did lead to more tangible positive outcomes, however. For example, Cree resistance to the James Bay Hydroelectric Project in Canada led to some degree of recognition for indigenous land rights; while in Norway, Sámi resistance to the Alta Dam resulted in a constitutional amendment concerning indigenous rights and the creation of a directly-elected Sámi parliament (Terminski 2014, 241; Maruyama 2013, 82).

While development-induced displacement shares numerous similarities with conflict-induced displacement (CID), the policy and practice of resettlement have historically treated these two areas as “intellectually and practically exclusive” (Muggah 2003, 6). Resettlement schemes in both instances are designed to transfer populations from one area to another on a planned basis, and share common features in their political economies, institutional and bureaucratic logics, and key impoverishment risks (Muggah 2003, 6; 10). Both CID and DID frequently involve elements of coercion or even violence, and in some cases DID has even led to
CID, resulting in further violations of IDPs’ human rights (Muggah 2003, 16-17). IDPs in both cases suffer from severe impacts, including the loss of their homes and lands and declines in income and housing conditions, and in some instances development-induced IDPs may even feel some of these impacts more acutely than conflict-induced IDPs (Pettersson 2002, 20). Viewed in the terms of the UN human rights principles discussed above, it is necessary that policymakers, development practitioners, and transnational NGOs expand their scope to include the consideration of development-induced IDPs in international frameworks governing displacement and resettlement.

Standards for informed consent and social protection of IDPs vary by country and by institution. An attention to clear, precise definitions of key concepts such as DID and IDP is warranted here because, as Bjorn Pettersson (2002), current Senior Protection Officer at the UN High Commissioner for Refugees, has argued,

Identifying which groups of victims of human rights violations are to be considered as IDPs can have a bearing both on the degree of international interest they attract and whether or not their rights are respected, enforced or subject to effective remedy. (Pettersson 2002, 20).

The proper identification of IDPs has a tangible impact on resettlement outcomes. As Pettersson explains,

If, for example, a displaced woman is viewed as an IDP, she may stand a better chance of receiving humanitarian and legal assistance and ultimately perhaps also benefit from rights to have her property later restored to her. If, however, she is considered to fall outside the definition of IDP she may be left to fend for herself. (Pettersson 2002, 20).

If national and international policymakers wish to see more effective protection of development-induced IDPs and their rights, it is therefore crucial to arrive at precise, practically-applicable definitions of key terms such as “involuntary displacement” and “internally-displaced person.”
Terminski defines displacement as “dispossession from land, homes, existing socio-economic relations and favourable environmental decisions” (Terminski 2014, 77). Development specialist Robert Muggah (2003) has written that internal displacement and resettlement “become ‘involuntary’ when the choice to remain is not provided” (Muggah 2003, 10; emphasis original). The UN Basic Principles and Guidelines on Development-Based Evictions (2007) hold that involuntary evictions represent “a distinct phenomenon under international law” that “constitute gross violations of internationally recognized human rights,” which “intensify inequality, social conflict, segregations and ‘ghettoization’, and invariably affect the poorest, most socially and economically marginalized sectors of society” (United Nations 2007, Articles 5-7). Meanwhile, the UN Guiding Principles on Internal Displacement (1998), also known as the “Deng Principles”, define IDPs as

people who have been forced or obliged to flee or to leave their homes or habitual places of residence in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border. (Muggah 2003, 9).

Terminski notes, however, that spatial mobility is often only a secondary consequence of displacement:

We should remember that physical relocation from a former place of residence is usually the result of a long-standing process, resulting in a weakening of an individual and community's position in the surrounding area. In many cases, displacement is only the final stage of an accumulation of many negative social, economic and political processes. We can say that the real socio-economic displacement takes place for a long time before the actual breaking point. The final decision on a particular development project only confirms the displacement. (Terminski 2014, 77; 223).

Therefore, negative impacts of development projects such as dam construction are also felt by local people who are not required to be resettled due to the construction of a dam, and must continue living nearby. Even when not explicitly forced to resettle elsewhere, the transformation
of local environmental conditions due to dam construction can prevent existing socioeconomic activities from continuing, which further drives impoverishment and may result in depopulation of the area (Terminski 2014, 274; 368). For these people, the loss of “political and economic control over living space” due to dam construction may contribute to their ongoing impoverishment (Terminski 2014, 450).

In their seminal report (2000), the World Commission on Dams (WCD) brought many of these negative impacts to light, ultimately concluding that the impacts of dam construction are “spatially significant, socially disruptive, lasting, and often irreversible” (Tullos, Tilt, and Liermann 2008, S205). The WCD’s report broke new ground by laying out a “Rights and Risks” framework that explicitly rejected what it deemed to be the old-fashioned cost-benefit accounting which had historically dominated compensation and resettlements schemes prior to the year 2000. The WCD also promoted the principle of prior and informed consent on the part of indigenous and tribal people during all stages of planning and construction (Dubash, et al. 2001, 44). Since the publication of the WCD’s report, the impacts of dam construction have been the subject of increased attention from academics, government institutions, and NGOs. This increased awareness has helped to contribute toward the adoption of more robust resettlement and compensation standards over the past two decades (Dubash, et al. 2001, 60).

In the years leading up to the publication of the WCD report in 2000, as evidence of their negative impacts continued to mount, dams began to fall out of favor with international funding agencies like the World Bank, and during the first decade of the new millennium the global rate of dam construction slowed considerably (Kirchherr and Charles 2016, 100; Tilt 2015, 182). Whereas at the height of the global dam boom in 1985 the rate of dam construction was about 500 dams per year, by the early 2000s this rate had slowed to 100 dams per year (McDonald,
Bosshard, and Brewer 2008, S297). Today, however, the rate of dam construction is once again on the rise thanks in part to growing concerns over global climate change, which could make reliable storage of water a high priority. Hydropower-development interests have been quick to capitalize on these concerns by promoting hydroelectricity as green energy, with the potential to reduce global fossil fuel consumption (Tilt 2015, 206). In 2012, the U.S. Department of Energy announced plans to boost hydropower by as much as 15% in effort to reduce dependence on fossil fuels, and in 2013 the World Bank signaled that it may be returning to the dam-building business after a decade-long hiatus (Kirchherr, Pohlner, and Charles 2016, 115). Dam construction is also being promoted under the Kyoto Protocol’s Clean Development Mechanism (CDM), with hundreds of dam projects throughout the world currently under way with CDM assistance (Tilt 2015, 205).

2.3 Japanese Trends

Like much of the rest of the world, Japan has a history of dam construction that stretches hundreds of years into the past. Japan boasts several dams over 1,000 years old, including the Kaerumataike Dam on the Yodo River in Nara Prefecture, which dates to around 200 CE and continues to be used today (Öhman 2016, 63; Jansen 1983, 18). Dozens of large earthfill dams taller than 15 meters in height were constructed prior to Edo period (1603-1868), including the 32-meter high Daimonike Dam in 1128 (Jansen 1983, 20). During the period in between the restoration of imperial rule and World War II (1868-1945), the Empire of Japan constructed many large dams for the purpose of hydropower generation (Nakayama, et al. 2002, 2092-2093). Dams were built both in the imperial center, such as the Ogochi Dam (1938) on the Tama River near Tokyo, which displaced approximately 945 households; as well as in the colonial periphery, such as the Sup’ung Dam on the Korea-Manchukuo border (1944) which displaced an estimated
15,000 households (Nakayama, et al. 2009, 631). After WWII, dams were instrumental in Japan’s post-war rebuilding, where they helped to increase food production, hydropower generation, and flood control (Takahasi 2004, 46). During the 1960s and 1970s, the height of Japan’s economic growth, dams were increasingly built to provide water to growing urban centers like Tokyo (Hamamoto 2013, 150). After 1980, the emphasis shifted more toward flood control, and Japan also became increasingly involved in financing dam projects in developing countries throughout Asia, such as the Sardar Sarovar Project in India and the Koto Pajang Dam in Indonesia (Nakayama, et al. 2009, 633).

By the late 1990s, when Japan’s last free-flowing river became obstructed with the completion of the Nagara River Estuary Barrage project, at least one dam or barrage had been constructed on every single river in Japan (Creighton 2003, 132). By the turn of the millennium, Japan had the distinction of having the highest budget among the G-7 member countries for public works, including dams (Lam 2005, 87). Since then, Japan has continued to build dams domestically at a rapid pace, constructing nearly 2,000 more dams since the turn of the millennium (World Commission on Dams 2000, 9). This trend is expected to continue in the immediate future, thanks in part to growing concerns over potential sources of renewable energy following the Great East Japan Earthquake and subsequent meltdown of the Fukushima nuclear facility in 2011 (Nishikizawa 2016, 1550013-6; Lewallen 2016, 213). Today, Japan ranks fourth worldwide with a total of 3,112 large dams, being surpassed only by China (23,842), the United States (9,261), and India (5,102) (International Commission on Large Dams, n.d.). More than 53,000 small erosion-control dams have been built there as well (Morita and Yamamoto 2002,

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12 At that time, the G-7 member countries were Japan, the United States, the United Kingdom, France, Italy, Germany, and Canada.
These figures make Japan one of the most densely dammed countries in the world, owing to its relatively small land area.\textsuperscript{13}

Japan’s unique geography makes it especially suited to dam construction: more than half of the archipelago’s land area is mountainous, and rivers are generally steep and fast-flowing, resulting in a high ratio of maximum-to-minimum discharge which makes dams efficient for water storage during high flow periods (Takahasi 2004, 35). Compared to the figures for dams worldwide, reservoirs in Japan tend to be relatively small: the capacity of the Tokuyama Dam’s reservoir, the largest in Japan, is only 660 million cubic meters, and the combined total capacity of about 2,700 large dams in Japan is only 20 billion cubic meters, or only about half the volume of the Hoover Dam’s reservoir, Lake Mead (Takahasi 2004, 35). As a result, most dam construction projects in Japan displace a relatively small number of people compared to dams worldwide: a study of 92 Japanese dams, for instance, found an average of 97 households needed to be resettled in each case (Takesada 2009, 419-420; Hamamoto 2013, 144).

The largest dam-related relocation program in Japan since WWII was associated with the Tokuyama Dam and involved the resettlement of 466 households (Hamamoto 2013, 152; Nakayama, et al. 2009; 631). Other noteworthy resettlement programs include: the Sameura Dam (352 households), the Ikawa Dam (193 households), the Miayagase Dam (281 households), and the Kusaki Dam (103 households) (Fujikura and Nakayama 2012, 10, Nakayama, et al. 2009, 637). Compared to other dams worldwide, these figures seem relatively small. However, because of the relatively high population density along rivers in Japan, most large dam projects involve

\textsuperscript{13} Japan’s land area is 377,962 km\textsuperscript{2}. By comparison, the land areas of China, the United States, and India are 9,595,906 km\textsuperscript{2}; 9,834,185 km\textsuperscript{2}; and 3,286,695 km\textsuperscript{2}; respectively. Taking a ratio of number of large dams to land area, Japan’s dam ratio is 0.0082, more than 3 times greater than China’s (0.0024), 9 times greater than the United States’ (0.0009), and five times greater than India’s (0.0015).
some degree of involuntary resettlement, and very few involve no resettlement whatsoever (Takahasi 2004, 36).

Japanese law provides a relatively robust system of legal protections which govern the resettlement process. Construction of large dams has been governed by the River Law since its enactment in the 19th century, and in 1964 a major revision was made to enable the Ministry of Construction (MOC) to more easily build dams in order to spur economic development (Nakayama, et al. 2002, 2093). Prior to the early 1960s, there were no general compensation standards or protections for dam-induced IDPs at the national level, and individual resettlement schemes were devised by developers on a case-by-case basis (Takesada 2009, 422). However, the lack of a national standard for compensation meant that many projects were controversial and met with considerable resistance from local residents (Takesada 2009, 422; Matsumoto, et al. 2012, 109). In 1962, the Japanese government issued the Outline of Compensation Standards for Losses Involved in the Acquisition of Land for Public Use, a law which defined a national standard for financial compensation of private land needed for development projects, and which is still in effect today (Hamamoto 2013, 155-156; Takesada 2009, 422). Additional standards and regulations were laid out in the 1967 Guidelines on the Standards for Public Compensation Associated with the Implementation of Public Works Projects, which set similar standards as the 1962 law, but for public property (Matsumoto, et al. 2012, 110). Observers have noted, however, that the main purpose of these legal standards was not to aid in livelihood restoration, but instead to expedite the implementation of public works projects, which meant that insufficient public investment was made in communities residing near dam construction sites (Takesada 2009, 422; Matsumoto, et al. 2012, 109; Takahasi 1997, 182).
As a result of this common attitude on the part of Japanese developers, observers have argued that some Japanese dams were built simply to “line the pockets” of politicians, bureaucrats, and special interests, while providing few tangible benefits to local residents (Creighton 2003, 130). Projects like these are sometimes labeled as “politicians’ dams” (J: seijika damu), indicating their usefulness for reinforcing ties between developers and the state (Creighton 2003, 130). This approach to dam construction fits the common pattern of Japanese governance in which, according to Lam (2005),

  governors, mayors, and conservative Diet members [of the ruling Liberal Democratic Party (LDP)] act as brokers to obtain public works funding from the political and bureaucratic centre in Tokyo to stimulate the local economy, reward their supporters with business contracts and jobs, and win re-election. (Lam 2005, 71).

Lam argues that such green-lighting of “wasteful” public works is part of a “deeply rooted domestic political economy” within Japan, which has made some rural areas into “contested battle sites” where residents and local governments push back against dam projects in their communities (Lam 2005, 72; 85). As will become clear in later chapters of this study, the two dams involved in the Saru River Development Project represent archetypal examples of this concept of the “politician’s dam.”

In 1973, the passage of the Act on Special Measures for Reservoir Area Development (ASMRAD) represented a major turning point in Japan’s resettlement policy by raising the subsidy rate for infrastructure development in reservoir areas and providing employment services to residents, and in 1976 the Fund for Reservoir Area Development was established, which allocated additional funding for the regeneration of reservoir areas, environmental conservation, and compensation for submerged properties (Takahasi 1997, 182). However, the implementation of these measures has been inconsistent: although ASMRAD applies to any dam that causes the
submergence of 20 or more households, or 20 or more hectares of agricultural land (60 hectares in Hokkaido), ASMRAD subsidies had only been applied to 26 dam projects as of 2004 (Takahasi 2004, 38-39).

Environmental impact assessments (EIA) for public works projects began to be performed in Japan in the 1970s and 1980s, following the basic model set forth in the United States’ National Environmental Policy Act (NEPA) of 1969 (Ministry of the Environment, n.d., 2). The need for a nationwide standard governing EIA became increasingly recognized, and in 1984 the government issued a Cabinet decision which introduced EIA guidelines for major projects (Ministry of the Environment, n.d., 2; Harashina 1998, 310). The Basic Environment Law of 1993 established legal recognition for and promoted the practice of EIA, but did not provide legally-binding guidelines or procedures for implementing these assessments (Ministry of the Environment, n.d., 2). In 1995, Evaluation Councils began to be established at certain dam sites—particularly those that met with considerable local resistance—which provided public fora for the (limited) participation of local residents and interest groups (Japan Commission on Large Dams 2009, 142). As of 2009, these councils had been utilized in 14 dam construction projects.

The year 1997 saw the passage of two landmark pieces of legislation which significantly expanded protections for local people impacted by dam construction projects. The first was the significant revision of the River Law, which now requires developers to solicit the opinions of experts and local residents (though the extent to which these opinions influence outcomes is debatable), draft a long-term management plan covering about 30 years, and express a commitment to the “Improvement and conservation of river environments” (Japan Commission on Large Dams 2009, 143; Nakayama, et al. 2002; 2096-2097). Also in 1997, the Environmental
Impact Assessment Law was passed by the Diet (the Japanese National Legislature), later going into effect in 1999 (Nakamura 2008, 434). This law established nationwide standards for conducting EIA, which now legally require public participation during the screening and scoping phases as well as follow-up surveys during and after construction (Ministry of the Environment, n.d., 10-11; 17). These standards apply to all dam projects that are defined as being either Class-1 or Class-2 projects.

In spite of these welcome changes to national policy, the Japanese legal system still guarantees the ultimate authority of the national government in development projects without meaningfully involving residents in the final decision-making process (Maruyama 2012, 78). Lam has argued that it “appears that the 1997 New River Law was legally binding only when the central and local governments chose to honour it,” and that the ultimate outcomes of dam construction projects are more often predicated upon “political contests and local resistance rather than a formal piece of legislation” (Lam 2005, 80). Furthermore, some politicians and bureaucrats have pushed back against the call for public participation in development decision-making. For example, one official from the Ministry of Construction remarked in 1998 that the “appropriateness of public works cannot be judged by amateurs,” while another MOC official argued that same year that “[i]n general, local residents lack analytical ability, and tend to be swayed by the emotions of the moment rather than reason, and because they are moved by feelings, there is a danger that they will produce an irrational result” (Lam 2005, 79).

14 The “screening phase” refers to the part of the process when the necessity of performing an EIA is being decided upon (this applies to Class-2 projects only). The “scoping phase” refers to the part of the process when the method of assessment is being decided upon.
15 Dams with an expected reservoir area of 100 hectares or larger are defined as Class-1 projects, and always require an EIA be performed; those with an expected reservoir area of 75 to 100 hectares are defined as Class-2 projects, and the necessity of performing an EIA is judged on a case-by-case basis (Ministry of the Environment, n.d., 3).
Nevertheless, compared to other countries in which no such protections exist at the level of national policy, on paper the Japanese system is relatively well-developed and robust.

Despite this robust legal framework governing development projects in Japan and the small scale of most of the country’s resettlement programs, Japanese IDPs still face serious problems posed by dam construction (Hamamoto 2013, 143; 164). Under the 1962 compensation standards, cash compensation equal to the value of the submerged assets is deemed to be sufficient, and except in the rare cases in which ASMRAD subsidies have been applied, no additional compensation or support measures are provided for livelihood restoration, job placement, or to help IDPs cope with dam construction’s less tangible impacts (Hamamoto 2013, 155-156; Matsumoto, et al. 2012, 110). Furthermore, in many rural and mountainous areas, declining property values mean that cash compensation based on the monetary value of assets is often insufficient to ensure future livelihoods (Matsumoto, et al. 2012, 114; Hamamoto 2013, 156).

In terms of the implementation of compensation schemes, Japanese developers have demonstrated a clear preference for pursuing “voluntary” relocation through individual negotiations with local residents to obtain their consent (Hamamoto 2013, 144). However, the notion of consent and the idea of voluntary relocation are misleading in this context since resettlement, as we have seen, is always involuntary if the option to remain is not provided (Muggah 2003, 10). For most, resettlement is ultimately inevitable, since development projects are rarely cancelled in Japan and compulsory purchase rights are exercised against those who refuse to give consent, regardless of the amount of compensation offered (Maruyama 2012, 76-77; Siddle 2002, 410; Hamamoto, et al. 2013, 144). As a result, many Japanese IDPs are “left with a sense of loss and powerlessness” (Creighton 2003, 129-130). One Japanese journalist has
even argued that “Japanese people who farm and fish have become the indigenous people,” in that, if the state “wants land, it takes it, and there is usually little rural communities can do about it” (Creighton 2003, 130).

Nevertheless, some Japanese dams became politically controversial and served as flashpoints for organized resistance. The Sameura Dam (1958-1975) displaced 352 households and was opposed by residents as well as the local government, which continued to build public facilities in the proposed site in protest after the dam was announced (Fujikura and Nakayama, et al. 2012, 10; Matsumoto, et al. 2012, 113). The Kusaki Dam (1958-1976) displaced 103 households and was opposed by the Alliance Construction Resistance composed of residents of several affected districts, primarily stonemasons who worked in the area (Fujikura and Nakayama 2012, 10; Matsumoto, et al. 2012, 111); The Nagara River Estuary Barrage Project (1973-1995) was widely opposed by environmental groups, whose protests gained widespread media attention (Takahasi 2004, 42-44; Takahasi 1997, 183).

By far the most famous case of anti-dam resistance in Japan was the Hachinosu-jō (J: Beehive Castle) dispute, associated with the construction of the Shimouke Dam (1958-1972). After suing nearly 80 times to halt the construction of the dam, local landowner Murohara Tomoyuki led a group of protestors who occupied the construction site intermittently between 1963 and 1965, constructing fortifications complete with electricity and running water and engaging in “samurai-like” tactics, including hurling human waste at police and barricading a road with a herd of cattle (Takahasi 2004, 37; Nakayama, et al. 2009; 632; Japan Commission on Large Dams 2009, 102). Although Hachinosu-jō was ultimately dismantled after he and his comrades were forcibly removed by more than 700 riot police, Murohara continued to challenge the construction of the Shimouke Dam until his death in 1970 (Takahasi 2004, 37).
Another noteworthy case involved a dam on the Yoshino River in Tokushima prefecture, which was opposed by residents and local government officials who argued that it was a waste of taxpayer money and a threat to the area’s cultural heritage—including a Tokugawa-era stone weir more than 250 years old, which was to be replaced by the proposed dam (Lam 2005, 75-76). The local government held a referendum in which 91.6% of local voters rejected the proposed dam, which prompted a national review of public works projects in 2000 in which 233 projects were ultimately recommended for cancellation (Lam 2005, 77-78). Although the dam in Tokushima was originally set for cancellation, “intense lobbying” from the prefectural governor, the Tokushima chapter of the LDP, and other dam supporters led to the project being ambiguously “frozen,” which Lam liken to being “dead but not buried” (Lam 2005, 78). This outcome has occurred in more than one dam construction project in Japan: in the case of the Saru River Development Project, the construction of Biratori Dam also appears to be ambiguously stalled (see Chapter 3).

In another noteworthy episode, Nagano prefectural governor Yasuo Tanaka famously announced the cancellation of the Asakawa and Shimosuwa Dams in 2002, drawing the ire of Nagano’s prefectural legislature and other pro-dam politicians and bureaucrats “with a vested interest in public works” (Lam 2005, 84-85). In an unprecedented move, the prefectural legislature passed a motion of no-confidence against Tanaka in response to his opposition to the dams, but the motion was repudiated when Tanaka overwhelmingly won in the following election (Lam 2005, 85). Although this political incident helped bring widespread media attention to opposition movements against dams and helped to shift the national sentiment away from large public works projects, Tanaka’s maverick “no dam” policy was ultimately reversed by subsequent Nagano administrations (Lam 2005, 86-87; KYODO News 2006).
Due in part to Japan’s reliance on individual negotiations for compensation, dam construction projects tend to be extremely long-lived, often taking decades to come to fruition (Hamamoto 2013, 154; Nakayama, et al. 2002, 2095). For example, both the Ikawa Dam (1907-1957) and the Tokuyama Dam (1957-2008) were completed more than fifty years after they were initially announced (Nakayama 2009, 636; Takesada 2009, 424; Hamamoto 2013, 151-153). Such long project lifespans make it extremely difficult for affected residents to plan for the future (Hamamoto 2013, 154). Additionally, investment in public infrastructure such as roads and schools tends to cease once an area has been designated for dam construction (Nakayama, et al. 2002, 2096). In the rural communities where dams are generally constructed, depopulation has been a serious issue since the 1970s, as more and more people opt for the amenities and employment opportunities of major urban centers like Tokyo (Takahasi 1997, 182; Takahasi 2004, 37). Resettlement due to dam construction and long-term lack of public investment in areas planned for resettlement may both compound the existing drivers of rural depopulation. The individualized nature of negotiations, coupled with the long time-frame, also divides and undermines communities, damages relationships, and generates “mutual distrust” and “feelings of strife,” which can even result in divorce (Nakayama, et al. 2002, 2096-2097; Hamamoto 2013, 155; 157). Under Japanese law, mental and emotional health damages like these are currently not compensated at all (Nakayama, et al. 2002, 2097; Hamamoto 2013, 155-156).

In rare instances, a land-for-land compensation scheme has been adopted for resettled communities instead of individual cash compensation, although this model has been legally prohibited since the enactment of the 1962 compensation standards (Takesada 2009, 421). The World Bank—the global leader dam construction financing—has consistently advocated for land-for-land compensation over cash compensation for people with land-based livelihoods like
farmers (Fujikura and Nakayama 2012, 5-6). Completed in 1957, the Ikawa Dam was one of the few projects in Japan to adopt such a program, due in part to the large number of farmers living in its vicinity (Takesada 2009, 424). Resettled villagers from the Ikawa Dam expressed general satisfaction with the outcome of their land-for-land compensation scheme (Takesada 2009, 426). Recently, Japanese scholars studying displacement and resettlement have begun to express their support this model of compensation, and in rural communities where depopulation is a serious issue, a land-for-land approach may help to stanch the flow (Nakayama, et al. 2002, 2094).

An even more radical approach to compensation was used for three small-scale dams on the Jintsugawa River in the 1950s, in which a unique “rent scheme” was adopted (Nakayama, et al. 2009, 636). Rather than selling their land, the 49 resettlers retained ownership of their submerged properties and collected a monthly rent from the power company (Nakayama and Furuyashiki 2009, 432). These leases lasted for fifty years, with rent amounts being revised every ten years (Nakayama and Furuyashiki 2009, 432; 435). Resettlers who were interviewed about this rent scheme all expressed satisfaction and were proud of their involvement in this unique arrangement, though it not immediately clear how they or their families are doing now that the fifty-year term of their leases has ended (Nakayama, et al. 2009, 636). Given the relatively positive outcome reported for this model of compensation, it seems surprising that a similar model has not been implemented in Japan since then.

2.4 Hokkaido Trends

The history of dam construction in the northern island of Hokkaido is relatively short compared to that of the rest of the country, owing to its relatively late incorporation as a part of Japan. In the 1870s, one of the stated priorities of the kaitakushi (J: Hokkaido regional development authority) was the construction of irrigation infrastructure, including dams and
canals (Irish 2009, 145). Western experts hired by the kaitakushi to oversee Hokkaido’s development helped lay the plans for Hokkaido’s earliest dams: Benjamin Smith Lyman studied sites for hydropower development throughout Hokkaido and N.W. Holt led the planning of a hydropower facility in southern Hokkaido, at Nanae (Irish 2009, 149; 153). By 1896, farmers throughout Hokkaido began forming irrigation associations for rice farming, and a 1902 law helped promote these associations and build irrigation works (Irish 2009, 138; 220). The Hokkaido Takushoku Ginkō (J: Hokkaido colonial bank) was established in 1900 to finance the construction of infrastructure, including Hokkaido’s first hydroelectric dam, which opened in 1906 at Iwanai (Irish 2009, 223). During the height of Japan’s imperialist expansion in the 1930s and 1940s, the Hokkaido Electric Power Company built more dams to increase energy production, in some cases through the work of conscripted Korean laborers who suffered from poor working conditions (Irish 2009, 51).

After the war, the construction of large dams was supported in part by the Hokkaido Development Law of 1950, which inaugurated the Hokkaido Development Bureau as a wing of the national government (Irish 2009, 291-292). Since the 2001 merger of the Hokkaido Development Bureau with other national agencies into the Ministry of Land, Infrastructure, and Transport (MLIT), large dams in Japan have been built and managed by MLIT, while small erosion-control dams have been managed by local governments since 1950 (Ministry of Land, Infrastructure and Transport, n.d.; Fukushima, et al. 2007, 1514). To date, a total of 189 large dams have been constructed on the island of Hokkaido, in addition to thousands of small erosion-control dams (Japan Dam Association, n.d.; Fausch, et al. 2010, 124).

With the exception of the two dams of the Saru River Development Project, research published on the impacts of Hokkaido’s dams have focused almost exclusively on their negative
environmental impacts. Threats to native fish species have been a primary concern. One study found that habitat fragmentation due to dam construction had negatively impacted the numbers of white-spotted char (*Salvelinus leucomaenis*) upstream of dams, and projected continued population declines by 2050 (Morita and Yamamoto 2002). The same study also found that the existence of dams negatively affected the genetic diversity of white-spotted char upstream. Another study observed white-spotted char populations undergoing “dramatic life history change” after being isolated from the sea by dams (Morita, et al. 2000). Yet another study found that dams negatively impacted not only white-spotted char, but many other fish species upstream of dams, including arctic lamprey (*Lethenteron camtschaticum*), Far Eastern brook lamprey (*Lethenteron reissneri*), masu salmon (*Oncorhynchus masou*), chum salmon (*Oncorhynchus keta*), Chinese ninespine stickleback (*Pungitius pungitius*), Sakhalin sculpin (*Cottus amblystomopsis*), and starry flounder (*Platichthys stellatus*) (Fukushima, et al. 2007). Hokkaido dams have also been linked to an increase in invasive fish species, such as rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*), which were widely introduced into reservoirs throughout Japan in the 1970s for sport-fishing (Han, et al. 2009; Morita and Yamamoto 2002, 1322). Even Hokkaido’s small erosion-control dams have been linked to negative impacts on native species of anadromous fish, since only 6.6% of them had fish ladders installed as of 2001 (Fukushima, et al. 2007, 1514).

### 2.5 Summary of Major Trends

This chapter has presented a brief survey of previous case studies of dam projects globally, within Japan, and in Hokkaido specifically. To summarize the information reviewed above, it is clear that large dams pose serious environmental and social risks, and that even

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16 The term “anadromous” refers to fish species whose lifecycle involves migrating upstream from the ocean to spawn, such as salmon.
smaller dams can produce serious impacts. Actual physical displacement is only the most obvious of these impacts, which can cause environmental and economic displacement even when physical relocation is not explicitly required. Indigenous peoples may be especially threatened by the impacts of dam construction, given their close connections with the landscapes they inhabit. From this discussion, it is clear that the displacement and other impacts caused Saru River Development Project—which will be discussed in detail in the next chapter—represent a particular local manifestation of a much broader, global crisis.

In Japan, these global trends are largely mirrored, and although the magnitude of population displacement caused by Japanese dams may not be as high as those of other countries, Japanese IDPs still suffer from severe impacts as a result of dam construction. In Hokkaido, attention has mostly been paid to dams’ environmental impacts, with the exception of the two dams of the Saru River Development Project—whose effect on Ainu culture has been widely acknowledged, if not precisely understood. Compared to other countries, Japan has a relatively robust system of policies designed to govern development planning, environmental impact assessment, land expropriation, and compensation. The examination of trends in dam construction presented in this chapter has provided a foundation of knowledge that will help evaluate the severity of Saru River Development Project’s impacts. With these facts in mind, it will be possible to evaluate the extent to which Japan’s safeguards have been enforced in the context of the Saru River Development Project. This will enable policy recommendations to be offered in this study’s conclusion regarding how to improve the project’s outcome. For now, let us turn our attention to the impacts of the Saru River Development Project themselves, which are presented in detail in the next chapter.
Chapter 3: Analysis of the Saru River Development Project

3.1 Introduction

Although the negative impacts associated with dam construction elsewhere have been well documented and the legal and political significance of the Nibutani Dam case has been widely acknowledged, no comprehensive English-language account of the Saru River Development Project’s impacts has yet been published. In this chapter, I attempt to fill this gap in the literature by cataloging the impacts of the Saru River Development Project as comprehensively as possible, using Kirchherr’s and Charles’s (2016) Matrix Framework as an organizational basis. I begin by explaining this framework, then apply it to the Saru River Development project, beginning with the impacts of the Nibutani Dam before moving on to the predicted impacts of the Biratorari Dam.

Figure 1. The Matrix Framework\textsuperscript{17}

\textsuperscript{17} Reproduced exactly from Kirchherr & Charles 2016, 105.
The Matrix Framework—shown in figure 1—is centered around the major “dimensions” and “components” identified by Kirchherr and Charles in their survey of the scholarly literature on the impacts of dam construction (Kirchherr and Charles 2016, 104-106). Components are defined as the variables to consider when assessing dams’ impacts. Components are organized into three major categories: infrastructure, livelihood, and community—though some impacts may overlap multiple categories. Since impacts may vary widely on a case-by-case basis and depending on the researcher’s scale of focus, any number of impacts could conceivably be listed as components under the three categories, not only the few shown in Figure 1. Impacts identified by previous frameworks, such as the eight impoverishment risks derived from Michael Cernea’s (1997) widely-cited Impoverishment Risks and Reconstruction Model—landlessness, joblessness, homelessness, marginalization, increased morbidity and mortality, food insecurity, loss of communal property, and social disarticulation—or the Integrative Dam Assessment Model’s (2009) 21 different impacts—7 socio-economic, 7 geopolitical, and 7 bio-physical—could easily be envisioned as components under the Matrix Framework (Cernea 1997, 1572-1575; Brown, et al. 2009; Tullos, Tilt, & Liermann 2008). The flexibility afforded by the Matrix Framework means that the major components can be locally-defined based on the issues that are most relevant to a given case-study.

Dimensions—space, time, and value—are defined under the Matrix Framework as the various contexts in which the components operate. The space dimension is used to account for the fact that dams can generate profound impacts outside of the immediate resettlement area, both upstream and downstream of the dam as well as at the national and global scales. The time dimension helps to remind the researcher that these impacts, including displacement, can occur at all phases of a dam’s lifetime, drawing clear inspiration from Scudder and Colson’s (1982)
Four Stage Framework (Scudder & Colson 1982; Scudder 2012, 39-42). Existing studies of the social impacts of dams have all too often adopted a narrow temporal perspective, focusing primarily on impacts that occur immediately following a dam’s construction (Kirchherr and Charles 2016, 103). The Matrix Framework’s flexibility allows for expanding the timescale of studies into the future, to include dams’ longitudinal impacts. Finally, the inclusion of the value dimension acknowledges that dams’ impacts may be positive or negative.

3.2 Impacts of the Nibutani Dam

The impacts of the Nibutani Dam, organized according to the Matrix Framework, are summarized in Figure 2. In the following sections, these impacts are explained in detail.

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Livelihood</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generates 3,000 kWh of energy (enough to power 1,000 homes).</td>
<td>Displaced approximately 50 households.</td>
<td>Destroyed at least 23 places with Ainu names, including 2 archaeological sites and 3 religious sites that were still in use.</td>
</tr>
<tr>
<td>Provides municipal water to nearby towns of Biratori and Monbetsu.</td>
<td>Those who resisted were heavily taxed.</td>
<td>Destruction of wild plants and fisheries harmed Ainu traditional practices and cultural revitalization efforts.</td>
</tr>
<tr>
<td>Causes severe sediment buildup and riverbed degradation; getting worse over time.</td>
<td>Submerged 530 ha, including 200 ha of farmland.</td>
<td>Individual negotiation tactic undermined communal solidarity and sowed division within Ainu community.</td>
</tr>
<tr>
<td>Capacity for flood-control is questionable at best.</td>
<td>This amounted to 37 of the village’s 51 farms and a third of its livelihood zone.</td>
<td></td>
</tr>
<tr>
<td>1975 EIA estimated maximum lifespan of dam at 20-30 years.</td>
<td>Submerged natural areas used for wild plant gathering.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harmed salmon fisheries; likely other fish as well.</td>
<td></td>
</tr>
</tbody>
</table>

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18 This framework held that the displacement and resettlement process consists of four primary stages: planning and recruitment; adjusting and coping; community formation and economic development; handing over and incorporation.
3.2.1 Infrastructure Impacts

The impacts of the Nibutani Dam on the local infrastructure have been both positive and negative. The dam’s hydroelectric power station has an energy potential of up to 3,000 kilowatts, or enough to provide power to around 1,000 homes (Levin 1999, 409-410). Additionally, the Nibutani Dam provides municipal water to the nearby towns of Biratori and Monbetsu. However, significant problems have been caused by the buildup of sediment upstream of the dam, as predicted by the 1975 impact assessment (Maruyama 2012, 75). This assessment had warned that sediment buildup would render the Nibutani Dam completely unusable within 20 to 30 years (Maruyama 2012, 75). At a rate of one million cubic meters per year, this buildup of sediment at the dam site has caused severe degradation to the riverbed and altered the riverbed’s elevation (Shimada, et al. 2006 1-9). This problem is especially acute after periods of heavy rains, which trigger frequent landslides on the area’s deforested mountain slopes (Maruyama 2013, 76; Murakami, et al. 2008, 32-37; cf. Mouri et al. 2016, 298; cf. Aipassa 1991, 406; cf. Ahn, et al. 2006, 330). In August 2003, Typhoon Etau’s record-breaking rainfall triggered thousands of shallow landslides throughout the Saru and Nukabira River basins, which dumped 2.4 million cubic meters of sediment into the Nibutani Dam’s reservoir, at a rate of 6,000 cubic meters per second (Shimada, et al. 2006, 1-9; Murakami, et al. 2008, 30). As a result, the reservoir is filling with sediment at a rate much faster than that which was estimated by the 1975 impact assessment. According to a 2009 article in the Hokkaido Shinbun which cited data from the Hokkaido Development Bureau, 41.1% of the reservoir’s volume had already been filled by sediment—more than twenty times the amount estimated by the 1975 impact assessment (Maruyama 2012, 75). Furthermore, the dam’s downstream location makes its capacity for flood control questionable at best, according to the 1975 environmental impact assessment—a fact the
Ainu plaintiffs of the Nibutani Dam case were quick to point out (see Chapter 1) (Maruyama 2012, 7-754; Levin 1999, 406-409).

3.2.2 Livelihood Impacts

The Nibutani Dam had a significant negative livelihood impact on local residents. Its reservoir submerged an estimated 530 hectares of land, a full third of the village’s livelihood zone (Levin 1999, 410; Maruyama 2012, 71). This included 200 hectares of agricultural land, or 37 of the 51 farms in the area, which had been used by the Nibutani Ainu community for more than four centuries. In addition, the findings of the impact assessments examined by the Sapporo District Court during the Nibutani Dam case estimated that approximately fifty households would be displaced (Levin 1999, 40). The land submerged by the Nibutani Dam included several plots which had been officially allotted to Ainu residents under the 1899 Hokkaido Former Natives Protection Act (see Chapter 5), and represented one of the few areas where Ainu maintained ownership of allotted lands in after the post-war land reforms (Nakamura 2008, 432-433; Nakamura 2013, 29; Maruyama 2014, 160). However, by the time the expropriation negotiations with individual landholders living in the proposed dam site began, much of this agricultural land fell under the purview of the national fallow policy, thus preventing local Ainu from farming it (Maruyama 2012, 65-66). As a result, many landholders who had borrowed money from the local agricultural cooperative and fallen into crushing debt, and were therefore eager to sell off their land to the Expropriation Committee in order to offset this debt. Cash compensation standards for the Nibutani Dam were determined through negotiations with individual landholders, as is the common practice in Japan. Although there is a lack of information about specific compensation amounts, Creighton (1995; 2003) has characterized the amounts as “large,” which made settlement an enticing prospect for many residents (Creighton
1995, 94; Creighton 2003, 131). Nevertheless, Creighton notes that none of the Ainu she interviewed “actually said they supported the dam” (Creighton 1995, 84).

Some Ainu landholders, including Kayano Shigeru and Kaizawa Tadashi, attempted to resist the dam by filing a lawsuit, but the government exerted considerable economic pressure in order to coerce them into “voluntarily” selling their land. Once compensation amounts had been determined, it was decided that the funding allocated to compensate landholders who refused to sell their land would be held in a government account until all disputes had been settled, for a maximum of ten years, at which point the money would become forfeit (Creighton 2003, 131). Furthermore, after three years the money would not be considered compensation at all but would instead be treated as income; landholders would therefore be subjected to “huge amounts” of tax if the dispute took longer than three years to settle (Creighton 2003, 131). These burdensome regulations meant that it was “too difficult and too expensive” for most landholders to resist the dam: one resident interviewed by Creighton described it as “kind of a scare tactic, if you don’t want to pay this huge tax on the land, then you feel you must sell” (Creighton 1995, 85; Creighton 2003, 131).

These policies had the effect of profoundly pressuring Ainu landholders to accept the expropriation of their land, and by 1994 only Kayano and Kaizawa’s son, Koichi, remained involved in the lawsuit. (Creighton 2003, 131). Most of the displaced landholders held the view that “no matter what they did, the government would build the dam, so they should fight for the best compensation they could get rather than just refuse the dam.” (Creighton 2003, 131). From a pragmatic perspective, they may have been correct to do so: the plaintiffs who continued to resist were subjected to further measures of economic coercion in order to silence their campaign against the Nibutani Dam. For example, although Kaizawa Koichi still refused to accept payment
for his land more than three years after the start of the dispute, the government levied a tax on the money and even withheld his previous year’s tax refund “because of his refusal to pay the income taxes on the payment he still refuses to accept” (Creighton 1995, 86). It is not known whether this dispute was ever resolved, though it seems reasonable to hope that this burdensome and unjust tax was commuted in 1997 when the dam was ruled illegal by the Sapporo Court. Creighton argues that these convoluted policies such as these were “reminiscent of historical government dealings with Ainu in which they had no voice as their land was taken from them,” a fact that will be discussed in greater detail in Chapter 5 (Creighton 1995, 85).

According to Maruyama (2012), “no one was required to be relocated due to the Nibutani Dam Project,” but it is unclear what exactly this means in light of the facts presented above (Maruyama 2012, 65-66). Given that a significant number of houses and agricultural fields were surely submerged by the dam, it is possible to read this statement as “the government did not feel obliged to relocate anyone.” There is no indication that any funding for livelihood reconstruction was allocated to the Nibutani Dam project under the Act on Special Measures for Reservoir Area Development (ASMRAD), even though the number of households expected to be impacted by the dam was greater than the 20 households required for ASMRAD funds to be allocated. In other words, no additional livelihood reconstruction measures, beyond simple cash compensation for the value of the land, were taken on behalf of displaced residents, though such measures were arguably more than warranted in this case. Whether or not the internally-displaced persons (IDPs) from Nibutani were “required to be resettled”, the fifty households living within the reservoir zone must be considered to have been involuntarily displaced, since the choice to remain in place was not provided (cf. Muggah 2003, 10). At the very least, it is clear that these households were economically and environmentally displaced by the Nibutani Dam, whether or
It is unknown how these IDPs are now faring financially, or where they now reside. It is possible that many of these residents still reside in the Nibutani area. On the other hand, it is also possible that displacement by the Nibutani Dam exacerbated depopulation from Hidaka sub-prefecture, which has been gradually occurring over the past few decades. From 1979 to 2006, the Ainu population in Hidaka sub-prefecture decreased by more than 4,000 people (Nakamura 2011, 34). Similarly, the general population of Biratori township has also declined by more than 1,000 people since 1995 (City Population 2017). Like many other rural areas in Japan, rural depopulation in the Saru River region has been linked to a lack of job opportunities for young people, who have increasingly moved to urban centers in search of work (Nakamura 2015b, 172). Thus, it seems likely that at least some of the landholders who were economically displaced by the Nibutani Dam may have left the community in search of job opportunities outside of the local agricultural sector. Further ethnographic and survey research is needed in order to locate the Nibutani IDPs and assess the long-term success of their livelihood reconstruction since displacement. Knowledge of their current situation would undoubtedly provide valuable lessons which could be applied to improve compensation and livelihood reconstruction measures in future projects, including the Biratori Dam.

In addition to residences and agricultural land, the Nibutani dam also submerged natural areas that provided important resources for Ainu subsistence. Contemporary Ainu in Hidaka sub-prefecture continue their ancestors’ practice of gathering wild plants and mushrooms such as shiitake and a variety of wild onion known as pukusa in the Ainu language (Allium ochotense), which are staple ingredients in Ainu cooking (Iwasaki-Goodman 2013, 226-231; Levin 1999,
Due to the loss of land for gathering these essential plants, the livelihoods of local Ainu residents are adversely affected as they must now travel further and spend more money to acquire them. Iwasaki-Goodman (2013) notes that the use of gathered plant ingredients is one of the practices that distinguishes contemporary Ainu foodways from those of the Japanese majority, so in addition to the immediate livelihood impact, the loss of wild plants also threatens the transmission of the Ainu’s indigenous ecological knowledge (Iwasaki-Goodman 2013, 226).

In addition to edible plants, other plant resources that were submerged by the Nibutani Dam include cattails, reeds, and the Manchurian elm (*Ulmus laciniata*), which are used in Ainu handicrafts and are “essential for the succession of Ainu culture for future generations” (Maruyama 2013, 77).

The Nibutani Dam also had an adverse impact on the Saru River’s fisheries. Prior to Japanese colonization, Ainu communities living along the Saru River were sustained by abundant salmon and trout fisheries (Walker 2001, 81; Levin 1999, 411). Salmon in particular were of unparalleled importance for surviving the winter since they could be easily preserved, and the importance of salmon in the Ainu diet is emphasized in the Ainu word for salmon, *kamuy cep* (A: divine fish) (Walker 2001, 81; Irish 2009, 31). Like Ainu throughout Hokkaido, Ainu in Nibutani were driven to impoverishment by Japanese overfishing, pollution generated by industrialization, and state policies which made fishing illegal for Ainu (see Chapter 5). Plaintiff Kayano’s father was even arrested for “poaching” salmon in 1932, since “the salmon he caught every night to feed us brothers, the old women in the neighborhood, and the gods, were off-limits at the time” (Kayano 1994, 57). In the early 1930s, although “such great numbers of salmon no longer came up river…there were more than enough for us to eat every day,” recalled Kayano (Kayano 1994, 18). By the time of the Nibutani Dam’s construction, the numbers salmon
migrating up the Saru River to the Nibutani area were already low due to continued overfishing and pollution in the post-war era. Plaintiffs Kaizawa and Kayano themselves had actively lobbied for the conservation of the Saru River’s fisheries based on their importance to Ainu livelihoods (Levin 1999, 415-416). Since the Saru River salmon run was already near to failure, however, the 1982 impact assessment concluded that the Nibutani Dam would not pose a significant risk to fish populations, even though this finding contradicted that of the previous 1975 assessment, which had predicted that increased river sedimentation would damage fish numbers (Maruyama 2013, 77).

Twenty years after the Nibutani Dam’s completion, its negative impact on fisheries is undeniable. Local residents have observed that the river upstream of the dam became “muddy and poor in both variety and population of fish” after the completion of the dam, “and that sludge damaged fisheries at the mouth of the Saru River [downstream of the dam] as predicted” in the 1975 impact assessment (Maruyama 2013, 77). The upstream migration of masu salmon (*Onchorhyncus masou*) is now virtually non-existent (Kawashima 2004, 41, Maruyama 2016, 101). Although the Nibutani Dam included a fish ladder designed to help migrating fish, researchers have concluded that there are almost no masu salmon fry in the Nibutani reservoir, and that only a few masu salmon swim upstream each year (Maruyama 2016, 101). Furthermore, the majority of salmon smolt that were experimentally released into the Nibutani reservoir were unable to pass downstream through the dam’s fish ladder (Maruyama 2016, 101). Although researchers have confirmed the existence of masu salmon spawning grounds in the Nukabira River and other upstream tributaries of the Saru River, only 28 mature masu salmon were found in the Nukabira River in 2004 (Maruyama 2016, 101). Thus, the Nibutani Dam has clearly had an observable negative impact on Saru River fisheries.
As a result, local Ainu are still unable to return to fishing salmon as previous generations did, depriving them of an important food source and cultural resource. Furthermore, a reduction in salmon numbers will likely have a cascading affect, harming other animal species that rely on them such as the brown bear (*Ursus arctos*) and Blakiston’s fish owl (*Bubo blakistoni*), both of which are also highly significant to Ainu culture (Nakamura and Komiyama 2009, 145; Lewallen 2016d; Irish 2009, 32-34). Since research has shown that other Hokkaido dams have had a negative impact on other fish species, it is possible that these species were negatively impacted by the Nibutani Dam as well (Morita and Yamamoto 2002; Morita, et al. 2000; Fukushima, et al. 2007). It is also possible that invasive species have proliferated upstream of the Nibutani Dam, as previous studies have shown this to be the case for other Hokkaido dams (Han, et al. 2009; Morita and Yamamoto 2002). Further research is needed to fully evaluate the magnitude of the Nibutani Dam’s negative impact on fish, as well as how the local Ainu in Nibutani are coping with the Saru River’s dwindling fisheries.

3.2.3 Community Impacts

The Nibutani area is highly significant to Ainu culture, being the only municipality in Japan in which Ainu make up the majority of the population. Nibutani is noteworthy for being the home of the legendary Okikurmi, an Ainu deity and culture hero who, according to the *yukar* (A: sacred oral narratives), taught the Ainu how to build houses, raise crops, and fish for salmon (Kayano 1994, 7). As a result of this cultural heritage, many of the best tellers of *yukar* have come from the Nibutani area, whose knowledge of the Ainu language attracted the attention of Japanese scholars in the years following WWII (Levin 1999, 412; 424). In a 1995 statement to the court in the Nibutani Dam case, plaintiff’s expert and noted professor from Osaka’s National
Museum of Ethnology, Ohtsuka Kazuyoshi, summarized the cultural significance of Nibutani thusly:

It is no exaggeration to say that Nibutani is the birthplace of Ainu studies…The Nibutani Resource Centre for Ainu Culture, which was established by Kaizawa Tadashi and Kayano Shigeru for the first time in Ainu history, played a significant role in leading the revitalization of Ainu culture. In the 1980s and 90s, Nibutani was also a place for cultural exchange between the Ainu and other peoples in Japan and the world. Nibutani hosted the World Council of Indigenous Peoples in 1989 and the Nibutani Forum in 1993, led by Kaizawa Koichi… The Saru River and its surroundings such as topography, air and wind have nurtured rich oral epics” (Maruyama 2016, 95).

Prior to the Meiji era, the area of Nibutani comprised a single river-based chiefdom (A: pet iwor; J: ioru), the basic unit of the Ainu communal property system (Levin 1999, 4111; Heinrich 2012, 140). In his statement, Dr. Ohtsuka testified that within the Nibutani pet iwor, the “Ainu [still] take salmon from the river, they [still] make food and other traditional things there. They [still] get medicines from the area, and know the trees,” and warned that “[w]hen the dam is finished this will all stop. The trees will be cut down, the water levels will change…The Ainu struggle to maintain their identity is focused around Nibutani, and this will suffer” (Creighton 2003, 131).

According to Plaintiff Kaizawa Koichi, “every corner of the ground” of the Nibutani pet iwor is imbued with “its own significance to us from generation to generation. Even a small stream and the spring-water are no exception” (Maruyama 2012, 71). Consequently, many landscape features in the Nibutani pet iwor possess Ainu-language place names which denote their cultural significance and serve to transmit Ainu cultural knowledge across generations. Some of these places are known as chinomishir (A: “places where we worship”), and hold special significance as locations for private spiritual practices as “holy places where they can place their souls at rest” (Levin 1999, 413). At least 23 places with Ainu names were predicted to be destroyed by the Nibutani Dam, including two chinomishir: Pere-ure-pukka Chinomishir and
The village is also the location of the *cipsanke* (A: boat-launching festival), an important annual religious festival which takes place in dugout canoes (*cip*) on the Saru River (Levin 1999, 412). At the time of the trial, it was predicted that the Nibutani Dam would render the original *cipsanke* launch site unusable (Levin 1999, 412; 428; Siddle 2002, 410; Maruyama 2013, 77).

Nibutani also boasts several noteworthy archaeological sites, including the remains of hillside fortifications, *casi* (A: palisades) that were likely built in the 17th and 18th centuries in response to increasing competition over trade resources demanded by the Japanese (Levin 1999, 412; Walker 2001, 123). *Casi* throughout Hokkaido have yielded valuable archaeological artefacts such as Japanese lacquerware, porcelain, ironware, swords, and colored beads, and at least two such sites were predicted to be at least partially submerged by the Nibutani Dam: *Yuoy Casi* and *Poromoy Casi* at the time of the litigation (Walker 2001, 123; Levin 1999, 412-413).

The court noted in particular that *Poromoy Casi*, an “important archaeological site for understanding the history of the Ainu people,” would be “completely destroyed” by the dam (Levin 1999, 412-413).

English-language sources that mention the dam’s impact on archeological and cultural sites invariably cite the Sapporo Court’s ruling as the source of their information. However, since the ruling was issued before the Nibutani reservoir was filled, the impact to these sites was merely predicted in the ruling, not confirmed. Through the geospatial analysis, I confirmed that *Pere-ure-pukka Chinomishir* and *Kankanrerekehe Chinomishir* were indeed submerged by the Nibutani reservoir (Ioannides 2017). Similarly, I confirmed that the original launch site of the

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19 The exact locations of these two *chinomishir* were not publicly known until their disclosure was necessitated by the legal proceedings of the Nibutani Dam case, since these locations were historically kept secret to prevent them from “being violated, harmed, or altered,” (Levin 1999, 413).
cipsanke was submerged, as were both Poromoy Casi and Yuoy Casi. Given that these predicted findings were able to be confirmed through geospatial analysis, it seems likely that the other 19 named sites identified in the ruling were also ultimately submerged. For the Ainu, a people without a written language, the destruction of these sites represents a loss of “precious irreplaceable resources in the quest for understanding Ainu ethnic culture” (Levin 1999, 425-426). Their locations within the Nibutani reservoir are depicted in Figure 3.

**Figure 3. Map of Cultural Sites Destroyed by the Nibutani Dam**

In addition to destroying these cultural and archaeological sites, the Nibutani Dam caused the destruction of a large area used for wild plant gathering and caused additional harm to the already vulnerable Saru River salmon fishery, making it impossible for local Ainu to continue these important cultural practices in the Nibutani area. Given the importance of these practices to

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20 Reproduced from Ioannides (2017).
the cultural heritage of Nibutani Ainu, who have actively sought to revitalize these practices as a means of engaging with their Ainu identities in the post-war period, it is clear that this loss constitutes a significant cultural impact in addition to its nature as a livelihood impact discussed above.

The Nibutani Dam also created division within the Nibutani Ainu community and disrupted its social cohesion. Creighton notes that the “Ainu did not all react to the Nibutani Dam with a uniform voice,” and disagreement over whether or not to oppose the dam strained within the community relationships (Creighton 1995, 84). Ultimately, this had the effect of dividing the impacted households into two groups, based primarily on whether or not they were indebted, a result that was predicted in the 1975 impact assessment (Maruyama 2013, 76-77). Plaintiff Kayano wrote that, although “[n]o one here is happy about” the dam, “others stopped complaining when they were offered large sums of money as compensation” (Creighton 2003, 132). Plaintiffs Kaizawa and Kayano, who were relatively well-off compared to the rest of Nibutani’s landholders, were conscious of the fact that their financial situation enabled them to resist the dam when few others could afford to, and therefore decided not to express their resistance to the dam until after many landholders had already completed the expropriation procedure, a move which in hindsight may have exacerbated existing class tensions within the community and hindered efforts to present a unified front against the dam (Maruyama 2012, 65-66). Some landholders, who were eager to collect cash compensation for their land, “resented the attitude of wealthy and successful Ainu” like the plaintiffs, including one local resident who argued that “those of us struggling to make ends meet do not have time for such fooling around” as the cipsanke (Siddle 2002, 410). In a small community like Nibutani “where most people know everyone else,” disagreements like this one can permanently damage relationships and
have a lasting impact on both individual and communal psychosocial wellbeing (Nakamura 2015b, 175). The full extent of the damage to Nibutani’s communal solidarity caused by this disagreement is not known, however, and further research is necessary to determine how Nibutani IDPs are coping with internal disagreements in the years since the dam’s completion.

3.3 The Biratori Cultural Impact Assessment (CIA)

The Nibutani Dam was only the first of two dams planned under the Saru River Development Project. The other proposed dam, the Biratori Dam, remains incomplete as of this writing. After the Sapporo Court’s landmark ruling in the Nibutani Dam case and the passage of the Amended River Law in 1997, the Japanese government became legally obligated to involve the participation of local residents in development projects (Iwasaki-Goodman and Kaizawa 2004, 1; Kaizawa 2005, 138). As a result of this new requirement, the Board of the Saru River Basin (hereafter, the Board) began a review of the plan for the Biratori Dam in 1999 (Iwasaki-Goodman and Kaizawa 2004, 1). The Board’s review process involved nine closed meetings held between 1999 and 2002 as well as a few hearings that were open to the public (Iwasaki-Goodman and Kaizawa 2004, 1). The thirteen members of the Board were appointed by the Hokkaido Development Bureau, and included local mayors, the executive of the Hidaka fisherman’s cooperative, and experts in river engineering (Maruyama 2013, 78). Maruyama (2013) notes that Board-members were primarily chosen “from persons of learning and experience…who share the interests of the authorities through the construction of dam projects,” and as a result, most of the discussions in the initial phase of the review focused on technical aspects like flood control (Maruyama 2013, 78). Only one of the Board’s thirteen members was Ainu, and out of the nine meetings held by the Board, Ainu issues were mentioned only briefly at the sixth and seventh meetings (Maruyama 2013, 78). Nakamura (2008; 2013) argues that the
Board’s actions during this review shows that the participation of local Ainu was viewed as a “must-do action” by the government, who “did not seem eager to listen to Ainu voices at the initial stage” (Nakamura 2008, 434).

In April of 2002, the Board issued its final decision to proceed with the implementation of the Biratori Dam, and construction was set to begin in 2006 (Iwasaki-Goodman and Kaizawa 2004; Maruyama 2013, 77). However, the Biratori Culture Department put pressure on the Muroran branch of the Hokkaido Development Bureau to conduct a more detailed investigation into the Biratori Dam’s potential impacts on Ainu culture, arguing that “additional site investigation and research was necessary to determine realistic measures for protecting sacred sites…and to minimise the impact on plant and animal habitations” (Nakamura 2013, 31). As a result, the Biratori Cultural Impact Assessment (CIA) was initiated in May of 2003. Most of the information about the predicted impacts of the Biratori Dam comes from the Biratori CIA. This project was notable as being the first instance in Japan in which research into a development project was “planned and conducted with the full participation of the community,” as well as the first case in which an indigenous culture was considered (Kaizawa 2005, 139; Nakamura 2008, 428; Iwasaki-Goodman and Kaizawa 2004, 3-4). According Yoshihara Hideki, leader of the Ainu Culture Preservation Research Office (ACPRO; hereafter, the research office); the Biratori CIA represented the realization of “the state’s responsibility to cooperate with Indigenous peoples in water development projects” under the UN Declaration on the Rights of Indigenous Peoples (Nakamura 2013, 34). However, as we shall see, the extent to which the state has lived up to this promise is questionable, given that it remains unclear how the CIA will influence the project’s ultimate outcome (Nakamura 2008).
The first phase of the Biratori CIA was conducted from 2003 to 2005, culminating in the publication of the Final Report (Ainu bunka kankyō hozun taisaku chōsa iinkai) in 2006 (Nakamura 2008, 435-436; Iwasaki-Goodman and Kaizawa 2004, 3). Field investigations were carried out by the research office, while another group, called the research committee, led the project and held final decision-making authority (Maruyama 2016, 99). While the research committee’s membership did include a few local Ainu leaders, the majority of its members were Wajin government officials and experts in fields such as law, engineering, and anthropology (Iwasaki-Goodman and Kaizawa 2004, 3). The research office, meanwhile, was staffed exclusively by local residents of whom a majority are Ainu (Nakamura 2008, 435; Maruyama 2016, 99). Nibutani Plaintiff Kaizawa Koichi was one of the members of the research office (Kaizawa 2005, 139). Between 2003 and 2005, the research office carried out field surveys and interviews, conducted archival research, and developed simulations designed to model the predicted impacts of the Biratori Dam (Iwasaki-Goodman and Kaizawa 2004, 3; Nakamura 2008, 435; Nakamura 2013, 31).

Local residents were hired by the research office as full-time and part-time employees for the three-year duration of the CIA and, through their involvement with the project, developed research skills and technical expertise they might not otherwise have acquired (Nakamura 2008, 440; Kaizawa 2005, 139). Because of this, the Biratori CIA can be said to have been successful in “effectively involving Indigenous people in its process,” though Nakamura cautions that “[i]t is not enough for local residents to be heard; local knowledge should be taken seriously in the decision as to whether or how projects will proceed,” and that the project’s effectiveness should be “analysed in terms of outcomes” (Nakamura 2008, 428). In practice, discussions tended to be dominated by non-Ainu academics who sometimes criticized the “unprofessional” methods
employed by the research office, and local Ainu residents without academic backgrounds found it difficult to participate (Nakamura 2008, 438-439). Furthermore, the Biratori Dam’s construction had already been confirmed by the Board in 2002, and the CIA was never intended to alter this ultimate outcome (Nakamura 2008; 440; Maruyama 2013, 77). In this way, according to Nakamura, the first phase of the Biratori CIA “demonstrated the uncertainty Indigenous members have in keeping power over decision-making” in development projects (Nakamura 2013, 27).

While the official position remains that the Biratori Dam will be completed, its construction has been suspended since 2007 until consensus can be reached between the government and local residents over adequate mitigation and compensation measures (Maruyama 2013, 77; Nakamura 2008, 440-441; Nakamura 2013, 34). Meanwhile, the CIA continued into its second phase with funding from the Hokkaido Development Bureau until fiscal year 2011, though according to Kaizawa Koichi this phase of the project was limited to recording Ainu place-names and transplanting important plants to areas outside the predicted reservoir zone (Nakamura 2013, 34; Maruyama 2016, 102). Nevertheless, recent developments at the national level may cast doubt on the future of the Biratori Dam. In 2009 the national Ministry of Land Infrastructure and Transport began a review of 89 dam projects throughout Japan, including the Biratori Dam, and in a suggestive move cut funding for the Biratori Dam’s construction in 2010 (Nakamura 2013, 34). Although officially the Biratori Dam is still planned to open, its future now seems more uncertain than ever.
3.4 Predicted Impacts of the Biratori Dam

The predicted impacts of the Biratori Dam, organized according to the Matrix Framework, are summarized in Figure 4. In the following sections, these impacts are explained in detail.

![Figure 4. Predicted Impacts of the Biratori Dam](image)

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Livelihood</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>• River sedimentation is a major concern.</td>
<td>• Will economically-displace at least 39 individuals who use the area for subsistence.</td>
<td>• Will destroy at least 14 places with Ainu names, including important religious sites that are still in use.</td>
</tr>
<tr>
<td>• Maximum lifespan of dam estimated at 30 years.</td>
<td>• Since none of them hold formal property rights, compensation is expected to be minimal.</td>
<td>• Will destroy at least 7 archaeological sites, but likely many more.</td>
</tr>
<tr>
<td>• Will harm 59 tree species and 69 other plant species, with implications for water quality.</td>
<td>• Fish and wildlife expected to be negatively impact.</td>
<td>• Loss of area for subsistence will harm transmission of residents’ indigenous knowledge.</td>
</tr>
<tr>
<td></td>
<td>• Conflicts with local government’s sustainable development initiative to preserve natural areas for Ainu use.</td>
<td>• Loss of cultural sites will harm residents’ mental and emotional well-being.</td>
</tr>
</tbody>
</table>

3.4.1 Infrastructure Impacts

Just as in the case of the Nibutani Dam, river sedimentation is a major concern associated with the Biratori Dam. The Nukabira River, like its distributary the Saru, is well known by local residents to have a naturally high sediment load, and the buildup of this sediment behind the dam is expected to make it unusable after thirty years (Maruyama 2013, 78). Because the Biratori Dam’s construction site is not near a village like the Nibutani Dam was, its impact on the built environment is likely to be minimal. However, the Biratori Dam is expected to have an adverse impact on the local ecosystem. Significant damage to local plant species is expected even at the lowest water level in the planned reservoir, including 59 tree species and 69 other species that are still used by local Ainu for food, medicine, and daily commodities (Nakamura 2008, 437-69).
The loss of these plants is expected to have a negative impact on the Nukabira River’s water quality (Maruyama 2016, 100). Animal species, such as bear, deer, sables, squirrels, foxes, hawks, owls, and falcons are also predicted to be negatively impacted by the Biratori Dam due to habitat loss (Maruyama 2016, 100-101; Nakamura 2008; Iwasaki-Goodman and Kaizawa 2004, 6-7). Although fish are predicted to be minimally impacted since their numbers had already been critically damaged by decades of overfishing and by the construction of the Nibutani Dam, the dam makes the restoration of these populations all the more difficult to achieve (Nakamura 2008, 437-438).

3.4.2 Livelihood Impacts

The environmental damage predicted to accompany the Biratori Dam has direct consequences for local residents’ livelihoods. The dam’s construction site is located in an area known to local Ainu as Shukushupetsu, an important “treasure forest” and pet iwor rich in natural resources regularly utilized by local Ainu (Kaizawa 2005, 137-138). At least 39 Ainu individuals continue to use the area planned to be submerged by the Biratori Dam for hunting, fishing, and plant gathering, and the area is also important for pedagogical purposes, since children are commonly taken there to learn Ainu cultural knowledge and livelihood skills there (Maruyama 2016, 100; Nakamura 2008, 436). Unfortunately, much of the damage to Shukushupetsu has already been done, as the land was cleared in the 1990s to make way for the dam’s construction (Kaizawa 2005-137-138).

In recent years, this area has been targeted by the local government of Biratori under the Ioru Plan, a sustainable development initiative designed to preserve natural areas for Ainu livelihood and cultural activities (Iwasaki-Goodman and Kaizawa 2004, 2)."21 The dam’s

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21 The Ioru Plan’s name is a reference to pet iwor, the Ainu’s traditional livelihood zone.
construction will make it impossible for the environment of Shukusupetsu to be revived and used to promote Ainu livelihood and cultural activities under the Ioro Plan. The loss of this crucial livelihood area poses a threat to the economic and environmental security of local Ainu (Maruyama 2016, 102-103). Since none of the Ainu who regularly use Shukushupetsu were identified as holding formal property rights to the area, any cash compensation received for this loss is likely to be minimal.

3.4.3 Community Impacts

Like the Nibutani Dam before it, the Biratori Dam is predicted to have a significant negative impact on local Ainu culture. Culturally-important livelihood activities like hunting, fishing, and gathering will be impossible to continue in the planned site, and it is unlikely that many of the local Ainu will continue these activities elsewhere (Nakamura 2008, 440). As a result, future generations of Ainu children will no longer be able to learn cultural skills that rely on a pristine environment as their classroom. Irreplaceable sites will also be destroyed by the dam. In general, the planned area of the Biratori Dam holds special religious significance thanks to the views it affords of the sacred Mount Poroshiri 30 kilometers away (Nakamura 2013, 32). The Biratori CIA identified more than 200 Ainu place names in the Nukabira River Catchment Area, including 14 that will be submerged by the dam (Maruyama 2016, 99-100). Three chinomishir are among those places that will be destroyed, as are a sacred spring, the site of an ancestor veneration ceremony (A: shinurappa), and the site of another important religious ceremony (A: kamuinomi) (Maruyama 2016, 100).

The Biratori CIA also revealed 47 archaeological sites in the Nukabira River Catchment Area, including at least 7 in the planned dam site (Maruyama 2016, 99-100). Additionally, the planned site is also known as a source of the metamorphic rock greenschist, which was widely
used in Japan during the Neolithic Period (Maruyama 2015, 99-100). Multiple observers have opined that more archaeological sites probably exist in the planned site than those that were recorded by the CIA (Maruyama 2016, 99-100; Kaizawa 2005, 137-138). The loss of these important cultural sites is anticipated to have a negative impact on the mental health of local Ainu. According to Nakamura, the destruction “of both tangible and intangible elements” of Ainu culture in this way will “physically and emotionally” harm local Ainu by striking a significant blow to their “pride and dignity” (Nakamura 2008, 437-438). Beyond its impact on the Ainu themselves, this irreplaceable loss would be deleterious to the knowledge and cultural heritage of all of humanity.

3.5 Conclusion

This chapter presented a comprehensive and holistic account of the Saru River Development Project’s impacts—including both the known impacts of the Nibutani Dam and the predicted impacts of the Biratori Dam—using the recently-published Matrix Framework as an organizational basis. While the Nibutani Dam provided modest benefits to local residents, its impacts on infrastructure, livelihood, and community have been overwhelmingly negative. According to information collected through the Biratori CIA, the project’s second dam is predicted to have a similarly severe impact. The Biratori CIA indicated that gaining a better understanding of the Nibutani Dam’s impacts is critically important for predicting and mitigating the impacts of the proposed Biratori Dam (Iwasaki-Goodman and Kaizawa 2004, 7-8). It is hoped that the data presented in this chapter might help in the realization of this goal and contribute to better outcomes for local Ainu, by being organized in such a way as to allow these findings to be integrated within the wider collected knowledge on development-induced displacement and resettlement.
However, to be true to the spirit Kirchherr’s and Charles’s call for an expanded temporal scope in DIDR studies, it is inadequate to limit one’s focus to the immediate after-effects of the Saru River Development Project itself. The roots of the Saru River Development Project originate in the history of Japan’s colonial invasion of Hokkaido. The social and environmental changes that occurred over the centuries of Hokkaido’s colonization together created the material context in which the Saru River Development Project was ultimately brought to fruition. Rather than being beside the point for a contemporary case study of development-induced displacement, an examination of historical facts like these will reveal the ways in which the Saru River Development Project has imbibed, and continues to perpetuate, the legacy of colonial statemaking and subjectmaking in Hokkaido. Such an examination will satisfy the demands of historical political ecology, which calls for researchers to pay close attention to the ways that historical systems of wealth, power, and knowledge production continue to influence social-ecological changes in the present.
Chapter 4: Toward a Theory of Statemaking and Subjectmaking

4.1 Introduction

The history of Japanese colonization of Hokkaido—the northernmost of Japan’s four main islands—remains one of the most controversial chapters in Japanese history. Inhabited for centuries by the indigenous Ainu people, Hokkaido became the site of the Japanese Empire’s first colonial enterprise and found itself at the center of Japan’s rapid transformation into a modern, industrialized nation-state and economic powerhouse. Over the course of the next two chapters, I will examine the history of Japanese colonization in Hokkaido during the Tokugawa (1603-1868), Meiji (1868-1912), Taishō (1912-1926), and early Shōwa (1926-1945) periods, as well as the island’s continued development in the post-WWII era. In this chapter, I develop a theoretical lens that can be used to explain the ways that contemporary development initiatives like the Saru River Development Project build upon the modernizing project of past colonial regimes, resulting in similar economic, political, socio-cultural, and environmental transformations. Then, in Chapter 5, I argue that modernization and development efforts in Hokkaido initiated during its colonization had devastating effects on the environment of Hokkaido and the Ainu people who relied upon it, and that this has in turn shaped the impacts of the Saru River Development Project. The negative social and environmental changes that occurred in Hokkaido prior to WWII created the context in which contemporary development projects like dams are brought to fruition, buoyed by pressing social and environmental needs and compounding the direct impacts of development projects themselves.

Drawing from the work of indigenous and non-indigenous anthropologists, continental philosophers, and substantivist social scientists, I argue in this chapter that colonialism and contemporary development share ideological and material underpinnings that unite them both as
examples of a process called “statemaking.” I further argue that the process of statemaking, which can loosely be defined as the process of establishing and legitimizing centralized government control over a territory, is inextricably linked to a complementary process, called “subjectmaking.” While statemaking is primarily concerned with the administration, management, or control of geographic space, subjectmaking meanwhile is concerned with shaping individuals and societies into “populations” that can be more easily administered, managed, or controlled by the state. Although colonialism and contemporary development each represent distinct facets in the history of the world’s political economy, I argue that they partake of a shared ideology (authoritarian high modernism) and engage in similar processes of statemaking (through capitalist accumulation and radical simplification) and subjectmaking (through interpellation and discipline). A visual summary of this theory of statemaking and subjectmaking is provided in Figure 5.

**Figure 5. Theory of Statemaking and Subjectmaking**

[Diagram of Statemaking and Subjectmaking]

In the following sections, this theory and its component elements are explained in detail.
4.2 Colonization and Development: An Indigenous Perspective

Much of the contemporary discourse about colonialism tends to relegate its structures and practices to the distant past, implying that “colonialism is over, finished business” (Smith 1999, 25). Conversely, some indigenous scholars have been vocal about their resistance to this narrative, such as Linda Tuhiwai Smith (1999), who argued that the legacy of colonialism “still hurts, still destroys and is reforming itself constantly” even in contemporary times (Smith 1999, 20). Regarding Hokkaido in particular, Historian Michele M. Mason (2012) seems to agree with Smith, writing that the island’s “postcolonial condition…is the current manifestation of the complex history” that took shape over the centuries of Japanese administration, both before and after the Second World War (Mason 2012, 183). After expounding upon the theory of statemaking and subjectmaking in this chapter, in Chapter 5 I will explore the ongoing nature of Japanese colonialism in Hokkaido, showing how many of the structures and practices initiated under the colonial regime persist and continue to shape contemporary development initiatives, including the Saru River Development Project. The construction of the Nibutani and Biratori Dams represents only the most recent chapter in the long history of Japanese colonization of Ainu lands, which contributed to their gradual impoverishment and marginalization and caused lasting damage to Hokkaido’s natural ecosystems (Maruyama 2014, 156). Any account wishing to engage with the socio-economic and cultural marginalization caused by the Saru River Development Project must therefore take the full history of Hokkaido’s colonization and its impacts on the Ainu and the natural environment into account.

Conventional narratives about the history of Hokkaido have tended to strongly emphasize a pioneer narrative of benevolent frontier development. Mason writes that, to many Japanese today, the story of Hokkaido is a “story of how a great nation-state called Japan extended the
fruits of its superior civilization—advanced technology and industry, political acumen, and moral fortitude—to the northern hinterland” (Mason 2012, 146). Although documents from the Meiji period unambiguously used the term *takushoku* (J: colonization) to refer to Japan’s activities in Hokkaido, the contemporary development narrative typically uses the euphemism *kaitaku* (J: development or reclamation, literally “opening up”), a seemingly apolitical term which sidesteps thorny political issues like the exploitation of nature and the dispossession of the Ainu (Siddle 1996, 51, Lewallen 2007, 521). More recently, a few noteworthy scholars have argued forcefully for a reinterpretation of the conventional narrative on Hokkaido’s development which more accurately emphasizes its role as a colonial holding of imperialist Japan. Ann B. Irish (2009) notes that “the economy that developed in Hokkaido was most definitely a colonial one,” an economy which Kristen L. Ziomek (2014) argues involved “the reappropriation and distribution of land, the extraction of resources, the influx of Japanese settlers, and attempts at forced acculturation of the Ainu,” (Irish 2009, 141; Ziomek 2014, 497). Historian Richard Siddle (1996) likewise locates the colonization of Hokkaido “within the broader historical contexts of nation- and empire-building that created ‘indigenous’ peoples from the Arctic to the South Pacific” which “racialized and subordinated” the Ainu to the increasingly-populous Japanese majority (Siddle 1996, 3; 8). Hokkaido would be the first of many overseas territories colonized by Japan prior to WWII, followed by Okinawa, Taiwan, Korea, Sakhalin, Manchuria, and much of Southeast Asia and the South Pacific, amounting to an empire roughly four times the size of present-day Japan (Lie 2001, 101).

Although Japan’s surrender in 1945 is typically imagined to herald the end of Japan’s age of imperialism since it was forced to give up most of its other colonial territories, Hokkaido remained under Japanese control and “continued to be administered through quasi-colonial
structures” (Siddle 1996, 8). Anthropologist Ann-Elise Lewallen (2016c) argues that this fact helps to “reify and further instantiate Japan’s claims to Hokkaido and Okinawa as legitimate constituents of the nation,” (Lewallen 2016c, 3). Such claims obscure the legacy of colonialism, which “continues to manifest as mental, emotional, and, increasingly, verbal and physical forms of violence” against Ainu, even today (Lewallen 2016c, 6). In sum, although the contemporary development narrative considers colonialism in Hokkaido to have ended, “settler colonialism inside Japan continues” (Lewallen 2016c, 3).

The legacy of indigenous peoples’ encounter with the colonial enterprises of imperialist regimes effectively “traps” them “in the project of modernity” with which, Smith contends, they still have “unfinished business” (Smith 1999, 35). In the late 20th and 21st centuries, this unfinished business has frequently taken the form of resistance to capital-intensive infrastructure and extractive resource development projects. For indigenous peoples, projects such as these “may translate into the violation of networks of emplacement that make life locally possible—and even to the destruction of place” itself (de la Cadena 2010, 357). Like other indigenous peoples around the world, the lives of Ainu people are “emplaced” within culturally and historically important landscapes that have been drastically altered by colonization and development. Seen in this light, it is hardly surprising that the Nibutani and Biratori Dams have drawn fierce opposition from local Ainu. One need not search long for other examples of indigenous resistance to development projects, which abound all over the globe in locations such as the Andes Mountains of Ecuador, the boreal forests of Scandinavia, and the great plains of South Dakota. Anthropologists such as Arturo Escobar (1995) and June Nash (1981) have called attention to the high stakes for local people impacted by development projects which, propelled through the approval process by promises of economic advancement, modernization, and social
progress, have in many cases resulted in “untold exploitation and oppression,” much like their colonial and imperial predecessors (Escobar 1995, 4; Nash 1981, 240).

Like colonialism, which traps indigenous peoples within the ongoing project of modernity, contemporary development projects represent “the last and failed attempt” to complete the Enlightenment project of modernization throughout the world (Escobar 1995, 221). Thus, my linking of colonialism and development under the framework of statemaking and subjectmaking is intended to serve as my contribution to what Escobar refers to as an “anthropology of modernity,” a growing subfield within anthropology that examines the historical and cultural production of “modern” life (Escobar 1995, 11). More specifically, tracing the continuity between colonialism and contemporary development will provide a new way of thinking about the history of the modern nation-state and the political economy in which it is embedded. Furthermore, this theoretical discussion will provide a new perspective on an important period of Japanese history, while also contributing to a more holistic understanding of the Saru River Development Project’s impacts on the indigenous Ainu people. Thus, rather than simply retelling the conventional narrative of Hokkaido’s history, this study’s unique interpretation of this history under the lens of statemaking and subjectmaking presents research that is both original and empirical.

4.3 Statemaking and Subjectmaking

In order to understand the correlated processes of statemaking and subjectmaking, it is important to clarify what is meant by the term “state.” The concept of the state employed in this discussion has been greatly influenced by the work of Marxist philosopher Louis Althusser (1995). According to Althusser, the state is most accurately defined as a complex entity composed of both the Repressive State Apparatus (RSA) and the Ideological State Apparatuses.
(ISAs) (Althusser 1995, 75). The RSA, consisting of the government, administration, army, police, courts, and prisons, is relatively unitary and functions “in an overwhelmingly preponderant fashion on repression” (Althusser 1995, 75; 85; 92). The ISAs, meanwhile, are multiple and, at the surface level, seem to be connected to the government in only the narrowest sense (Althusser 1995, 92). The ISAs include institutions such as schools, families, religious institutions, political parties, news media, publishers, research centers, and popular culture outlets (Althusser 1995, 75). Unlike the RSA, the ISAs function “in an overwhelmingly preponderant fashion on ideology,” and are necessary for the propagation of the state ideology and the reproduction of the relations of production; in other words, to make both state and subject “go” (Althusser 1995, 86, 137-139). The state ideology realized in the ISAs serves at times to obscure, and at times to legitimize, the exploitation and repression inherent in state power, creating an illusion of normality and making it seem as if nothing remarkable is happening at all (Althusser 1995, 206).

With this conception of the state in mind, this study’s use of the term statemaking is primarily derived from the work of anthropologists and historians of colonial South Asia, including Bernardo Michael (2002) and K. Sivaramakrishnan (1999). Statemaking can be loosely defined as the process of establishing and legitimizing centralized government control over a territory. Bernardo Michael notes that a “crucial dimension of statemaking is manifest in the struggles surrounding the capacity of states and their agents to bind and mark space and territory” (Michael 2002, 5). It is therefore useful to consider statemaking under the rubric of the social production of space, which includes all factors “that result, or seek to result, in the physical creation of the material setting,” including social, economic, ideological, and technological factors (Low 2009, 24).
That the social production of space is a key element of statemaking is supported by the work of Marxist philosopher of space, Henri Lefebvre (1991). Lefebvre argues that the “total subject” of the state acts to maintain its conditions of existence by imposing the “total object” of “absolute political space” onto the world “as reality despite the fact that it is an abstraction” (Lefebvre 1991, 3). For Lefebvre, the state’s central role of imposing absolute political space is necessary for the perpetuation of the capitalist mode of production—a view shared by geographer David Harvey (2005), who pithily argues that “[i]f states had not existed, in short, capitalism would have had to invent them” (Harvey 2005, 80). Thus, the history of the modern state is intricately bound together with the history of capitalism, and the application of state power to the creation of absolute political space has long been a key feature in the process of statemaking. Many landscapes today still bear the scars of these efforts as visual reminders of the state’s production of absolute political space.

Just as space is produced by the social so too does it produce the social. Arturo Escobar notes that the social production of space is inextricably bound to “the production of differences, subjectivities, and social orders” (Escobar 1999, 9). For Sivaramakrishnan, as well, statemaking is “fundamentally about defining the forms and legitimations of government and governmentality [and] simultaneously about the making of civil society” (Sivaramakrishnan 1999, 5). David Scott (2005) argues similarly that a key element of colonialism was its “politicoo-ethical project of producing subjects and governing their conduct” (Scott 2005, 44). Thus, statemaking involves not only the production of absolute political space, but also the production of political subjectivities, or as Sivaramakrishnan puts it, “the social identities of its citizens” (Sivaramakrishnan 1999, 8). Although Sivaramakrishnan includes the production of subjectivities within his definition of statemaking, in this discussion the term “subjectmaking,”
as a complementary process to statemaking, is used in order to avoid confusion and to emphasize the mutual co-production of space and subject.

The processes of statemaking and subjectmaking are always inextricably linked, and frequently blend into one another in practice. Because of this, subjectmaking shares statemaking’s involvement in the social production of space. In British colonial Egypt, for instance, Timothy Mitchell (2002) notes that “power over persons was to be reorganized as a power over space, and persons were merely the units arrayed and enumerated within that space” (Mitchell 2002, 80). David Scott, for his part, argues that “modern” power (and therefore state power, by virtue of the state’s privileged position within the modernist worldview) is distinguished for the fact that its point of application “is not so much the body of the sovereign’s subject…as the conditions in which that body is to live and define its life” (Scott 2005, 30). Even Michel Foucault (1980), famous for his discussions of biopolitics and its effects on both subjectivities and physical bodies, has argued that “individuals are the vehicles of power, not its points of application” (Foucault 1980, 98). Although Foucault is sometimes criticized for overemphasizing the “all-encompassing power of the state” in capitalist Europe, his vision in many ways accurately describes conditions in colonial areas, in which the state was able to exercise its power “with little restraint” (Cordell, Ittman & Maddox 2010, 16).

4.4 Modernist Ideology and the State

Often used interchangeably, colonialism and imperialism were distinct systems which nevertheless functioned in concert. According to Smith, colonialism was one of the tools employed by imperialist regimes to pursue their goals, both abroad and at home:

Imperialism was the system of control which secured the markets and capital investments. Colonialism facilitated this expansion by ensuring that there was European control…Whilst colonies may have started as a means to secure ports, access to raw materials and efficient transfer of commodities from point of origin
to the imperial centre, they also served other functions. Europeans also needed to be kept under control, in service to the greater Imperial enterprise. (Smith 1999, 22-24).

The imperialist drive to acquire natural resources and ensure control over labor was propelled by a complex ideology which articulated, rationalized, and justified the transference of wealth from the colonial periphery to the imperial center, as well as the expansion of the imperial state’s administrative powers both at home and abroad (Smith 1999, 23). The ideology of imperialism as described by Smith bears a striking resemblance to political scientist and anthropologist James C. Scott’s (1998) concept of “authoritarian high modernism,” defined as an ideology that emerged in the 18th century emphasizing continued linear progress, the objective rationality of Western science, the relentless expansion of economic production, and the exercise of control over nature—in short, the creation of a rational social order—all applied through the central oversight of the state (Scott 1998, 90).

Authoritarian high modernism can be described as a particular brand of liberal humanism, characterized by its intense interest in applying science and technology to further human welfare—often going to extremes in order to ameliorate perceived social ills. Under the mindset of authoritarian high modernism, only “those who have the scientific knowledge to discern and create this superior social order are fit to rule this new age” (Scott 1998, 94). “Scientific knowledge” in this context is defined by its positivism, its search for objective truth, and its “ultimate goal of predicting and controlling reality” (Wilson 2008, 36). The ideology of authoritarian high modernism is quite evident when examining colonial regimes, which have “often been sites of extensive experiments in social engineering” in which harmful methods were thought justified by the pursuit of knowledge (Scott 1998, 97; Wilson 2008, 36). With evolutionary theory’s rise to prominence in the 19th century, modernist scholars propagated
theories of Social Darwinism, which cast colonized people as pre-modern vestiges destined to disappear in the wake of modernity’s spreading grasp, in a classic misreading of the phrase “survival of the fittest.” This move was used to implicitly justify “denying human status and thus legal status” to indigenous peoples (Wilson 2008, 46; 48).

In settler-colonial states such as Australia, Japan, and the United States, such theories of scientific racism came to influence state policy in profound ways. Marisol de la Cadena (2010) notes that this racial ideology can be traced back in the Americas to early colonial times, when natives’ racial inferiority was articulated as a “closeness to nature [that] made them unproductive” (de la Cadena 2010, 344). Eric Hobsbawm (1975) argues that, in the 19th-century US, scientific racism not only “triumphed rapidly, but was very soon turned into an ideology of militant capitalism” used to justify racial oppression in the name of modernity, development, and progress (Hobsbawm 1975, 305; see also Smith 1999, 31-33; de la Cadena 2010, 345).

According to Hobsbawm, the racist ideology of settler-colonial America is perhaps best explained as a mechanism by means of which a fundamentally egalitarian ideology rationalised its inequalities, and attempted to justify and defend those privileges which the democracy implicit in its institutions must inevitably challenge. Liberalism had no logical defence against equality and democracy, so the illogical barrier of race was erected: science itself, liberalism’s trump card, could prove that men were not equal. (Hobsbawm 1975, 315).

In this way, authoritarian high modernism’s combination of scientific racism and militant capitalism under the banner of progress and modernization served to justify the imperialist state’s continued interventions in the early 20th century into the lives of colonized peoples, which were framed as humanistic, “protective” measures (Wilson 2008, 46-47; Siddle 1996). These interventions varied depending on the location, but frequently included forced removal (i.e., involuntary displacement), the banning of “backward” cultural and religious practices, and the dismantling of indigenous subsistence and livelihood patterns. To make matters worse, efforts
were made to erase indigenous people’s experiences under these policies from official histories. In their place, pioneer narratives of intrepid “discoverers” were erected, which further served to reify state control over colonial territories (Smith 1999, 21; Tsing 2015, 18; Wilson 2008, 45-47).

Authoritarian high modernism’s Social Darwinian conception of linear social progress, so vividly on display during the 19th century, continues to be expressed in the context post-WWII development initiatives. It has been especially evident in the so-called “Truman Doctrine,” exemplified by the famous 1949 speech by US President Harry Truman, which Arturo Escobar highlights as the apotheosis of the ideology of contemporary development (Escobar 1995, 3-4). The Truman Doctrine held that greater economic production, brought about through a wider and more vigorous application of modern scientific and technical knowledge, was the “key to prosperity and peace” (Escobar 1995, 3). By the 1970s, the notion of development enshrined in the Truman Doctrine “had achieved the status of a certainty in the social imaginary” throughout the developed world (Escobar 1995, 5). Escobar (2010) identifies “planning” as a key feature of this paradigm of development, echoing the authoritarian high modernists’ conviction “that social change can be engineered and directed, produced at will” (Escobar 2010, 145). Today, development planners all too frequently believe that economic growth, made possible through the proper application of capital, science, and technology, holds the hope for the “salvation” of Third World peoples—a viewpoint which Escobar himself links to the humanistic “civilizing mission” of colonialism (Escobar 2010, 149).

This emphasis on salvation through economic growth can be seen in the long list of benefits that development projects are presumed to bring to local communities, such as the creation of jobs, energy, and transportation infrastructure. However, such a view obscures the
negative costs associated with development projects that are disproportionately borne by people living closest to the project area, including population displacement, impoverishment, and health risks. Those who reap the most benefit from contemporary development, in contrast, tend to be members of an ever-shrinking group of state and business elites who live far away from the project area (Nash 1981, 240)—just as the primary beneficiaries of colonial-era projects invariably resided in the imperial center.

4.5 Processes of Statemaking: Capitalist Accumulation and Radical Simplification

The history of the modern state is intricately bound together with the history of capitalism. As we have learned, colonial enterprises were initiated in an effort to gain access to natural resources and establish commodity markets for the economic benefit of the imperial center (Smith 1999, 22-24). The fact that the valuable sources of capital to be had in the colonies were unevenly distributed throughout the world has been an influencing factor in statemaking’s production of space. David Harvey has pointed out that the uneven distribution of resources throughout the world is a key to the “historical geography of capitalism” (Harvey 2005, 70). Historically, the accumulation of capital was a driving concern for colonial and imperial projects of statemaking, and it continues to motivate contemporary development projects today. According to Marxist theory, states undergo the process of “primitive” accumulation as they transition from feudalism to capitalism. Historian Katsuya Hirano (2015) provides a useful summary of this process:

[P]rimitive accumulation begins with an enclosure movement designed to expel a resident population from the land by force and law in order to occupy and commodify the land—a corollary of which is the birth of a landless proletariat. It eventually integrates the land into the privatized mainstream of capitalist accumulation and creates an industrial reserve army of labor to exploit for the maximum production of surplus value. (Hirano 2015, 208).
In other words, primitive accumulation begins when communal property is enclosed into state- or privately-owned parcels, setting in motion a series of events that eventually leads to the creation of a market-based wage labor system and the accumulation of capital by elites.

Building upon Karl Marx’s work, Rosa Luxemburg (1951) argues that accumulation is “primarily a relation between capital and the non-capitalist environment” which, rendered in biological terms, would most accurately be described as parasitic, or even malignant:

Historically, the accumulation of capital is a kind of metabolism between capitalist economy and those pre-capitalist methods of production without which it cannot go on and which, in this light, it corrodes and assimilates. Thus capital cannot accumulate without the aid of non-capitalist organisations, nor, on the other hand, can it tolerate their continued existence side by side with itself. Only the continuous and progressive disintegration of non-capitalist organisations makes accumulation of capital possible. (Luxemburg 1951, 416).

Thus, colonial enterprises must be viewed as essential to the modern state’s project of appropriating capital from the non-capitalist parts of the world.

The accumulation of capital from the non-capitalist world does not simply happen on its own, but must be forcibly instituted by the state (Luxemburg 1951, 369; Escobar 1995, 11). Colonial policies established the conditions for capitalist accumulation by investing in transportation infrastructure, in order to aid in the circulation of goods and labor between the colonies and the imperial center (Luxemburg 1951, 428). This investment had the added benefit of strengthening imperialist claims over ever-expanding colonial territories, since transportation infrastructure like roads and railroads served as visual reminders of the state’s production of absolute political space. In the colonies as well as in the industrialized West, as Foucault once remarked, the road was “a crystallization of state power” (Crampton 2013, 391).

In addition to establishing the conditions for capitalist accumulation by investing in infrastructure and developing colonial resources, the imperial state facilitated capitalist
expansion by “planning for the systematic destruction and annihilation of all the non-capitalist social units which obstruct its development,” including those of colonized and indigenous peoples (Luxemburg 1951, 370). Karl Polanyi (2001) argued similarly that “the market was to annihilate all [non-market] forms of existence and to replace them by a different type of organization, an atomistic and individualistic one,” which was necessary for the capitalist mode of production to function (Polanyi 2001, 171). By Polanyi’s time, this pattern had already repeated itself numerous times in colonial regions, where indigenous peoples were forced into exploitative labor markets. In order to bring about these new labor markets, indigenous peoples’ traditional institutions had to be “destroyed, and prevented from reforming” (Polanyi 2001, 171). It was also necessary to “separate land from man and to organize society in such a way as a way as to satisfy the requirements of a real-estate market,” excising the land (often violently) from the social contexts which had previously defined its use: “the organization of kinship, neighborhood, craft, and creed…tribe and temple, village, guild, and church” (Polanyi 2001, 171). Such policies, designed to establish the conditions for capitalist accumulation and set up land and labor markets, unsurprisingly had devastating consequences for indigenous peoples (Smith 1999, 29; Wilson 2008, 45-50).

Luxemburg critiques Marx for treating capitalist accumulation as “incidental,” and for limiting his analysis solely to the primitive accumulation of capital in the industrialized West—a historical period which by Luxemburg’s time was considered to have already passed (Luxemburg 1951, 364). She argues instead that the process of capitalist accumulation is ongoing, and points to the colonial policies of her time as evidence of this fact (Luxemburg 1941, 370). Following Luxemburg’s example, I contend that capitalist accumulation continues to be an important aspect of the dominant paradigm of contemporary development. Unfettered
economic growth remains the orthodox logic of economic development the world over (Escobar 1995, 74; Rist 2014, 16). Although the economic growth generated by development projects is commonly believed to bring widespread social benefits (as exemplified by the modernist zeal of the Truman Doctrine), contemporary development has also been profoundly destructive. Gilbert Rist (2014) acknowledges this destructive capacity when formulating his definition of development:

‘Development’ consists of a set of practices, sometimes appearing to conflict with one another, which require—for the reproduction of society—the transformation and destruction of the natural environment and of social relations. Its aim is to increase the production of commodities (goods and services) geared, by way of exchange, to effective demand. (Rist 2014, 13).

Contemporary development’s capacity to destroy the environment and communities alike has been well-documented in a number of case studies from around the world (Short, et al. 2015; de la Cadena 2010; Auyero & Swistun 2009). Examples such as these support Escobar’s impassioned proclamation that “there are worlds that development, even today and at this moment, is bent on destroying” in the name of economic growth (Escobar 1995, 226).

In order for the imperialist state to benefit from the vast resources to be had in the colonial world, thus bringing these regions into the capitalist mode of production, it was necessary redefine colonial territory as an absolute political space (Lefebvre 1991, 3). According to Lefebvre, “[a]ny determinate and hence demarcated space necessarily embraces some things and includes others” (Lefebvre 1991, 7). In other words, such absolute political space is but an abstraction, and cannot fully account for the inherent complexity of social organizations and environmental systems as they exist in reality. Land, resources, and people all needed to be measured and counted in a standardized way in order to be incorporated as wards or possessions of the state, and complex social-ecological realities had to be simplified into digestible forms to
make them more amenable to centralized administration. James C. Scott variously uses the terms “radical simplification,” and “state simplification” to describe this process of standardization. “State agents,” according to Scott, “have no interest…in describing an entire social reality,” and employ radical simplification to generate synoptic views of complex systems to make them easier to manipulate (Scott 1998, 23). Radical simplification is hegemonic, and ultimately seeks to satisfy only commercial and bureaucratic logics, focusing on elements that are commodifiable, profitable, or amenable to administration, while ignoring or replacing other elements that don’t conform to these logics (cf. Lefebvre 1991, 14).

Examples of radical simplifications instituted in both the colonies and the imperial center have included the institution of common units of measurement; surveying and the creation of cadastral maps; the establishment of individual freehold property regimes; the practices of scientific agriculture and forestry; demography; and racial typology (Scott 1998 11-52; Mitchell 2002, 83-101; Cordell, Ittman & Maddox 2010 10-11; Michael 2012, 7; Crampton 2013, 388; Smith 1999, 26). Radical simplification, according to Scott, “can and has been profoundly destructive of human communities and of nature,” (Scott 1998, 412). Imposed by a centralized authority and often accompanying colonial ventures and the establishment of new economic markets, radical simplifications are inexorably entwined with relations of knowledge and power. These simplifications exist not just on paper but shape the reality they describe, actively “strip[ping] down reality to the bare bones so that the rules will in fact explain more of the situation” (Scott 1998, 23; 303; cf. Low 2009, 24). In the colonial world, state administrators made concerted efforts to shape reality to conform to simplified administrative theories, rather than altering their theories to better describe reality in its complexity (Mitchell 2002, 101). The reason for this, according to Scott, is simple: “[i]f the environment can be simplified down to the
point where the rules do explain a great deal, those who formulate the rules and techniques have also greatly expanded their power” (Scott 1998, 303). Thus, redefining territory as absolute political space through the process of radical simplification was a cornerstone of colonial and imperial statemaking projects, which in turn helped to solidify state power.

Although the form of radical simplification has changed in its contemporary applications, its logic is still applied to 21st century development initiatives, as made clear by the encouragement of intensive monoculture and extractive industry with little thought given to their ecological and social consequences (Lansing 2006; Short, et al. 2015). Even when environmental or social assessments are conducted, they inevitably fail to capture the complexity of impacts caused by development projects and, in the worst cases, are conducted superficially in order to push projects through the approval process (Maruyama 2012; Tilt 2015). Radical simplifications such as these contribute to an ongoing “colonization of reality” by the ideology of international development, consolidating and reinforcing state and corporate power over people throughout the developing world (Escobar 1995, 5).

4.6 Processes of Subjectmaking: Interpellation and Discipline

Just as statemaking (through capitalist accumulation and radical simplification) is involved in the social production of absolute political space, the complementary process of subjectmaking formats individuals as absolute political subjects. In Althusser’s framework of the state, the process of subjectmaking is one of the main functions of the so-called “state ideology” (Althusser 1995, 138-139; 188-189). This ideology “recruits” or “transforms” individuals into subjects through a process called “interpellation” (Althusser 1995, 190). Through the sorting of people into categories (for instance, “citizen”) and the hailing of these categories as legitimate subjects of state authority, the state ideology interpellates individuals as subjects and ensures
mutual recognition between these subjects and “the Subject”—in this case, the “total subject” of the state,” (Althusser 1995, 190; 197; Lefebvre 1991, 3). Interpellation therefore helps to solidify the relationship of domination between the state and the various categories of subjects into which the state organizes its subject populations, making both state and subjects “go all by themselves” (Althusser 1995, 197).

In the colonial context, the process of interpellation by which indigenous peoples were formatted as subjects can be seen to operate through categories such as “savage,” “primitive,” and “metis” (Smith 1999). As Smith notes, such “legislated identities” which regulated colonized peoples “were all worked out arbitrarily (but systematically), to serve the interests of the colonizing society” (Smith 1999, 23). These identities were not self-ascribed by indigenous peoples, but were created from the preconceived ideas of settler society, which “enabled comparisons to be made between the ‘us’ of the West [Subject] and the ‘them’ of the Other [subjects]” (Smith 1999, 27; 33). In this way, colonized peoples were interpellated as subjects of the imperialist West’s beneficent project of modernization. Yet interpellation remains an operative process of subjectmaking in the dominant paradigm of contemporary development, as well. By drawing a sharp line of division between the First and Third Worlds, the dominant discourse of international development has created a “veritable underdeveloped subjectivity endowed with features such as powerlessness, passivity, poverty, and ignorance, usually dark and lacking in historical agency, as if waiting for the (white) Western hand to help subjects along” (Escobar 1995, 8). Just as during colonial times, the interpellation of Third World peoples as “underdeveloped” formats them as targets for state intervention, creating the Third World subject “in ways that allow the exercise of power over it” by the state (Escobar 1995, 9).
Subjectmaking is not simply a matter of categorization, but involves the active management of populations “in ways consistent with the movements of capital” (Escobar 1995, 60). Foucault (1995) famously argued that this regulation necessitates state intervention at the level of individual bodies through techniques of “discipline,” which include procedures such as surveillance, enclosure, the organization of individuals in space, and the regulation of their movements through time (Foucault 1995, 136-145; 150-159; cf. Low 2009; 22). According to Foucault, “discipline produces subjected and practiced bodies, ‘docile bodies’” in such a way as to maximize economic advantage (Foucault 1995, 138; 142). The production of disciplined subjects is inherently bound up with the production of space—specifically, of “disciplinary space” (Foucault 1995, 143). Foucault defines disciplinary space as space that is “divided into as many sections as there are elements or bodies to be distributed,” in which “each individual has his own place” (Foucault 1995, 143). Lefebvre, for his part, seems to agree with Foucault on this point when he argues that individuals are “caught up…in the toils of parcellized space” (Lefebvre 1991, 7). Foucault notes, however, that disciplinary space is concerned less with individuals themselves than with the “rank” or category they occupy, revealing a close connection between discipline and interpellation (Foucault 1995, 145-146). In this way, discipline organizes and circulates interpellated subjects as replaceable parts in the social machinery of the capitalist mode of production.

Under colonialism, disciplinary techniques were applied wantonly, carrying significant consequences for indigenous peoples. One of the most striking examples of the creation of a disciplinary space was the frequent practice of forced removal and relocation of indigenous peoples to make way for imperialist expansion (Smith 1999, 22-23; Wilson 2008, 46-47). In some contexts, such as North America, marginal land was set aside to serve as reservations for
indigenous peoples, directly imposing spatial constraints on their movements. Indigenous land was parceled out in allotments to encourage the adoption of freehold agriculture, thus disciplining indigenous peoples into a taxable, agrarian population. That the policy of allotment was largely unsuccessful, and resulted in much of the land being bought up by settlers rather than indigenous people, does not detract from the significance of the practice of allotment as a disciplinary endeavor frequently employed by the state, but in fact suggests that discipline through dispossession, rather than agrarianization, may have been the ultimate goal.

To this day, forced relocations continue to occur in order to make way for proposed development projects (Tilt 2015). Although such projects often meet with intense resistance from local people, most of these people are ultimately powerless to prevent their arbitrary removal. Development planners treat people displaced by development as replaceable parts, naively expecting them to somehow integrate into their new host communities with inadequate compensation and little, if any, assistance. Such displacements in turn drive urban migration and often coerce rural subsistence farmers into wage labor (see Chapter 2). In this way, international development’s disciplinary techniques aid in the process of subjectmaking by helping to sever the ties between people and the land, ensuring the continual accumulation of capital and to reaffirm the power of the state.

4.7 Conclusion

In this chapter, it has been shown that the theory of statemaking and subjectmaking can reveal similarities and continuities between historical colonial endeavors and contemporary development projects. In each of these two contexts, states have employed the processes of capitalist accumulation and radical simplification to solidify their control over territories, while employing the processes of interpellation and discipline to solidify their control over people. In
this way, contemporary development initiatives in settler-colonial states build upon the modernizing project of past colonial regimes, resulting in similar social and environmental transformations.

As this study’s contribution to the burgeoning “anthropology of modernity” originally proposed by Escobar, the theory of statemaking and subjectmaking presented in this chapter is useful for investigating the historical and cultural roots of contemporary settler-colonial states. In particular, this theory is useful for examining contemporary development initiatives in post-colonial contexts, especially those involving indigenous peoples. Previous studies of development projects have all too often maintained a narrow temporal scope, viewing any resistance as an isolated event disconnected from the long history that precedes it. Viewing contemporary development projects as continuing the ongoing processes of statemaking and subjectmaking initiated under colonialism can help to broaden our perspective by offering more nuance to our understanding of those projects’ impacts on indigenous peoples. Such understanding is absolutely crucial if developers are to avoid repeating the grave mistakes of the past in their dealings with indigenous peoples. In the next chapter, I apply the theory of statemaking and subjectmaking to Hokkaido’s history, from early colonial times to the present day, satisfying political ecology’s demand that close attention be paid to the ways that systems of wealth, power, and knowledge production are implicated in the production of social-ecological change.
Chapter 5: From Colonial to Contemporary: Japanese Statemaking and Subjectmaking in Hokkaido

5.1 Introduction

Now that the theory of statemaking and subjectmaking has been developed in detail, it is possible to understand how both colonization and contemporary development have contributed to the project of legitimizing the Japanese state’s authority in Hokkaido. In this chapter, I examine the history of Japan’s colonization of Hokkaido, showing how the northern island served as both the “incubator” of the modern Japanese state, and the crucible in which the category of the modern Japanese subject was forged (Mason 2012, 4). I apply the theory of statemaking and subjectmaking outlined above to this history, using its characteristic elements (modernist ideology, capitalist accumulation, radical simplification, interpellation, and discipline) to guide my examination. I argue that environmental degradation and the systematic suppression of the Ainu’s rights and cultural identity were all direct results of Japanese statemaking and subjectmaking efforts that were motivated by the primitive accumulation of capital; enacted through radical simplification, interpellation, and discipline; and justified by an authoritarian high modernist ideology centering on the narrative of the consanguineous imperial family-state.

The Japanese state’s radical simplification of complex social-ecological systems helped to make Hokkaido amenable to centralized administration, through the expropriation of communal land and its division into state-owned and individually-owned parcels, as well as policies promoting scientific agriculture. Interpellation and disciplinary techniques, meanwhile, were employed to shape indigenous Ainu and settlers alike into docile Japanese subjects. Japanese narratives of Hokkaido’s colonization embodied an authoritarian high modernist ideology, which justified the destruction Ainu lifeways in the name of national progress and
modernization. These factors helped to legitimize Japanese control over the natural and human resources of Hokkaido, which were instrumental to the primitive accumulation necessary for Japan to establish itself as a capitalist nation-state able to compete on the world stage. Although the historical period of Japanese colonialism in Hokkaido is typically seen as finished business, this chapter demonstrates that colonialism’s enduring legacy can be seen in the context of Hokkaido development projects in the post-war period. This analysis provides a new perspective on an important period of Japanese history, while also contributing to a more holistic understanding of the true magnitude of the Saru River Development Project’s impacts on the indigenous Ainu people. Instead of simply retelling the commonly-accepted narrative of Hokkaido’s history, interpreting this history through the lens of statemaking and subjectmaking therefore represents research that is both original and empirical.

5.2 Statemaking in the Early Colonial Period (1450-1798)

Michele M. Mason (2012) argues that “the formation of the modern nation-state that is now known as Japan was not a fore-ordained destiny but was created out of a crucible of conflict,” rejecting revisionist readings of history which presuppose “the existence of the Japanese nation-state before the process of appropriating the island” of Hokkaido (Mason 2012, 4; 23). In actuality, Japanese expansion northward during the Tokugawa period (1603-1868) and the establishment of a colonial economy in Hokkaido during the Meiji period (1868-1912) “contributed to the discursive and material creation of the modern Japanese nation and empire” itself, and was crucially important for “eliminating opposition, consolidating state and military power, and molding national-imperial subjects” (Mason 2012, 4; 55). In other words, Japanese colonialism in Hokkaido enabled the transformation of the archipelago into the “absolute political space” of modern Japan.
After the Meiji restoration in 1868, when Japan emerged as a player in international trade and politics, the need to define what was and was not “Japan,” was seen as especially pressing by the new, modernist regime—especially in terms of its northern border, as tensions with Russia became an increasingly serious concern (Ziomek 2014, 497). When the newly-restored Meiji emperor set forth his vision for rapidly modernizing Japan in order to achieve parity with the industrialized West, he insisted that the development of the newly-renamed Hokkaido (which had up to that point been known to the Japanese as “Ezo”) should be a top priority (Mason 2012, 23-24). The island’s rich biological and mineral resources would provide the fuel for Japan’s industrialization. Its location was strategically important for trade in the North Pacific, over which Japan was keen to solidify its hold in response to Russian expeditions into Eastern Siberia and the Kurile Islands in the mid-19th century. Thus, the Hokkaido needed to be transformed—from a “foreign land” inhabited by “barbarians,” to an inherent and inalienable constituent element of Japanese territorial sovereignty, inhabited solely by Japanese national subjects. Through the process of transforming Hokkaido, Japan itself was transformed from a feudal polity to a modern, capitalist nation-state and one of the “great powers” of the late 19th and early 20th centuries, for whom the conquest of overseas territories was seen by many as a defining characteristic (Bresner 2009, 41).

Although Hokkaido was treated as *terra nullius* by Japanese colonists, archaeological evidence suggests that human habitation of the area stretches back at least 20,000 years, to when it was still attached to continental Asia (Irish 2009, 16; Siddle 1996, 26-27).22 What is now recognized today as the “traditional” Ainu culture emerged around 1300 CE through cultural interaction among the earlier archeological cultures that inhabited the area, as well as interaction

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22 Hokkaido became an island about 10,000 years ago when rising sea levels separated it from the Asian continent (Irish 2009, 16).
with Wajin (J: ethnic Japanese), primarily through trade (Walker 2001, 20-27). Characteristic elements of this traditional culture were shaped by the Ainu’s key geographic location, which made them powerful brokers of maritime trade between the Japanese islands and continental Asia (Walker 2001, 20-27). By the mid-15th century, Wajin settlements began to be established in southern Hokkaido, then known to Wajin as “Ezo ga shima” (J: barbarian island), or simply “Ezo” (Walker 2001, 75). Starting around this time, Ainu and Wajin came into continual contact through trade, which led to an increased dependence upon Wajin goods, such as rice and sake, among Ainu communities, which sometimes sparked armed confrontations between Ainu communities and with Wajin settlers. During the Tokugawa era (1603-1868), samurai lords of the Matsumae domain were granted exclusive control over trade with the Ainu, in much the same way that the Satsuma and Tsushima domains controlled trade with the Ryūkyū Kingdom (present-day Okinawa) and Joseon (present-day Korea) respectively (Howell 2005, 132). In the early years of Matsumae rule, the area under Wajin control was known as Wajinchi (J: Japanese land), and encompassed only the southernmost tip of Ezo’s Oshima Peninsula. Meanwhile, the majority of the island remained under Ainu control, and was known as Ezochi (J: barbarian land). However, intense cultural changes experienced by the Ainu during this period resulted in the destabilization of their society, to the point where Matsumae’s gradual northward expansion rarely met with any organized resistance.

Historian David Howell (1995) has written that “Hokkaido has always straddled a physical, political, and intellectual boundary, its status as Japanese territory both conditional and suspect” (Howell 1995, 16). Prior to the mid-19th century, Japanese maps depicted Ezo as a terra

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23 Archaeological cultures of Hokkaido have included: the Epi-Jōmon (250 BCE–700 CE), the Okhotsk (600–1000 CE), and the Satsumon (700–1200 CE) (Walker 2001, 20).

24 Though rare, armed confrontations between Ainu and Wajin are recorded to have occurred in 1456, 1515, 1529, 1531, 1536, 1669, and 1789 (Irish 2009, 42-43; Walker 2001, 49-50; 213).
incognita which lay outside the northernmost territories of the feudal Japanese polity (Walker 2001, 1-3). Even the Matsumae lords themselves considered the island to be a foreign land (iiki), as evidenced by Matsumae Kimihiro’s 1618 boast to a visiting Jesuit missionary that “Matsumae [domain] is not Japan” (Siddle 1996, 35-39). After Shakushain’s War of 1669—a major conflict between the Matsumae authorities and an alliance of Ainu and Wajin living in Ezochi—guard posts were established on the borders of Wajinchi and Ezochi and movement between the areas was severely restricted (Howell 2005, 130). However, this border crept steadily northward as Wajin settlement in southern Ezo continued to increase (Walker 2001, 43).

Even as early as the 17th century, the importance of Ezo’s natural bounty to the economy of the Japanese polity was undeniable. Over the course of three centuries, raw materials that were harvested in Hokkaido were shipped elsewhere for processing and use, “in the classic colonial manner” (Irish 2009, 141). The Matsumae clan, whose finances have been compared to those of the Massachusetts Bay Company of colonial North America, obtained a variety of products through trade with the Ainu, including animal skins and eagle feathers; pharmaceuticals such as kelp and bear gall-bladders; trade goods from mainland Asia such as Chinese silks; and live hunting hawks, which were an important status symbol to the samurai rulers of feudal Japan (Walker 2001, 39; 93-94; 100-102). Ezo’s mineral resources like lead, zinc, copper, sulfur, and gold were particularly valuable to the Matsumae, who established mines to extract these resources (Irish 2009, 49; Walker 2001, 82). Similarly, fisheries products like salmon and herring were also of high importance, as fishmeal fertilizer was commonly used to fertilize agricultural fields throughout Honshu—the central island of the Japanese archipelago, where major metropolises such as Tokyo, Kyoto, and Osaka are located (Irish 2009, 49; Howell 1995, 2; Siddle 1996, 36).
In the early 18th century, officials from the Matsumae clan set about establishing fishing ports called *basho ukeoi* (J: contract fisheries) along the coasts of *Ezochi*, conscripting Ainu as slave-laborers (Irish 2009, 51). Although Japan would not fully transition to capitalism until the Meiji restoration of 1868, the *basho ukeoi* system laid the groundwork for the primitive accumulation of capital by working to dismantle native Ainu social units, in the classic manner described by both Luxemburg and Polanyi (Howell 1995; Loy 201; cf. Luxemburg 1951, 370; cf. Polanyi 2001, 171). In order to compel them to work in the fisheries, Ainu were prohibited from raising crops and from buying seeds and farm tools (Irish 2009, 50). The high demand for wood products at the fisheries drove the deforestation of Hokkaido’s wilderness, which in turn contributed to environmental hazards such as “serious” erosion (Howell 1995, 55-56). The establishment of the contract fisheries was also the earliest contributing factor to a widespread practice of overfishing, which would eventually lead to the near-collapse of Hokkaido’s salmon and herring fisheries in the mid-20th century (Irish 2009, 131; cf. Swanson 2014). By 1855, catches of salmon along the northeast coast of Hokkaido were already dwindling. Christopher Loy (2015) posits that reduced salmon harvests were a direct result of the unsustainable fishing practices employed by the contract fisheries (Loy 2015, 72-23). In addition, the last herring run occurred in 1958 due to this widespread use of unsustainable fishing practices throughout the 18th and 19th centuries (Howell 1995, 2).

The history of the *basho ukeoi* provides an illustrative example of Rosa Luxemburg’s argument regarding primitive accumulation’s effects on native peoples, as well as Polanyi’s observation of market society’s need to do away with non-market forms of social organization. Loy argues that the Ainu’s increasing dependence on Japanese goods drew Ainu men into the emergent wage-labor system of the contract fisheries and that, because of the central importance
of the annual salmon run to the Ainu’s traditional subsistence, “time spent working in the *basho ukeoi* was time not spent catching, preparing, and storing surplus salmon for the long northern winter” (Loy 2015, 70). As a result of overfishing by the contract fisheries, as well as the overhunting of deer by Wajin during this period, many Ainu communities suffered from mass starvation (Walker 2001, 84; 119). In the *basho ukeoi*, Ainu men worked in squalid and abusive conditions for meager wages, often separated from their families for indefinite periods of time. Ainu women became especially vulnerable in the absence of husbands and fathers and were frequently raped and subjected to other forms of sexual violence by Wajin. In 1799, Matsumae officials enacted a “local wives” policy, which Lewallen (2016b) argues “amounted to state-sanctioned sexual assault and in many cases precipitated the breakdown of Ainu families” (Lewallen 2016b, 37). Also around this time, Matsumae officials issued the first edicts prohibiting Ainu from hunting and fishing, because they “might have competed with the labor needs of the fishing grounds” (Loy 2015, 70-71). In light of these 18th century policies, the abuses suffered by Ainu men and women living and working at the contract fisheries were, according to Howell, “too extensive and too systematic to dismiss as the excesses of a few sadistic supervisors” (Howell 1995, 40).

5.3 Statemaking in the Late Colonial Period (1799-1945)

In 1799, the Tokugawa shogunate in Edo (present-day Tokyo) claimed sovereignty over *Wajinchi* and *Ezochi* in response to the appearance of Russian explorers in the North Pacific, and the entire island fell under its direct administration (Howell 2005, 133; Siddle 1996, 37; Ziomek 2014, 497). In 1855, the border between *Wajinchi* and *Ezochi* was formally dissolved, and Wajin were henceforth allowed to permanently settle in the former *Ezochi* (Irish 2009, 116).

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25 The Matsumae clan was briefly granted administrative control of the island again from 1821 to 1855 (Ziomek 2014, 497).
Even after being officially claimed as Wajin territory, however, the island was still viewed as outside of Japan proper. In 1856, for example, one shogunal official argued that Ezo was merely “a country under the reins” of the Edo polity (Walker 2001, 41). With the restoration of the Meiji emperor to political power in 1868, the island was formally annexed and incorporated as part of the nascent nation-state of Japan. In 1869, Ezo was renamed Hokkaido (J: northern sea route), which solidified its link to the newly “invented tradition” of a mythic imperial past (Hobsbawm 1983; Mason 2012, 24; Siddle 1996, 53).26

To carry out their plans to achieve parity with the industrialized West through the rapid modernization of new Japanese nation-state, the Meiji government established the kaitakushi (J: Hokkaido regional development authority), which enacted sweeping reforms designed to develop the wilderness of Hokkaido into fuel for industrialization and to encourage Wajin settlement. As the colonial authority in charge of Hokkaido’s development, the kaitakushi served as the primary source in the collection and distribution of what was considered to be authoritative knowledge regarding conditions in Hokkaido. As we shall see, the kaitakushi framed Hokkaido’s development by soliciting the advice of foreign experts from the United States, and employing the logics of property rights, scientific agriculture, and Social Darwinism to enact and legitimize both the appropriation of Ainu communal property and the destruction of Ainu traditional culture. Although the kaitakushi was dismantled in 1882, only thirteen years after it was founded, the policies and practices it helped to establish began the process of Japanese statemaking in earnest.

26 Mason explains that the name “Hokkaido” was chosen for its association with the gokishichidō (J: five provinces, seven highways) of the Heian period (794-1185), which centered on the imperial court (Mason 2012, 24-25). This served function of reinforcing the centralized authority of the Meiji regime and linking this authority to a mythic past.
Capitalist accumulation, radical simplification, and authoritarian high modernism all converged in policies implemented by the *kaitakushi* between 1869 and 1882, which resulted in dramatic social and ecological consequences whose effects are still felt today. During the brief period of *kaitakushi* administration, Hokkaido’s population quadrupled and the area of cultivated land increased twenty-five-fold (Irish 2009, 124). Its efforts, along with imported diseases like smallpox, measles, and tuberculosis, triggered intense demographic shifts in Hokkaido. Between 1871 and 1909, the population of Wajin in Hokkaido increased from 160,000 to 1.5 million, while the Ainu population dropped from an estimated 66,618 to below 18,000 (Hirano 2015, 203-204). During the *kaitakushi* period, efforts were primarily focused on exploiting Hokkaido’s natural resources to fuel capitalist accumulation in Japan’s urban core—a focus made explicit in the assertion by the *kaitakushi*’s director, Kuroda Kiyotaka, that “Hokkaido is Japan’s coffer” (Mason 2012, 128). Mason writes that, in Hokkaido, “[c]orporate interests were encouraged to serve their nation (and fill their own pockets) by tapping into the unlimited resources and golden financial opportunities of Japan’s own El Dorado” (Mason 2012, 93). Capitalist accumulation, as the reader will recall, begins with the appropriation, enclosure, and commodification of land by the state. The *kaitakushi*’s land reform policies in the late 19th century did just that. The goal of these policies was to establish an agricultural economy in Hokkaido and fully assimilate the Ainu into the individual freehold system.

Under the *kaitakushi*, Hokkaido was perceived as *terra nullius*, and indigenous Ainu land use was not recognized as true ownership. Large areas of Hokkaido were surveyed and partitioned to be allotted as agricultural freeholds to settlers, which Siddle (1996) argues was “an

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27 It is difficult to estimate the population of Ainu people due to blood quantum logic that excluded adopted individuals or intermarried households who might identify as Ainu, as well as extreme discrimination and social stigma which have historically led many Ainu to hide their identities and “pass” as Japanese. See Lewallen (2016a).
important stage in the process of colonial legitimization through the remaking of Hokkaido in the image of the [Japanese] mainland” (Siddle 1996, 57). *Kaitakushi* land surveys engaged in the radical simplification of Hokkaido’s landscape, which was “mapped, named, and claimed” (Siddle 1996, 57). In the process, “[o]rder was imposed on the ‘wilderness’ in the form of grid-like blocks” (Siddle 1996, 57). Major land reforms enacted by the *kaitakushi* and its successors in 1877, 1886, and 1897 resulted in the complete appropriation of Ainu territory by the Japanese government (Mason 2012, 69; Peng et al. 1974, 731). Ultimately, this land would be redistributed to Wajin settlers and, after 1899, to individual Ainu freeholders who could prove Ainu ethnicity. According to Hirano (2015), the expropriation of Ainu land by the *kaitakushi* and its later successors further “displaced the Ainu from the conditions of their labor and commodified indigenous means of production” (Hirano 2015, 209). These reforms represent striking examples of radical simplification, in that the elimination of Ainu communal property regimes they brought about—including through the 1876 ban of the *itopka*-engraved poison arrows that had traditionally regulated Ainu communal land-use rights29—was necessary to establish Japan’s administrative control of Hokkaido and to make it manipulable from the center (cf. Scott 1998, 35).

In 1899, the government ratified the Hokkaido Former Natives Protection Act (hereafter, the Protection Act), a landmark piece of legislation which remained the primary law governing

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28 Hokkaido Land Act, Article 16 (1877); Hokkaido Land Sale Regulation (1886); Law for the Disposal of Undeveloped National Land in Hokkaido (1887).
29 Traditional Ainu subsistence practices, such as hunting and fishing, were legally prohibited so as not to compete with the Japanese hunting and fishing industries, and to encourage the Ainu to adopt an agricultural lifestyle. The use of poisoned arrows in hunting, a favored method employed by Ainu, was banned in 1876. Not simply an effective tool for bringing down game, these arrows also had great economic and cultural importance since they were carved with patrilineal crests, called *itopka*, which traditionally regulated Ainu communal hunting rights (Lewallen 2016a, 56). Nocturnal fishing was made illegal two years later, in 1878. According to Nibutani Dam plaintiff Kayano Shigeru, whose father was arrested for salmon poaching in 1932, for the Japanese state to issue such prohibitions on fishing “was as good as telling the Ainu, who had always lived on salmon, to die” (Kayano 1994, 59).
Ainu affairs for nearly a century. Heavily influenced by the 1887 Dawes Act of the United States, the Protection Act held that Ainu hunting and fishing were to be replaced by individual freehold agriculture. The Protection Act officially allotted five hectares of farmland to individuals who “anyone would recognize as an aborigine” which, Lewallen explains, “generally meant persons residing in majority Ainu areas, meaning that those who migrated to urban centers for economic opportunities ‘ceased functionally to be Ainu’” (Lewallen 2016a, 61, quoting Howell 2004). In actuality, the average allotment under the Protection Act was only about two hectares per household, “a fraction of the area allotted to Wajin settlers,” and much of this land was of poor quality, being marshy or otherwise unfit for cultivation (Siddle 1996, 65; 71). Under the 1899 law, Ainu farmers were required to develop their lands within fifteen years in order to maintain possession of their allotments (Siddle 1996, 70). However, land allotment would ultimately prove be a difficult bureaucratic process, and the provision of agricultural supplies and training were “limited and haphazard,” resulting in the later repossession of 21.5% of allotted lands under the fifteen-year rule (Siddle 1996, 71; cf. Peng et al. 1974). In effect, the 1899 Protection Act, which remained the law of the land until 1997, “fixed the Ainu on the lowest rung of rural society” in Japan (Siddle 1996, 71).

Japan’s vision of a developed Hokkaido embodied an authoritarian high modernist ideology that was imported by Western bureaucrats recruited by the kaitakushi. Today, these foreign experts are still widely regarded major figures in Hokkaido’s early development. Hired in 1871 by Kuroda Kiyotaka, they contributed to the modernization project in many ways, such as by introducing topographical and geological surveys; promoting Western scientific agriculture; laying the foundation for modern medical practice in Hokkaido; building roads and railroads; improving shipping facilities; developing coal mines; establishing the agricultural college that
would later become Hokkaido University. Importantly, these foreign experts were also instrumental in constructing irrigation networks and water management infrastructure, including large dams (Irish 2009, 143-153). Japan’s boom in hydroelectric dam construction prior to WWII can largely be credited to the technology and construction techniques imported by Western bureaucrats working in Hokkaido. Unsurprisingly, it appears that little regard, if any, was given to providing adequate compensation, livelihood reconstruction, and impact mitigation measures for the many people affected by pre-war dam construction.

Among the most notable foreign experts hired by the kaitakushi was former US Agriculture Secretary Horace Capron, who was personally recommended for the position by President Ulysses S. Grant (Irish 2009, 145). Capron’s earliest advice for the development of Hokkaido involved a thorough land survey, the establishment of a private property system, the creation of a machine factory, the hiring of foreign farmers to act as advisors, and the development of industries such as coal mining and capital-intensive livestock ranching (Hirano 2015, 201-202). During his time, Horace Capron was widely acknowledged as a primary architect of Hokkaido’s development and received many accolades, including from the US ambassador to Japan, John Armor Bingham, who in 1876 wrote a telling description of Capron’s unsurpassed role in the Japanese statemaking project in Hokkaido:

It may be truly said that there was no State in Yesso [Hokkaido] in the sense that men constitute a State, when you took charge of that Island and it may also be said that when you left it, a State was formed and what is essential to a State

30 Other noteworthy Americans who worked for the kaitakushi included: rancher Edwin Dun, who established an experimental livestock ranch at Niikappu, Hidaka region; mining expert Benjamin Lyman Smith, who laid the groundwork for Hokkaido coal industry, including the famous Horonai Mine; civil engineer A.J. Warfield, whose excessive drinking and terrorization of local Ainu were well known; medical expert Stuart Eldridge, who established a hospital, a medical school, and Japan’s first medical journal; railroad engineer Joseph Crawford, who supervised the first railroad in Hokkaido, which served Horonai Mine; mechanical engineer N.W. Holt, who planned some of the earliest hydroelectric power stations on the island; and William S. Clark, founder of Massachusetts Agricultural College (later University of Massachusetts at Amherst), who led the Sapporo Agricultural College in its earliest years and whose famous appellation “Boys, be ambitious” continues to be a popular slogan connoting the “pioneer spirit” of Hokkaido (Irish 2009, 143-153).
inaugurated by you, the introduction of the industries and the appliances which will secure food, clothing and shelter to a nation. (Harrison 1951, 142).

Western diplomats and advisors like Capron helped to inaugurate an age of authoritarian high modernist ideology in the young state of Japan, which was on display in the policies of the kaitakushi. This influence served to transmit the techno-scientific knowledge necessary for the construction of ambitious infrastructure projects, such as large dams. The particular brand of Western techno-science imported by these foreign experts would go on to serve as the ideological basis for the Japanese national government’s vision of development and modernization. As will become clear in the remainder of this chapter, this authoritarian high modernist ideology has continued to typify development efforts in Hokkaido during the post-war era, including the Saru River Development Project.

After the kaitakushi was disbanded in 1882, most of the foreign experts returned home and the administration of Hokkaido’s colonial development was carried out by their Japanese successors (Irish 2009, 159). During this time, Hokkaido continued to function as a “lucrative satellite economy” for the rest of Japan, which was dependent on Hokkaido foodstuffs and coal (Mason 2012, 116). In 1900, the Hokkaido Takushoku Ginkō (J: Hokkaido colonial bank) was established to continue development projects initiated by the kaitakushi (Irish 2009, 223). Among the many projects financed by the Takushoku Ginkō was the island’s first hydroelectric plant, at Iwanai. Private companies were also important players in Hokkaido’s development during the colonial period. Some of these businesses would grow become some of the most powerful conglomerates in Japan today, such as Mitsui, which was primarily involved in coal mining, and Mitsubishi, which controlled shipping to and from the island (Siddle 1996, 60). In short, Hokkaido’s colonial development was instrumental to the development of the capitalist
economy within Japan, and served as “the model for virtually all of Japan’s extractive empire” throughout the Pacific region prior to WWII (Mason 2012, 114-115).

5.4 Environmental Consequences of Japanese Statemaking

Japanese statemaking during the pre-war period had dramatic consequences on Hokkaido’s natural environment. Salmon and herring stocks as well as populations of sika deer were all drastically reduced due to overexploitation, which caused many Ainu communities to suffer starvation (Walker 2001, 84, 119; Irish 2009, 131). Deforestation—which had already become a problem even before the Meiji restoration due to the high demand for wood products at the contract fisheries—intensified after 1868, as millions of trees were felled to clear land for agricultural fields and Hokkaido’s growing towns (Howell 1995, 55-56; Simmons 1973, 284; Irish 2009, 130; Lie 2001, 91). A logging industry developed in Hokkaido, which provided construction materials and fuel to Wajin settlers as well as to the Japanese and Chinese timber markets (Irish 2009, 140; 219; 224). Deforestation during this period caused severe floods, which frequently damaged Ainu farmers’ fields and contributed to their food insecurity—a fact that the plaintiffs of the Nibutani Dam case were quick to point out in court (Maruyama 2012, 66-67).

Between 1873 and 1878 alone, more than half a million deer, a primary food source for the Hokkaido Wolf, were slaughtered by Wajin hunters, their meat and skin destined for commodity markets in China, France, and the United States (Hirano 2015, 206). In the absence of deer—a primary food source for the endemic Hokkaido Wolf—packs of wolves seized the opportunity presented by Hokkaido’s newly-established cattle ranches, including the Hidaka area’s Niikappu Ranch, which processed over 1.7 million cattle between 1893 and 1902 (Walker 2004, 256-262). In response to the predation of Hokkaido’s herds, American rancher Edwin Dun, who had been hired by Horace Capron to oversee the establishment of cattle ranching on the
island, engineered the complete annihilation of the Hokkaido Wolf by encouraging kaitakushi officials to offer bounties on wolf pelts and by promoting the latest scientific method in wolf-control: strychnine poisoning. Dun’s pursuit of the Hokkaido Wolf was relentless, and frequently extravagant: “[W]e succeeded in getting enough [strychnine] to poison every living thing on the island,” he once wrote (Walker 2004, 264). By the turn of the 20\textsuperscript{th} century, the Hokkaido Wolf was declared extinct. Other animal species, like the river otter, were also driven to extinction due to overhunting for pelts and medicinal products (Ando, et al. 2007; Irish 2009, 17).

Additionally, the construction of dams altered the flow regimes of Hokkaido’s rivers and streams and contributed to sedimentation and river channeling that, combined with industrial pollution, added additional strain on salmon populations, which were already undergoing decline due to overfishing (Irish 2009, 297; 322). Many environmental problems that originally arose during the colonial period have persisted in the decades since the Second World War, a fact that can be plainly seen in a close analysis of the Saru River Development Project’s impacts (see Chapter 3).

5.5 Subjectmaking in the Early Colonial Period (1450-1798)

Lewallen (2016c) has written that “Ainu interpellation as subjects of the settler-colonial state has indelibly shaped their position in Japanese society, the way they are received by Wajin…and the legacy of government attempts to administer Ainu as a distinct ethnic population” (Lewallen 2016c, 3). Hokkaido’s colonization was a watershed event in Japanese subjectmaking, which paved the way for the transformation of the Ainu into Japanese national subjects, just as Hokkaido itself had to be transformed from a foreign land into an inalienable part of Japan. Prior to the Meiji Restoration in 1868, the dominant image of the Ainu in the eyes of Wajin was that of non-human, barbarian Others. This image originated from the “massive
importation of Chinese culture and ways of thought” that occurred between the 6th and 8th centuries (Siddle 1996, 27; Bresner 2009, 33). Among the most influential elements of Chinese thought imported during this period was a Confucian concept known in Japanese as the ka’i chitsujo, which posited a worldview in which a civilized center was surrounded by a barbarian periphery (Walker 2001, 204; Siddle 1996, 18; Jacobson 2008, 167; Hansen 2014, 54). This worldview had historically “provided the ideological foundation of the Chinese tribute system, in which barbarians submitted to Imperial authority and presented goods as tribute,” and the Matsumae lords were keen to adopt a similar tribute system in their dealings with the Ainu in the form of the uimamu and omusha ceremonies (Siddle 1996, 28; Walker 1996, 205).

According to the logic of the ka’i chitsujo, the Ainu’s barbarism was marked by their geographic distance from the civilized center in Edo and their “strange” customs (Howell 2005, 6-7; Jacobson 2008, 167-168). Paul Hansen (2014) argues that the ka’i chitsujo can best be described as “a form of speciesism…the making of a non-human category or other-than-human category rooted in arbitrary distinctions and enacted politically to inscribe physical and intellectual alterity and construct difference” (Hansen 2014, 52). Indeed, the earliest Japanese depictions of Ainu resembled “supernatural beings like ghosts, demons and goblins,” and portrayed them as hairy and hunched, with sanpakugan eyes—a characteristic associated with monstrous creatures like demons, dragons, and tigers in early Japanese art (Siddle 1996, 11; Bresner 2009, 33-34). According to Siddle, Wajin traders who had dealings with Ainu during the pre-Meiji period tended to refer to themselves as ningen (J: humans) in contrast to ijin (J: barbarian, foreigner), and even mocked Ainu who practiced agriculture and learned to speak and

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31 For a detailed explanation of the uimamu and omusha ceremonies and their role in reinforcing Matsumae authority, see Walker 2001, 204-226.

32 The term “Sanpakugan eyes” refers to eyes that show the white beneath the iris.
write Japanese as “mimicking the ways of humans” (Siddle 1996, 43). Although the pre-Meiji image of the Ainu as both non-Japanese and non-human would later be challenged by the official discourse of ethnic homogeneity adopted after the Meiji Restoration, these images persisted among Wajin settlers and can still be encountered today in the form of racist stereotypes of Ainu (Siddle 1996, 43-44; 48; Creighton 2003, 127).

5.6 Subjectmaking in the Late Colonial Period (1799-1945)

In the decades between the Meiji Restoration in 1868 and the end of WWII in 1945, Japanese policy in Hokkaido was organized around the singular goal of modernization. While Hokkaido’s natural resources provided the material fuel for Japan’s rapid industrialization in the late 19th century, the island was also at the center of an ideological transformation that was heavily influenced by Western authoritarian high modernism. In addition to enacting policies designed to increase economic productivity and cement the centralized administrative control of the state, the Meiji regime actively promoted a nationalist ideology of “one nation, one people, and one language” (Maruyama 2016, 90). According to the prevailing logic of the dominant Western powers at that time, the concept of “modern man” was understood to apply only to “people who are bounded in a demarcated territory, under a conception of ‘nation’” (Cheung 1997, 260). In the late 19th century, modernization and nationalism were therefore both assumed to be necessary in order for Japan to achieve parity with its Western rivals.

In his seminal treatise on nationalism, Benedict Anderson (2006) remarks on two important yet contradictory themes that are common to most forms of nationalist thought, which posit that the nation is at once objectively modern and ideologically rooted in antiquity (Anderson 2006, 5). In Japan, this essential contradiction was nowhere more apparent than in the figure of the Meiji emperor himself, who Sidney Cheung (1997) argues was presented as “the
ancient man made modern” (Cheung 1997, 260). Images of the emperor, dressed in a Western-style military uniform, were widely disseminated after the introduction of photography in Japan, which “made the invisible and holy emperor a visible and powerful figure” (Cheung 1997, 261). Cheung writes that in these photographs, the “westernized appearance of the Meiji emperor represented the modernization of Meiji Japanese society” (Cheung 1997, 260). At the same time, the figure of the emperor also suggested the antiquity of the Japanese nation, by virtue of his membership in the imperial family, whose genealogy is held to proceed directly from the mythic past.

In order to make the emperor’s rule over the new nation of Japan appear “natural,” the Meiji regime propagated a master narrative which “bound the people of the Japanese Empire biologically through a theory of bloodlineage” (Bresner 2009, 36). Under this narrative of a consanguineous imperial family-state, Japan was argued to be ethnically-homogenous—“a spatially unified nation of one extensive family on a cohesive and progressive march through time,” with the Meiji emperor serving as both a father-figure to the Japanese people and the pinnacle of social advancement (Jacobson 2008, 171; Siddle 1996, 14). According to Jacobson (2008), this family-state narrative “allowed for the suppression of agitation from below” by channeling subjects’ loyalties toward the emperor and the state (Jacobson 2008, 172). Japan’s colonial enterprise in Hokkaido was “intimately connected” to the creation and propagation of this ideological narrative (Mason 2012, 35). In Hokkaido, this narrative was articulated primarily through a concept that Mason calls “the trinity of prosperity,” which “postulated an inherent alignment of interests and shared destinies of settlers to Hokkaido, the emperor, and modern Japan” and “configured settlers as emissaries of Japanese modernity” (Mason 2012, 32-33). “At the same time,” writes Mason, the trinity of prosperity “prescribed the subordination of
individual interests to those of the nation and the empire,” thus capitalizing on settlers’
nationalistic zeal in order to recruit them as disciplined national subjects (Mason 2012, 32-33).

Over time, the image of the Ainu in the eyes of the state was reconfigured, from
ethnically-distinct “barbarians” who needed to be kept separate from the “civilized” Wajin, to
national subjects who had “always been Japanese”—members of the presupposed homogenous
ethno-nation of Japan. Despite this transformation, the image of Ainu as barbarian Others proved
remarkably durable and managed to persist alongside the official discourse of Japanese ethnic
homogeneity, which formed the cornerstone of the family-state narrative. During the late
Tokugawa and early Meiji periods, the appearance of Russian explorers in northern Hokkaido
put pressure on Wajin authorities to claim the island as an inalienable part of Japanese territory.
It was therefore important to define Ainu as “true Japanese” and to eliminate all trace of their
ethnic distinctiveness (Irish 2009, 194).

After Hokkaido’s annexation, the Ainu became *de jure* imperial subjects—members of
the consanguineous family-state whose non-Japanese identity ceased to be “politically
meaningful” (Howell 2005, 169). Populating the island with Japanese national subjects became a
key strategy for legitimizing Japan’s territorial claims over Hokkaido in response to Russian
expansion, and the Meiji regime sought to achieve this by enacting reforms designed to
encourage Wajin migration to the northern island and to assimilate the Ainu into Wajin society.
In the latter part of the 19th century, the Meiji regime “recruited individuals as active participants
in the modernization project” by issuing edicts that encouraged Ainu subjects to adopt Japanese
national identity, most notably by abolishing the Tokugawa-era status system and reorganizing
Ainu society into taxable, agricultural freeholds (Howell 2005, 4-7; 165-179 ).

The status system (*mibunsei*) was instituted during the Tokugawa period defined the ways that Japanese subjects
were viewed by the state prior to 1868. David Howell (2005) argues that the status system also formed the basis for
time, Ainu were re-interpellated as *kyū-dojin* (J: former natives) and *shinheimin* (J: new commoners) under laws such as the 1871 Household Registration Law and the 1899 Hokkaido Former Natives Protection Act.  

Early on, since the Meiji authorities still viewed Ainu alterity through the lens that they had inherited from their Tokugawa predecessors—which focused on customs and other outward displays of cultural difference—the task of turning Ainu into Japanese was as simple as encouraging the Ainu to speak the Japanese language and forbidding public displays of Ainu cultural identity, such as house-burning after the death of a family member, the tattooing of women’s faces, and the wearing of earrings by men—all of which were officially proscribed in 1871 (Howell 2005, 135; 179). Legal prohibitions like these, coupled with extant discrimination against the Ainu and their cultural practices, meant that many such practices were not passed down between generations, leading to a loss of much traditional knowledge and the virtual eradication of the Ainu language. As the project of Japan’s modernization continued into the latter part Meiji period, however, a distinctly authoritarian high modernist emphasis on state intervention into increasingly intimate and minute elements of Ainu life became prevalent, as “the state turned its attention from the active policing of physical appearance to the problems of moral suasion and outright indoctrination” (Howell 2005, 17). In keeping with the authoritarian high modernist belief in employing social engineering to create a rational citizenry, these...
interventions were justified as necessary for the improvement of Ainu people’s social welfare and to bring them into the “universal brotherhood” of national citizenship (Hirano 2015, 212).

Siddle has argued that, for Japan—“a modernizing society seeking acceptance as a civilized country, and later, as a Great Power—the Ainu, “in the guise of the primitive Other” served as “a yardstick against which the civilization and progress of Japan could be measured,” (Siddle 1996, 77). First introduced to Japan in 1884 via the writings of evolutionist Herbert Spencer, Social Darwinism and the science of eugenics purported to explain why the Ainu were a “dying race,” inevitably doomed to disappear through the onward march of civilization and development (Lewallen 2016a, 64; Lewallen 2007, 514; Siddle 1996, 11-12). Like other imperial powers in the late 19th and early 20th centuries, Meiji Japan participated in world fairs both domestically and internationally, which included exhibitions in which “primitive” colonized peoples from throughout the Japanese Empire were put on display, including the Ainu.35 Displays like these helped to propagate the pseudo-scientific racial hierarchy of Social Darwinism, in which “superior” races were assumed to inevitably conquer or out-compete “inferior” ones.

Backed by the latest science of its day, this hierarchy enabled Japan to assert the racial superiority of the *Yamato minzoku* (J: Japanese race) over its colonized subjects (Siddle 1996, 12; 77; Ziomek 2014, 494; Bresner 2009, 39). Paradoxically, the image of the Ainu as an inferior race contradicted official claims about the essential “Japaneseness” of Ainu as “former natives” and “new commoners,” as many critics of the expositions were apt to point out (Ziomek 2014, 495). In truth, Ainu faced extreme discrimination and stigmatization in their interactions with

35 World fairs that occurred during the Meiji era in which Japan participated included the 1903 Domestic Industrial Exposition in Osaka, the 1904 Louisiana Purchase Exposition in St. Louis, the 1910 Japan-British Exhibition in London, and the 1912 Colonial Exposition in Tokyo (Ziomek 2014, 493; Cheung 2000, 240; Bresner 2009, 41; Siddle 1996, 102). Ainu were exhibited at each of these fairs, among other colonized peoples.
Wajin, which prompted many Ainu to hide their identity, abandon their so-called “backward” practices, and attempt to dilute their children’s “inferior” blood through intermarriage with Wajin (Lewallen 2016a, 64). According to Lewallen (2016a), assimilation policies and racial discrimination against Ainu, taken together, amounted to a “bloodless genocide” which aimed to wipe out Ainu cultural identity completely (Lewallen 2016a, 53).

Racially-discriminatory assimilation policies were just one of the many tools in the Japanese state’s repertoire when it came to disciplining Ainu subjects. From 1877 to 1937, Ainu children attended special, segregated schools (Lie 2001, 92; Maruyama 2014, 157-158). The Japanese language was practically the only subject taught in the Ainu schools, and Ainu children were indoctrinated into revering both the emperor and the state (Maruyama 2014, 157-158; Cheung 2000, 228). Nibutani Dam case plaintiff Kaizawa Tadashi, who attended one of these schools beginning in 1919, recalled the way that the Ainu schools were used for the ideological disciplining of Ainu children:

On the playground of the school was the miniature hall enshrining the venerable pictures of the Emperor and the Empress, along with a plaque of the educational edict. Whenever attending and leaving school, we were obliged to make a profound bow to the miniature hall…Child as I was, lectures at the ceremony stimulated me to be prepared to sacrifice my life for the Emperor without reluctance” (Maruyama 2014, 157-158).

Devotion to the ideology of Japanese nationalism was further reinforced by visits to Hokkaido by the emperor and members of the imperial family.36 Siddle writes that these visits can be seen as “a symbolic re-enaction…of the tribute relationship” between the Ainu and the Matsumae clan during the Tokugawa period (Siddle 1996, 93). Rather than emphasizing “the modern and progressive which were the supposed objectives of the assimilation policy,” writes Siddle, “the

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36 According to Siddle, the most important of these visits included the 1912 visit of Crown Prince Yoshihito (later Emperor Taishō) and the 1922 visit of Emperor Shōwa (Siddle 1996, 93).
Ainu were cast again in their role as primitive barbarians,” in a move that once again contradicted the official definition of Ainu as former natives and new commoners (Siddle 1996, 93). Nevertheless, like Wajin, Ainu were also expected to participate in Japanese empire-building overseas, and became subject to military conscription in 1895 (Siddle 1996, 116).

While the proper disciplining of Ainu subjects was clearly a primary concern, Hokkaido’s development was also central to the suppression of unlawfulness and political dissidence throughout the rest of Japan. Since as early as the 12th century, the island had been used as a penal colony for exiles and political prisoners (Walker 2001, 26; Siddle 1996, 29). After the end of the Boshin War in 1868, although Hokkaido’s development was certainly one of the Meiji government’s top priorities, it also faced “more immediate and pressing crises at home,” including deciding how to deal with the large number of “disgruntled and impoverished former samurai” from the war’s losing side (Mason 2012, 33). It was ultimately decided that many of these former samurai were to be resettled to the newly-annexed Hokkaido, serving the dual purposes of developing Hokkaido’s vast land area and suppressing potential sources of political dissent (Irish 2009, 119; Mason 2012, 33). As a result, hardened criminals and political prisoners were sent to modernized prison facilities called shūjikan at Abashiri, Sorachi, and Kushiro, among other locations in Hokkaido (Mason 2012, 93-101).

Influenced by the *Napoleonic Code*, the shūjikan were disciplinary spaces in the classic Foucauldian sense, characterized by “extremely orderly spaces and disciplined schedules and patterns of movement” (Mason 2012, 99). Inmates were disciplined through “elaborately choreographed rituals under the constant watchful eyes of armed guards,” and “not a modicum of privacy was afforded to prisoners” (Mason 2012, 99). The goal, according to Japan’s home minister Itō Hirobumi, was to “promote the convicts’ rehabilitation and improvement, provide a
stable life in sparsely populated Hokkaido, and have them reclaim a life of independence” (Mason 2012, 96). At the same time, prisoners of the Hokkaido shūjikan provided an important source of unpaid labor, which was indispensable for the development of the island’s infrastructure. Frequently working alongside Ainu laborers, convicts provided the bulk of the labor force performing the most strenuous and dangerous work involved in the building of roads, bridges, and railroads (and, most likely, dams), in addition to working in Hokkaido’s coal mines (Mason 2012, 96; 127; Irish 2009; 136). Home minister Itō was explicit about the potential for convict labor to fast-track development projects, writing that by “[p]utting the deported convicts’ labor power to practical use, [and] applying it to the development of Hokkaido, we will exploit the nation’s natural resources” (Mason 2012, 95). The Hokkaido shūjikan therefore played crucial roles in Japanese statemaking and subjectmaking alike in the years prior to WWII.

5.7 Subjectmaking through Involuntary Resettlement

Siddle writes that involuntary resettlement was a “feature of Ainu life” during the colonial period (Siddle 1996, 46). Prior to the Meiji Restoration of 1868, Ainu frequently were forcibly relocated in order to provide labor for the contract fisheries (Siddle 1996, 46; 193). Sometime around 1858, for example, 43 of the 116 villagers of Nibutani were forced into working at Atsukeshi fishery over 350 kilometers away—including Nibutani Dam plaintiff Shigeru Kayano’s grandfather, who was only eleven years old at the time (Kayano 1994, 27-34; Irish 2009, 193). According to Kayano, these early IDPs from Nibutani walked “over 350 kilometers in silence…under threat of swords” in an event reminiscent of the infamous “Trail of Tears” from the United States, and Kayano’s grandfather went so far as to mutilate and poison himself in his attempts to escape Atsukeshi (Kayano 1994, 32-33). Thus, the involuntary displacement of Kayano and other local residents caused by the Saru River Development Project
perpetuates a clear pattern of injustice that has plagued Nibutani’s Ainu community for generations.

After 1868, Ainu were forcibly resettled in order to promote their agriculturalization or to clear them out of land designated for Wajin settlers. Local administrations established small hogochi (J: reservations) starting in 1877, where Ainu were resettled and given use-rights (but not ownership) of the land; in many cases, these reservations were “located on. Many Ainu communities were forcibly resettled “to inferior or marshy land” from the island’s more fertile areas, in order to make way for Wajin farmers and new township (Siddle 1996, 65-66). Instances of forced resettlement of Ainu to hogochi occurred in Tokachi (1884), Abashiri (1886), Shintotsugawa (1889), Chikabumi (1891) and Chitose (1894), among many other locations (Siddle 1996, 65-66). Some Ainu communities were even resettled more than once. For example, the Shintotsugawa Ainu were forcibly relocated a second time in 1910 when their hogochi “became the object of Wajin desires,” this time being moved to the “remote mountain settlement” of Wakkauenbetsu (Siddle 1996, 66). Similarly, Ainu who in 1888 had been forcibly relocated to the Hidaka region in order to provide labor for the Niikappu Ranch were again relocated in 1916 to “a desolate inland area” called Kaminukibetsu once their labor was no longer needed (Siddle 1996, 66; Kayano 1994, 37-41). Other Ainu were relocated for geopolitical purposes, such as the Ainu of Sakhalin and the Kurile Islands, who were relocated to Hokkaido “in order to affirm their Japanese nationality” (Howell 2005, 184-185).

In sum, Siddle argues that “[f]orced population transfers of this kind ensured that a large proportion of Ainu were segregated and excluded from the most productive land” in Hokkaido (Siddle 1996, 67). Ironically (and, from the government’s point of view, conveniently), this widespread policy of force relocation moved many Ainu out of areas where “anyone would
recognize” them as Ainu, thus limiting their ability to qualify for land allotment under the 1899 Former Natives Protection Act. Even for those who were able to qualify for allotment, the Protection Act forbade Ainu from selling land they had been allotted, so many Ainu “were forced to remain within the artificial communities that had been created by previous policies” (Siddle 1996, 71). Like the shūjikan, these artificial communities served as disciplinary spaces, and Ainu resettlement aided Japanese statemaking and subjectmaking alike by simultaneously providing for land and labor and affirming the state’s control over the Ainu’s living conditions. In a similar fashion, the involuntary displacement of Nibutani residents to make way for the Saru River Development process continues this colonial-era practice of treating indigenous subjects as replaceable parts whom the state has license to relocate as it sees fit.

5.8 Statemaking and Subjectmaking in Contemporary Development (1945-Present)

Mason has written that “[i]f the colonial nature of modern Hokkaido has been repressed and overlooked since the Meiji era, its postcoloniality is even more obscured” (Mason 2012, 182). In many ways, the processes of Japanese statemaking and subjectmaking that were initiated prior to the Second World War continued to function in the context of Hokkaido’s post-war development. Since Japan, according to Lewallen, “is not a postcolonial occupier,” but rather a settler-colonial state, its “colonial control continues to manifest” today. Through the processes of Japanese statemaking and subjectmaking carried out during the pre-war period, “the Ainu were gradually marginalized and impoverished” (Maruyama 2014, 156). Post-war development initiatives have continued to degrade Hokkaido’s natural environment, and post-war land reforms (as well as) served to perpetuate the marginalization and impoverishment of Ainu communities. Meanwhile, the enduring legacies of the family-state ideology and the Social Darwinian “dying race” narrative further contributed to this reality.
After Japan’s defeat in WWII, Hokkaido continued to function as an important satellite economy, providing a much-needed source of food and forest products to the devastated Japanese heartland (Irish 2009, 259). To ensure a steady stream of such goods and to strengthen Japan’s border against the USSR, the planning and implementation of capital-intensive development projects resumed a few short years after the war, with the founding of the Hokkaido Development Bureau in 1950 (Irish 2009, 291). This agency issued plans for a series of development projects, which involved increasing the island’s population; expanding its production in agriculture, forestry and fisheries; and constructing infrastructure (Irish 2009, 291). Since 1950, nearly 10% of Japan’s annual budget for public works has gone to funding projects in Hokkaido (Maruyama 2013, 75). Although the Hokkaido Development Bureau had some financial support from the World Bank in its early years, many of its planned projects were ultimately never realized (Irish 2009, 292). However, among the Bureau’s projects that did survive to completion, Irish (2009) identifies hydroelectric dams and power stations as among the most important (Irish 2009, 292).

Coal mining in Hokkaido reached its peak in the recovery period after the war, with the island’s approximately 250 mines employing more than 100,000 workers in 1961 (Irish 2009, 295). The timber industry also continued to grow after the war, peaking in the mid-1970s with around 14 million cubic meters harvested for lumber, charcoal, and paper, most of which was sent to the Honshu market (Shimotori and Takahashi 1986, 165-166; Shimotori 1975, 32). Such growth would prove to be unsustainable, further driving the deforestation of Hokkaido’s natural forests and leading to an increased dependence on planted forests, which, by 1986, accounted for 1.4 million of the island’s 5.6 million hectares of forest cover (Shimotori and Takahashi 1986, 167). Because of this overexploitation, Shimotori and Takahashi (1986) argue that it “cannot be
denied…that the forests of Hokkaido are growing poorer both quantitatively and qualitatively (Shimotori and Takahashi 1986, 167). In light of this, it seems reasonable to conclude that the increase in planted forest and subsequent decrease in natural forest did in fact limit the natural flood- and erosion-control capacity of Hokkaido’s natural ecosystems, just as the Nibutani plaintiffs argued in court.

To support Hokkaido’s extractive industries, facilities such as steel plants and pulp mills spread rapidly along the coastal belt between Usudake and Tomakomai, initially incorporating only minimal controls for waste water, and frequently being sited without consideration for the environment (Simmons 1973, 288). Apart from the publicly-sponsored development of these major industries, smaller-scale private sector projects also started being pursued in the mid-1970s with little oversight from the Japanese government, including the construction of small erosion-control dams, even in protected areas (Simmons 1973, 268). Post-war agricultural development mainly followed in the footsteps of the kaitakushi, with many of the crop varieties and livestock originally introduced by Western experts in the late 19th century still being raised today. According to recent figures, Hokkaido remains a major breadbasket for the rest of Japan, growing 93% of the country’s kidney beans, 85% of its azuki beans, 70% of its wheat, 70% of its potatoes, 20% of its soybeans, and 8.5% of its rice (Irish 2009, 308). Similarly, the island produces 40% of Japan’s dairy products and more than 90% of its race horses (Irish 2009, 308; Hansen 2014, 59). Just as during the pre-war period, most goods produced in Hokkaido are exported to the Japanese heartland. In this way, Hokkaido continues to function as an economic colony of Japan, even though Japan’s colonial period is commonly believed to have ended.

Despite Hokkaido’s natural bounty and its importance to Japan’s national economy, its people lag behind the rest of Japan’s citizenry in key economic and social indicators. According
to Mason, “all inhabitants of Hokkaido are marginalized and disadvantaged in contemporary Japan as a result of persisting economic, political, and civil disparities” (Mason 2012, 183). The island’s per-capita income remains below the national average, and in 2006 unemployment in Hokkaido rose despite a decrease at the national level (Irish 2009, 326). Hokkaido’s inhabitants must also cope with the island’s higher medical costs compared to the rest of Japan (Irish 2009, 330). Adding additional pressure, Hokkaido’s extractive industries like coal mining, timber production, and ocean fisheries have all declined since the 1970s (Irish 2009, 327).

Deindustrialization—most notably the closure of 90% of Hokkaido’s coal mines—has driven unemployment and rural depopulation on the island, with about 380,000 people moving away from mining towns throughout the late 20th century (Irish 2009, 296).

Relative to the rest of Hokkaido’s inhabitants, the Ainu have been hit particularly hard. Post-war reforms instituted by the American occupation, including revisions to the 1899 Hokkaido Former Natives Protection Act in 1946 and 1947, abolished tax exemptions on allotments and ended welfare measures, such as the provision of agricultural supplies and medical services (Siddle 1996, 149). Additionally, thanks to the 1946 Agricultural Land Readjustment Law, 1,271 Ainu farmers lost the lands they had been allotted under the 1899 law, amounting to a staggering loss of 34% of arable land held by Ainu throughout Hokkaido (32% in the Hidaka region) (Siddle 1996, 149-151). As of 1987, only 1,360 hectares of the 1899 allotments remained under Ainu ownership, including, notably, the properties that would later submerged by the Nibutani Dam (Siddle 1996, 185; Maruyama 2016, 103).

To make matters worse, Ainu today continue to suffer discrimination, and lag behind the rest of Hokkaido’s inhabitants in education and employment (Advisory Council for Future Ainu Policy 2009, 15; Nakamura 2015a, 664-665). In 2008, the number of Ainu households receiving
public assistance was 1.5 times higher than the Hokkaido average and 2.5 times higher than the national average (Advisory Council for Future Ainu Policy 2009, 16). Similarly, of the approximately 17.4% of Ainu who attend university (compared to 47% for the rest of Japan), about one in five will drop out—a rate 9 times higher than the national average (Irish 2009, 211, Nozaki 2011b, 65-68; OECD 2014, 1). This lack of educational attainment has been linked to poverty and structural discrimination toward Ainu households, and Lewallen argues that “higher education is simply beyond the grasp of most Ainu families” (Nozaki 2011b, 77; Lewallen 2016, 218). In light of these socioeconomic conditions, contemporary Ainu are commonly interpellated as “underdeveloped” and in need of state intervention. In the case of the Saru River Development Project, Hiroshi Maruyama (2016) has argued that “[i]t can be said that the economic insecurity of Ainu landowners…has allowed the authorities to easily advance construction work” for the project, even though it has been fiercely opposed by some landowners (Maruyama 2016, 103).

Although the hegemonic narrative of the consanguineous imperial family-state was officially abandoned after WWII at the insistence of the US occupation, it has persisted in a somewhat altered form which continues to envision Japan as an ethnically-homogenous nation (J: tan’itsu minzoku) (Siddle 1996, 18; 156). According to Cheung (1996), the massive social changes brought by Japan’s surrender in 1945 prompted a national soul-searching, since “the search for [an essential] Japoneseness was seen as necessary for rebuilding” (Cheung 1996, 18). Illustrating this fact, around 700 treatises on Japanese identity and racial origins (J: nihonjinron) were published between 1946 and 1978 (Cheung 1996, 19). Under the discourse of ethnic homogeneity promoted by the nihonjinron, Ainu were “denied coevalness” with Wajin, being seen as members of the same “Yamato race,” but in a more “primitive” stage of social evolution
Obscured by the discourse of ethnic homogeneity promoted by the *nihonjinron* and other forms of popular media, Ainu existence as a distinct ethnic group—to say nothing of their status as an indigenous people—went unrecognized by the Japanese government until the 1990s (Maruyama 2014, 153).

Some Japanese anthropologists pursued their research into the racial origins of the Japanese to the extreme, with no regard for ethical treatment of their Ainu research subjects. Starting during the pre-war period and continuing until at least 1956, Japanese anthropologists such as Koganei Yoshikiyo and Kodama Sakuzaemon looted burial sites despite the protests of local Ainu. In total, 1,636 Ainu remains were shipped to universities throughout Japan, sometimes even before the bodies had fully decayed (Lewallen 2016, 214; Lewallen 2007, 515-516; Siddle 1996, 160). In one noteworthy instance, municipal police protected Japanese anthropologists while they excavated, removing Ainu protestors by force as they attempted to protect the bones of their family-members (Lewallen 2007, 516; Siddle 1996, 160). In other instances, Ainu who suffered from extreme poverty and poor health were tricked and cajoled into selling their blood by unscrupulous researchers disguised as medical doctors (Kayano 1994, 98-99; Lewallen 2007, 515; Siddle 1996, 160). Instances such as these affirmed the ability of the state and its agents to intrude into the most intimate spheres of Ainu communal life, all while Ainu existence was denied official recognition under Japanese law.

When Japan held its celebrations of the centennial of Hokkaido’s annexation in 1968, almost no mention of the Ainu was made, with attention instead focusing on the triumphs and struggles of Wajin settlers (Irish 2009, 205). Propelled by their growing involvement with the

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37 This idea originated out of authoritarian high modernism’s and Social Darwinism’s linkages of concepts like “progress” and “civilization” with scientific and technological advancement. Thus, it was thought that Ainu who had been assimilated into Wajin society were no longer Ainu. (Jacobson 2008, 172-173)
global indigenous peoples’ movement, in the 1970s Ainu activists increasingly began to challenge the conventional narrative of Hokkaido’s development and to demand recognition of their rights as an indigenous people. Since then, Ainu activists have gained important victories, such as the passage of the Ainu Cultural Promotion Act in 1997 which repealed the 1899 Hokkaido Former Natives Protection Act, as well as the government’s official acknowledgement of the Ainu as an indigenous people in 2008.

However, these political developments have stopped short of granting meaningful indigenous or land rights to the Ainu, instead focusing narrowly on the protection of Ainu “culture,” in the form of traditional handicrafts, performance, and language (Siddle 2002, 413). This unfortunate outcome was presaged by one Ainu activist who, when discussing the growing tourism industry and the commercialization of Ainu culture in 1972, worried that “all Ainu will just end up in the image created for them by the Wajin” (Siddle 1996, 158). Indeed, the definition of Ainu culture enshrined in the Cultural Promotion Act, according to Siddle, is one that “has been forced upon them by Wajin” (Siddle 2002, 413). Similarly, Maruyama (2014) argues that the state “is shifting its Ainu policies from welfare colonialism to culture colonialism, which means the Government manages problems with the Ainu through the apparatus of culture and community development instead of…their indigenous rights” (Maruyama 2014, 167). In short, the Japanese state remains actively engaged in contemporary Ainu subjectmaking through development projects and cultural promotion initiatives.

In the case of the Saru River Development Project, developers failed to recognize the negative environmental and social impacts the project would have until it was too late. Imbibing the hegemonic narrative of a mono-ethnic Japan, which refuses to acknowledge the existence of the Ainu, developers gave no regard to the preservation of Ainu culture until required to do so by
the Sapporo Court’s 1997 ruling in the Nibutani Dam case. Through their interpellation as “underdeveloped” and “primitive” by the Japanese state, Ainu residents were considered to be in need of state intervention, yet unqualified to comment on the impacts of the Saru River Development Project, and were thus excluded from its decision-making processes.

Although Nibutani’s Ainu residents had knowledge of the area’s environmental history which might have made developers think twice about constructing a dam in that location, the Ainu’s indigenous knowledge was completely disregarded. In light of the systematic devaluation of Ainu culture glimpsed through the historical analysis presented in this chapter, it seems likely that such indigenous knowledge would have been viewed as “backward,” especially in comparison to the techno-scientific knowledge of state-sponsored experts in economics and hydraulic engineering. By employing disciplinary techniques such as economic coercion, the Japanese government asserted its dominance over local Ainu residents who attempted to resist the project. Just as Ainu had been systematically resettled from Hokkaido’s fertile areas to make way for Wajin settlement in colonial times, Ainu landholders in Nibutani were once again expected to give up their land for the benefit of national development. Clearly, when it comes to the ways that Ainu are treated in the context of contemporary development projects, not much has changed since colonial times, despite the common view that the period of Japanese colonialism ended with the country’s surrender in WWII.

5.9 Conclusion

In this chapter, I applied the theory of statemaking and subjectmaking to the history of Japanese colonization in Hokkaido, arguing that Japanese statemaking efforts produced Hokkaido as we know it today, while Japanese subjectmaking efforts shaped the indigenous Ainu of into whatever image best fit state interests. Prior to WWII, Japanese colonial
administrators’ authoritarian high modernist ideology demanded the radical simplification of Hokkaido’s complex social-ecological system, helping to cement the Japanese state’s administrative control over the island and enabling the primitive accumulation required for Japan to transition from feudalism to capitalism. Hokkaido’s colonial-era development was instrumental to achieving these ends, triggering profound environmental change and justifying the destruction of Ainu social organization. Simultaneously, Ainu subjects were interpellated and disciplined according to the needs of the state, first as non-human barbarians, then as former-natives, and finally as “primitive” Japanese.

Development initiatives in the post-war period have in many ways replicated the material and ideological conditions of the colonial era, with the effect of perpetuating Hokkaido’s status as an economic colony of Japan. Post-war development projects have consistently been carried out largely for the benefit of state and corporate interests (Lam 2005, 71-72; Creighton 2003, 130). In Chapter 2, the concept of a “politicians’ dam” was introduced to illustrate the perception that many capital-intensive public works projects in Japan exist to serve the interests of politicians, bureaucrats, and developers, with little tangible benefit for local communities. Based on this examination of Japanese development practices in Hokkaido both before and after the Second World War, I propose that wasteful public works projects like “politicians’ dams” be viewed as contemporary examples of statemaking in action, in that they seemingly exist solely to reaffirm the relationship between capital and the state. Meanwhile, contemporary development projects reenact the colonial process of radical simplification when they incorporate only cursory impact assessments and adopt a narrow temporal scope that views development projects in a historical vacuum. As a result, significant impacts can escape official notice until after the
damage has already been done and, when indigenous peoples are involved, systemic inequality and injustices are perpetuated.

A view of the Saru River Development Project embedded within the colonial history of Hokkaido makes it clear that the roots of the project’s impacts originate in the history of Japan’s colonial invasion. Through the dual processes of statemaking and subjectmaking, Japan established and legitimated its authority over the territory and people of the northern island. Processes of statemaking like capitalist accumulation and radical simplification damaged the island’s natural environment, while processes of subjectmaking like interpellation and discipline caused irreparable harm to its indigenous people. Unsustainable extraction and development practices were widespread, not just in the Nibutani area but throughout Hokkaido, beginning as early as the Tokugawa period. These practices caused lasting environmental damage, including widespread deforestation and flooding, as well as reductions in deer and fish populations, which together caused the destitution of the Ainu in Nibutani and throughout Hokkaido. As a result, Ainu continue to lag behind the national average in terms of income, employment, and educational opportunities.

This regional history provides the context in which to evaluate the true magnitude of the Saru River Development Project’s impacts, which were discussed in Chapter 3. For local Ainu, the Saru River Development Project continues a pattern of neglect and abuse that has characterized state policies governing Ainu affairs for centuries. With the construction of the Nibutani Dam, Ainu landholders were physically, economically, and environmentally displaced—just as previous Ainu had been displaced by colonial-era modernization efforts. Through its lack of consultation with local Ainu during the project’s initial planning and assessment phase, the government ignored local Ainu’s needs and grossly undervalued their
indigenous knowledge, employing economic and legal coercion to discipline those who resisted. Just as colonial-era projects radically simplified Ainu social organization to accommodate taxation and the wage-labor system, Japan’s insistence on the use of individual negotiations in the expropriation process (see Chapter 2) undermines Ainu communal solidarity and hinders the broader effort for Ainu indigenous rights. The net effect of the government’s approach to land expropriation and compensation in this fashion has been to enforce a disciplinary state of atomization on Ainu landholders in order to weaken their resistance. Meanwhile, under the dominant paradigm of development in contemporary Japan, wasteful public works like the Saru River Development Project and other “politicians’ dams” continue to be championed by LDP politicians seemingly for the sole purpose of reaffirming ties between capital and the state (see Chapter 2).

Although efforts to make the planning and construction of the Biratori Dam more representative of local interests and concerns have produced some encouraging changes, considerable work remains if future development in the Saru River region is to affirm Japan’s commitment to Ainu indigenous rights, as expressed in the 1997 Cultural Promotion Act and the government’s 2008 acknowledgement of the Ainu’s indigenous status. In this study’s final chapter, I issue recommendations for future research and policy changes that can begin to redress this centuries-long history of injustice.

38 The issue of individual versus collective rights in the Ainu rights movement has been widely remarked on (Porter 2008; Maruyama 2014, 15; Siddle 1996, 166-170). Porter (2008) explains that the Japanese government’s insistence on individual rights originates in the post-war Constitution of Japan, which was heavily inspired by the US Constitution (Porter 2008, 210). In response to Ainu efforts to gain collective rights as an indigenous people—which indigenous peoples in the United States, Canada, Australia, and New Zealand all enjoy to varying degrees—Maruyama (2014) notes that the Japanese government “has insisted that collective rights are contradictory to the…nature of the constitution” (Maruyama 2014, 15). As a result of this strict adherence to the concept of additional rights, Porter argues that “the denial of collective rights…indicates that the Ainu may receive little or no benefits” from Japan’s 2007 adoption of UNDRIP and its official 2008 acknowledgment of the Ainu’s indigenous status. Japan’s conventional use of individual bargaining in expropriation and compensation negotiations concerning dam construction fits within the country’s general pattern of emphasizing individual rights at the expense of collective rights.
Chapter 6: Conclusion

6.1 Policy Recommendations

The review of the Saru River Development Project presented in this study showed that the Nibutani Dam had a significant negative impact on infrastructure, livelihood, and community. In the balance, the benefits the dam provides, in the form of modest gains in energy and water supply and its questionable capacity for flood control, do not seem to outweigh its significant costs. Simply put, the social mitigation measures involved in the Nibutani Dam’s construction—which were limited to cash compensation for the value of their expropriated land—were inadequate to mitigate the harm caused by the dam. It needs to be determined why internally-displaced persons (IDPs) from Nibutani did not receive funds earmarked for reservoir area development and environmental restoration under the Act on Special Measures for Reservoir Area Development (ASMRAD), despite the dam falling under the law’s purview. It also needs to be determined whether Nibutani IDPs might still be eligible to receive financial assistance through ASMRAD, given the possibility that many of them continue to struggle with the dam’s lasting impacts. If so, ASMRAD funds should be used for Ainu-led sustainable development projects, like Kaizawa Koichi’s non-profit reforestation initiative, National Trust Chikornai.

The Biratori Cultural Impact Assessment (CIA) indicated that gaining a better understanding of the Nibutani Dam’s impacts is critically important for predicting and mitigating the impacts of the proposed Biratori Dam, the other dam planned under the Saru River Development Project (Iwasaki-Goodman and Kaizawa 2004, 7-8). Although this study has attempted to collect all available information on the Nibutani Dam’s impacts and organize them according to a new organizational framework in order to aid future comparative research into the
impacts of dams, many of these impacts remain poorly understood. Part of the reason for this has been a lack of follow-up studies and continuous environmental monitoring in the years since the dam’s completion. In crafting the Matrix Framework, Kirchherr and Charles (2016) stressed the need to pay sufficient attention to dams’ longitudinal impacts, which may persist or even worsen many years after the initial displacement. Previous studies of resettlement programs, both globally and within Japan, have largely fallen short in this regard (Matsumoto, et al. 2012, 118). Takesada (2009) calls for an approach to resettlement called “far-sightedness,” which he defines as the preparedness to take responsibility for resettlers’ long-term wellbeing (Takesada 2009, 429). Policymakers and researchers should follow Takesada’s lead and adopt a “far-sighted” view of the Nibutani Dam’s impacts, making follow-up studies a major priority.

More research therefore needs to be done to assess the current wellbeing of Nibutani IDPs. In particular, in-depth ethnographic fieldwork is required to produce a “thick” account of Nibutani IDPs’ experiences before, during, and after resettlement. This study has been intended in part to serve as a foundation for such fieldwork to be carried out in the future, including the PhD dissertation research that I myself intend to one day conduct. In addition, continuous environmental monitoring is also needed to fully understand the dam’s impacts on the Saru River watershed’s riparian ecology (Takahasi 1997, 184-185). As Nibutani plaintiff Kaizawa Koichi puts it, “if we must have dams, if we must have river improvements, we can live with them. Just stop and think that we are changing the ecological balance in the Saru River” (Kaizawa 2005, 140). The impacts of the Saru River Development Project should be viewed holistically, rather than treating each of the two dam’s impacts individually. Policymakers and researchers should adopt a watershed-level perspective and treat the impacts of both dams as cumulative impacts on the same river system.
The Biratori CIA was an important litmus test that can be used to gauge the Japanese
government’s willingness to follow through with its obligation for public participation in public
works projects, as mandated under the Amended River Act and the Environmental Impact
Assessment Law. Although the CIA was successful as a research project—resulting in the
collection of an impressive amount of valuable information about the proposed dam site—the
Japanese government has seemed hesitant to fully embrace the promise of public participation
enshrined in its own laws. The government has instead treated the involvement of Ainu in the
Saru River Development Project as a “must-do process,” and has not displayed an eagerness to
incorporate local opinions into the final decision-making (Nakamura 2008, 430). Kawashima
(2004) argues that effective participation, as defined by the International Covenant on Civil and
Political Rights (ICPR) and the Committee on the Elimination of All Forms of Racial
Discrimination (CERD), requires that the public have a meaningful influence over final
outcomes (Kawashima 2004, 24-28). Effective participation of indigenous peoples in
development projects—grounded in free, prior, and informed consent—can serve as a basis for
the articulation of indigenous rights in the Japanese legal context, and contribute to their
realization (Kawashima 2004, 24-28; Maruyama 2013, 83; Nakamura 2013, 27).

But to be truly effective, public participation must also include the option for a
community to unequivocally reject a project it deems unsuitable. Takesada echoes the call for
effective participation in influencing a project’s ultimate outcome, arguing that participation
“should not be treated merely as an occasion at which planners can persuade resettlers”
(Takesada 2009, 429). Unfortunately, in the “must-do process” of the Biratori CIA, this appears
to have been precisely the case, since it was already decided that the construction of the dam
would proceed well before the assessment was even conducted. Perhaps proponents of the dam
thought that the CIA would appease local community members and convince them that the project would be a net benefit for the community. If anything, the Biratori CIA’s findings have only reinforced the importance and irreplaceability of the affected area and confirmed the fears of local residents opposed to the dam.

Although the CIA did not result in the outright cancellation of the Biratori Dam, it seems to have given the Ainu a much stronger voice in the Saru River Development Project than they otherwise would have had. The fact that funding for the dam is currently suspended until a consensus can be reached on mitigation and compensation efforts seems encouraging, though it is not quite clear whether or not the consensus that is being sought will truly reflect public opinion, or be treated as another opportunity to appease and persuade the community to accept the dam. In order to ensure the process of reaching consensus is fair to local residents, government transparency is of the utmost importance. This is an important point not just for this specific case, for Japan’s domestic dam construction more broadly (Harashina 1998, 309).

Government decision-making regarding dam construction should be made more transparent, and important decisions should not be made behind closed doors, but with the effective participation of the local community.

This study’s historically-rooted political ecology of the Saru River Development Project revealed that its story begins with Japan’s colonial invasion of Hokkaido. Through the dual historical process of statemaking and subjectmaking, Japan established and legitimated its authority over the territory and people of Hokkaido. Processes of statemaking like capitalist accumulation and radical simplification triggered significant damage to the island’s natural environment, while processes of subjectmaking like interpellation and discipline caused irreparable harm to its indigenous people. Thus, when livelihood reconstruction occurs following
development-induced displacement, it is inadequate to simply restore the Ainu community to its pre-project standard of living, since this community was marginalized for centuries and continues to lag behind the national average in terms of income, employment, and educational opportunities. If, indeed, the construction of dams in Hokkaido must go forward, livelihood reconstruction efforts must avow to greatly surpass pre-construction living standards—if Japan is to become a truly equitable society. This study has shown that, in the case of the Saru River Development Project, Japan has mostly failed in this regard.

Given the economic dispossession Ainu faced under Japanese statemaking, any project in the Nibutani area that does not directly benefit the local Ainu community is simply unacceptable. Similarly, since the Ainu’s ethnic identity and pride were systematically devalued under Japanese subjectmaking, any project that does irreparable damage to their cultural heritage or hinders revitalization efforts—including environmental restoration efforts, such as those aiming to restore forestland and salmon populations—must be critically examined. If such a project does not meet with approval from local residents, it must be rejected outright. Based on this analysis, it is clear that Ainu residents’ economic situation was a major factor that sowed resignation over the inevitability of the Nibutani Dam’s construction and influenced their decision not to oppose the dam. The Ainu’s economic situation should not be used in this manner to persuade them to adopt development projects that will irreparably damage their cultural heritage, such as the proposed Biratori Dam. Other measures are needed to address pressing economic problems in ways that are both environmentally and culturally sustainable.

6.2 Toward an Indigenous Paradigm of Sustainable Development

During the Nibutani Dam case, the Ainu plaintiffs disputed the government’s argument that the dam is necessary to prevent floods. Their argument rested on the idea that environmental
degradation in the wake of massive overexploitation during the colonial era and afterward were the root cause of these so-called “natural disasters,” and that building a dam would only make this problem worse. The findings of this study seem to support the Nibutani Dam Case plaintiffs’ argument that local flooding was a man-made problem caused by unsustainable exploitation of the local forests by Japanese timber companies in both the pre-war and post-war periods. In fact, it appears that this is only one of the most obvious of the many ways that Hokkaido’s landscapes and watersheds were indelibly altered through Japanese statemaking. For Ainu who have spent most of their lives in the Nibutani area, ecological changes are impossible to deny. Kaizawa Koichi recalled the state of the Saru River during his youth, summarizing the damage done to the river since the construction of the Nibutani Dam:

“I was born in Nibutani and grew up watching sisirmuka (Saru River) every day for more than a quarter of a century. When I was young, I got together with friends and went swimming in the Saru River. When we got tired, we rested by a fire on the river bank. When we got hungry, we went into the river and caught bullhead, loach and river shrimp, grilled them on a fire, and swam until it was dark. To get to the other side of the river to help with the farming, we used cip (a boat) or a house wagon. In the fall, several house wagons went across the river to bring back the harvest. Around that time, children gathered around trees near river bank to gather kokuwa (Actinidia arguta) and mountain grapes, as they are sweeter than those of other trees. In winter, there were many house sleds carrying wood for stoves from the other side of the river, travelling on the frozen Saru River. These are the scenes of the past in Nibutani. Now, we see that the Saru River does not freeze in winter, fish cannot swim into tributaries because of the lowering of river beds, slanted bridges and other constructions. (Kaizawa 2005, 140).

The historical review presented in this study found that unsustainable forestry practices were widespread not just in the Nibutani area, but throughout Hokkaido, beginning as early as the 17th century. This seems to corroborate the indigenous knowledge put forth by the Ainu plaintiffs during the trial, who understood that in order to understand the Nibutani Dam, one needed to contextualize it within the environmental history of the region. That this indigenous knowledge
was devalued by the court in the Nibutani Dam case shows that the colonial-era interpellation of Ainu as “backward” or “primitive” persists, albeit in a somewhat veiled and transformed fashion. The findings of this study suggest that indigenous knowledge should be taken more seriously in decision-making involving development planning in indigenous communities (cf. Öhman 2016, 50-51).

If the Ainu landholders’ indigenous knowledge had been seen as valuable and had been solicited by developers, issues with the Nibutani Dam such as sediment buildup and the uselessness dam’s downstream location for flood control might have been avoided. More importantly, the irreparable damage to sites precious to Ainu cultural heritage, as well as the less-tangible but equally-severe damage to the local Ainu’s communal solidarity and ethnic pride, might have been prevented. Today, twenty years after the Nibutani Dam case, the dam is nearing the end of its useful lifespan as the reservoir continues to fill with sediment. Perhaps a decade remains—or two, at most—before costly additional measures become necessary for the dam to continue to function. What hardships will local residents be made to endure when that inevitability comes to pass? Will the damages caused to Ainu culture and the local environment really have been worth it when the dam ultimately ceases to function at all, and needs to be decommissioned?

Owing to Hokkaido’s location within the borders of the contemporary nation of Japan, whose expenditure on public works is among the world’s highest, capital-intensive development has been a major feature of the island’s story. Irish (2009) argues that “[f]rom the time that the island became Hokkaido, its history has been one of development” (Irish 2009, 327). In Hidaka sub-prefecture, and particularly in Biratori district where the village of Nibutani is located, this same pattern played out on a local scale. After the Second World War, Biratori “left its future to
the huge public works” of the Saru River Development Project (Maruyama 2012, 670).
According to the prevailing logic of the post-war era, ambitious public works like dams were “temples of modernity” that represented civilization’s conquest of nature, making them “central elements in post-war and post-colonial pursuits of modernization and nation-building, and a preferred instrument for displaying economic superpower” (Huber, et al. 2016, 40). For indigenous peoples like the Ainu, development projects like these tell a different story. In his 1996 testimony to the Sapporo Court, Kaizawa Koichi expressed an indigenous perspective on the Nibutani Dam, saying “[t]his concrete monstrosity has become a symbol of the environmental degradation of the peaceful land around Nibutani’s Saru River” (Maruyama 2012, 72). For Ainu like Kaizawa, public investment in dam construction has failed to yield the promise of development, and has only contributed to the continual loss of “the ground on which to succeed with our culture” that has persisted for centuries (Kaizawa 2004, 8). He passionately calls for an alternative approach to local development, one that is both environmentally and culturally sustainable: “Let’s stop peeling the skin of the earth, cutting up the meat and shaving the bone of the earth” (Kaizawa 2005, 138).

In the years since the Sapporo Court’s historic 1997 ruling, Kaizawa Koichi has demonstrated such an alternative approach, and his efforts bear special attention. Through his work with the non-profit organization National Trust Chikornai, Kaizawa is actively involved in the reforestation of the wilderness of around the Saru and Nukabira Rivers, with the goal of restoring the natural areas necessary for the reproduction of Ainu culture and indigenous knowledge. Although Kaizawa acknowledges that he will probably not live long enough to see the fruits of his labors with the organization, his vision displays a “far-sighted” concern with the wellbeing of future generations of Ainu:
This is a movement to recover the real forest in Hokkaido. Probably, after 200 to 300 years, the real forest in Hokkaido will come back. I am not able to witness that forest, but my grandchildren or great grandchildren or their descendants will look at that forest, and realize that the Ainu people constructed their culture in that real forest in Hokkaido” (Kaizawa 2004, 8).

In addition to its potential to contribute to the national project of Ainu cultural revitalization as affirmed by the 1997 Cultural Promotion Act, Kaizawa’s vision for National Trust Chikornai includes practical economic and environmental benefits to rival those gained from large infrastructure projects, and at a fraction of the cost:

I would like to see the comparison of economic benefits over ten and fifty years of managing rivers using natural forests and managing rivers using dams. Those who work in the Development Agency are expert river engineers, and should be capable of doing it. The best solution to the current problem is to install pumps in the flood-prone area inside the embankment, to open all seven water-gates in the Nibutani Dam, and to control water flow only at times of heavy rain. The river banks could be used for growing plants such as ditch reeds, cattails and willows, which are necessary for the preservation of the Ainu culture. The budget that has been earmarked for construction of the Biratori Dam should be used for the conservation of the forest, hiring local people for the job. Considering the fact that the Saru River is rapidflowing and carries a lot of sand and soil, this method of management would be more effective than building dams. (Kaizawa 2005, 138).

If it turns out that Nibutani is eligible to receive ASMRAD funding for reservoir area development, as the findings of this study indicate is likely to be the case, these funds should be used to support Ainu-led development efforts like National Trust Chikornai. With the Biratori Dam in administrative limbo, the time is ripe for a shift in the government’s approach to regional development. If development is to be made truly sustainable, we should harken to the lessons of Ainu elders like Kaizawa, and help the Ainu regain the natural areas they need as the ground to succeed with their culture.
References


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