

UNIVERSITY OF CALIFORNIA

Los Angeles

Chinese Resource Modernity:  
Environmental Government and the Resource Conflicts  
in Northeast China's Forests, 1860-1932

A dissertation submitted in partial satisfaction of the  
requirements for the degree Doctor of Philosophy  
in History

by

Xiang Chi

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ABSTRACT OF THE DISSERTATION

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Doctor of Philosophy in History

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Professor Roy Bin Wong, Chair

This dissertation explores the formation and the implication of what I call “resource modernity” in Northeast China. It examines how the perception and government of forests have changed in the late nineteenth and early twentieth century and the relationship between changing knowledge, property, and the production of Chinese territoriality. I focus on the competing knowledges (*weji* vs. *sanrin*), policies (state-sponsored logging vs. timber-oriented manufacturing industry), and institutions (civil forestry bureau vs. scientific and colonial expansion) over the forest resources between the Japanese and Chinese forest government from 1860 to 1932, and argue for the emergence of Chinese resource modernity in terms of the state’s capacity to classify, register, and defend the frontier timber resources under the new conceptual framework. The goal of my research is to illuminate how forests in this region that embedded in varied political economies and characterized by diversified categories of *weji* (ancient woodland), *shan* (mountain), *di* (land), and *lin* (forest) were

transformed into a single domain for modern government, and how *ringyo* (Ja: 林業 forestry industry), a forest policy that underpinned Japan's extractive and violent expansion into Hokkaido, Taiwan and Korea was borrowed, internalized, and modified by the Qing Chinese elites and the Beiyang government as a self-strengthening discourse and border-securing strategy in Northeast China's semi-colonial context as *linye* (Ch: 林業 literally wood manufacturing), that naturalized the violence into science. I argue that although the Chinese characters of the term *ringyo* and *linye* stayed the same in both the Japanese forestry surveys and the Chinese official reports, however, the meanings and practices bifurcated. Moreover, I show how the category *lin/rin* (林 wood) was established as the fixed standard term for the forest under the notion of modern resource government. Specifically, I examine the historical development of state-owned forests (*guoyoulin*) as a bureaucratic and land-tenure category during the early twentieth century and the resource conflicts caused by changes in management priorities. This research points out that the term *lin/rin* was more than the natural landscape of trees. Rather, it was the result of the knowledge construction for the formation of the modern resource regime.

The dissertation of Xiang Chi is approved.

Richard von Glahn

Katsuya Hirano

Susanna B. Hecht

Roy Bin Wong, Committee Chair

University of California, Los Angeles

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*This dissertation is dedicated to  
my parents and my husband*

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# XIANG CHI

## EDUCATION

### **UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)**

Sept. 2014-Present, *Ph.D.* Candidate, History Department

Dissertation: “Chinese Resource Modernity: Environmental Government and the Resource Conflicts in Northeast China’s Forests, 1860-1932”

Committee: R. Bin Wong (Advisor), Richard von Glahn, Katsuya Hirano, Susanna Hecht

### **TSINGHUA UNIVERSITY, Beijing, China**

Jun 2014, *M.A.*, Department of History

### **SICHUAN UNIVERSITY, Chengdu, China**

Jul 2011, *B.A., magna cum laude*, National Humanities Talent Training Base in History (Dual degree in Finance)

## RESEARCH AND TEACHING INTERESTS

Modern Chinese History, Chinese Environmental History, Chinese Economic History, Chinese Frontier History, Social History of Forests, History of Manchuria, History of Japanese Imperialism, Environmental Humanities, Digital Humanities

## PUBLICATIONS

### ***Articles under Review***

Xiang Chi. “The Reconstruction of China’s Northeastern Frontier: Trade, Disputes, and the Lumbermen Along the Yalu River (1878-1930).” Under review with *Environmental History*.

### ***Articles in peer-reviewed journals***

Xiang Chi. (In Chinese) “The Invention of the Forestry Bureau: The Jilin Provincial Forestry Bureau Under the View of the New Policies in the Late Qing Dynasty,” *Journal of Tsinghua University*, No.3, Vol. 34, 2019, 133-154.

Xiang Chi. (In Chinese) “Imagined the ‘Other’: A Case Study of the Qiang Cognition of the British Missionary Thomas Torrance.” *Dongyue Tribune*, Vol.4, April, (2012): 94-101.

Xiang Chi, Weimin Zhong. (In Chinese) “The Emperor’s Land and The Border Town: The Transformation of Fuzhou’s Role in Imperial Vision Before and After the Opening of the Five Treaty Ports.”, *Journal of Fujian Normal University*, No.1 (2015): 103-109.

### ***Chapters in edited volumes:***

Xiang Chi. (in Chinese) “State-Local Interaction: A Case Study of Lu Zuofu’s Attempt at Beibei, Sichuan Province, 1927-1935.” *Selected Papers from the International Conference on New Frontiers of Urban History* ed. Zhang Jin (Chongqing University Press, 2016).

### ***Book Reviews:***

Xiang Chi. “Review of Shaodan, *Remote Homeland, Recovered Borderland: Manchus, Manchoukuo, and Manchuria, 1907-1985*, Honolulu: University of Hawai’i Press, 2011.” in *Global History Review* 20, 2019, forthcoming.

Xiang Chi. “The Origin of Modern Economy: A Comparative Study of Western Europe and China.” *Quantitative Historical Research*, Vol.1 (2014): 3-15.

## INTRODUCTION

“What was *weji*? It was outstanding viewing from a distance.  
What a sea of trees and you obtain the enlightenment of Hua-yen by looking at them.  
Purple flowers came out between the trees, and boundless forests locked the rock.  
It was like looking at the Bohai Sea, and you knew the salty taste before you had drunk it.”

窩集夫何許，遙瞻已不凡。  
真堪稱樹海，乍可悟華嚴。  
紫脆粉間柯，蒼蕈鎖奧岩。  
恰如望瀛渤，未飲早知咸。

——Qianlong, *A Verse on Stationing at the Kulene Weji (zhubi kulene woji kouzhan 駐蹕庫勒訥窩集口占)*<sup>1</sup>

Written in 1743, the poem composed by the Qianlong emperor on routine worship to the Changbai Mountains, presented a picture of Manchuria as a land clothed in wildwood, but also, in his poetic vision, a space defended by forest. *Weji*, transcribed in classic Chinese as 窩集, specially refers to the ancient woodlands in Jilin, Ningguta, and Heilongjiang.<sup>2</sup> Sixty-six years ago in 1677, the Kangxi emperor demanded the closing-off of the Liaodong region. As pointed out by the Qing historians, the conservation of Manchuria’s natural environment was part of Qing’s larger imperial project guided by the Manchu purity concept.<sup>3</sup> The efforts were no in vain. In the 1910s, the Japanese forestry specialist recorded the legacies of Qing’s imperial forests in a series of *Mantetsu* surveys that were later documented by the Republican Chinese forestry expert Chen Rong:

Table 1: The Forest Acreage and Volume in Three Eastern Provinces

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<sup>1</sup> Hongli 愛新覺羅·弘歷, *Zhubi kulene woji 駐蹕庫勒訥窩集*, in Sa Ying’e 薩英額, *Jilin shizhi jilin waiji 吉林史誌·吉林外記*, collated by Shi Jixiang 史吉祥 and Zhang Yu 張羽 (Shanghai: shanghai guji chubanshe, 1995), 3.

<sup>2</sup> Hu Zengyi 胡增益, *Xin manhan dacidian 新滿漢大詞典* (Xinjiang: xinjiang renmin chubanshe, 1992), 817. Wang Chi-Wu, *Forests of China* (Cambridge: Harvard University, 1961), 34.

<sup>3</sup> Jonathan, Schlesinger, *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule*, (Stanford, California: Stanford University Press, 2016).

Forest Areas	Provinces	Acreage (1000 <i>mu</i> )	Volume (1000 <i>shi</i> )			References
			Conifer	Broadleaves	Total	
Yalu River Right Bank and Hun River Valley	Liaoning	9,030			433,352	1915 survey
Sungari (Songhua River) Valley	Liaoning, Jilin	14,370	401,581	501,539	903,123	1928 correction
Tumen River Valley	Liaoning, Jilin	8,330	132,374	271,227	433,601	1917 survey
Mudan River Valley	Jilin	6,350	211,933	209,018	420,951	1915 survey
Lalin River Valley	Jilin	6,340	103,731	197,419	301,150	1917 survey
Chinese Eastern Railway Eastern Lines	Jilin	21,350	273,883	650,770	924,652	1917 survey
Sanxing Area	Jilin	52,910	904,618	1,713,981	2,618,602	1917 survey
Greater Khingan Mountains (Daxing anling)	Heilongjiang	140,000			5,600,000	Estimation
Lesser Khingan Mountains (Xiaoxing anling)	Heilongjiang	100,000			8,500,000	Estimation
<b>Total</b>		861,080			15,135,481	

Source: 滿州產業統計 *Mantetsu Industry Accounts*, 1930, in Chenrong 陈嵘, *Lidai senlin shilue jinguo lizheng shiliao* 歷代森林史略及民國林政史料 (Nanjing: Jinling daxue nongxueyuan senlinxi linyebu tuiguangbu, 1951), 114-115.

Shown in a new set of a list of tables and graphs, the pristine woodland that the Qianlong emperor had marveled at was transcribed into structured data under the title of “industry statistics.” A sequence of professional terms such as “forest coverage” and “forest form,” as well as the quantitative acreage and volumes portrayed a different, abstract, and scientific reordering of forest knowledge. Along with the new forms of knowledge about trees and vegetation types were the new governmental institutions, industrial enterprises, professional training, and national working plans that constituted what we know nowadays as modern forestry. My questions are: how did Northeast China’s forests participate in China’s modern forestry formation? Further, when *weiji* was translated into a new set of ideas of “*ringyo*” (林業 forestry) and “*sangyo*” (產業 industry), what was gained and what was lost in the new form of forest knowledge and practice?

This dissertation explores the formation and the implication of what I call “resource modernity” in Northeast China.<sup>4</sup> It examines how the perception and government of forests

<sup>4</sup> Mark Elliott (2000) reveals that beginning in the 17<sup>th</sup> century, the term “Manchuria” gradually developed into a hyponym referring to the area in Northeast Asia that the Manchu rulers of the Qing claimed as their place of origin, into which they

have changed in the late nineteenth and early twentieth century and the relationship between changing knowledge, property, and the production of Chinese territoriality. I focus on the competing knowledges (*weji* vs. *sanrin*), policies (state-sponsored logging vs. timber-oriented manufacturing industry), and institutions (civil forestry bureau vs. scientific and colonial expansion) over the forest resources between the Japanese and Chinese forest government from 1860 to 1932, and argue for the emergence of Chinese resource modernity in terms of the state's capacity to classify, register, and defend the frontier timber resources under the new conceptual framework.

The goal of my research is to illuminate how forests in this region that embedded in varied political economies and characterized by diversified categories of *weji* (窩集 ancient woodland), *shan* (山 mountain), *di* (地 land), and *lin* (林 forest) were transformed into a single domain for modern government, and how *ringyo* (Ja: 林業 forestry industry), a forest policy that underpinned Japan's extractive and violent expansion into Hokkaido, Taiwan and Korea was borrowed, internalized, and modified by the Qing Chinese elites and the Beiyang government as a self-strengthening discourse and border-securing strategy in Northeast China's semi-colonial context as *linye* (Ch: 林業 literally wood manufacturing), that naturalized the violence into science. I argue that although the Chinese characters of the term *ringyo* and *linye* stayed the same in both the Japanese forestry surveys and the Chinese official reports, however, the meanings and practices bifurcated. Moreover, I show how the category *lin/rin* (林 wood) was established as the fixed standard term for the forest under the notion of modern resource government. Specifically, I examine the historical development of state-owned forests (*guoyoulin* 國有林) as a bureaucratic and land-tenure category during the

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invested a unique identity. Therefore, in this book, I use both "Manchuria" and "Northeast China" as a historical term to refer to the region that in the 20<sup>th</sup> century has become Northeast China. See Mark Elliott, *The Limits of Tartary: Manchuria in Imperial and National Geographies*, *The Journal of Asian Studies*, 59.3(2000): 603-646.

early twentieth century and the resource conflicts caused by changes in management priorities. This research points out that the term *lin/rin* 林 was more than the natural landscape of trees. Rather, it was the result of the knowledge construction for the formation of the modern resource regime.

Forests made a different history in Manchuria, and they did so because the factors of Manchu royal closing-off, banner institutions, the Japanese imperialism, and Western forestry knowledge acted in certain specific ways. This project examines not only the commercialization of the forest but also the impact geopolitical tussles for the forests had upon local people and local governance structures. By situating my project within the forest and modern Manchuria's land management *longue durée*, the projects especially focus on the processes where forests were made into a domain fit for modern government. It shows that the natural and institutional legacies of the Qing and Japanese empires, as well as their successor states transformed the frontier forests into modern frontier forestry that would redefine the northeastern frontier.

The temporal scope extends from the decline in the Qing's capacity of centralization in the 1860s, to the establishment of the puppet sovereign Manchukuo in 1932. Thus the history of Northeast China's forests illuminates long-term economic and environmental processes spanning from the late Qing, the Beiyang period, and the Zhang Zuolin 張作霖 regime (1916-1928). Events in Manchuria, China, from 1860 to 1932, represent a crucial period in Chinese and world history. It encapsulates the rise of Japan and its struggles with Tsar Russia for regional dominance, placing Manchuria directly within its crosshairs, the Qing dynasty's declining centralization, the rise of powerful factional rulers, and the establishment of the puppet Manchukuo state in 1932. The construction of the China-Eastern Railway (CER) in 1898 challenged the Qing government's frontier defense, to use the old-growth forests as a Sino-Russo buffer zone. Russia's defeat to Japan in 1905, the first Asian polity to defeat a European

one in modern times, continued to alter the balance of the region's political landscape and projected the changes on forests.<sup>5</sup> Winning the war, Japan not only inherited the forest concessions attached the southern line of the CER (what we know as the South Manchurian railway) but also managed to directly invest in the Yalu River forest by establishing the Sino-Japanese Yalu River Logging Company that later was privatized as a branch under the Okura *zaibatsu* 大倉. The Manchurian forests that encompassed diplomatic negotiations and ethnic disputes thus raised Chinese national attention.

In response, the Qing government set up the first civil Forestry Bureau (*Jilin linyeju* 吉林林業局) aimed at reestablishing the frontier control. As a result, the banner forests governed as tribute mountains under the Imperial Household Department were thrown open and rearranged into the government lumber yards. The tribute mountains with their banner institutions and responsibilities for the Manchu royal family came to a stop. The political and economic campaigns on forests in Northeast China, and therefore accelerated the timber extraction for revenue collection and empowered the Chinese discourse of *linye* (林業 wood manufacture or forestry). With the fall of the Qing dynasty in 1912, the new Republican Beijing government launched China's first state forestry program, characterized by the promulgation of the Regulations of the State Forest Allocations in Three Eastern Provinces (*dongsansheng guoyoulin fafang guize* 東三省國有林發放規則) and the promotion of the afforestation movement. State forest tenure (*guoyoulin* 國有林) thus became a new land-tenure category and institution, redefining the property system. Consequently, this historical

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<sup>5</sup> Kaoru Sugihara, R. Bin Wong, "Industrial Revolution in Early Modern World History," in *Cambridge World History* 6.2 (2015):283-310. Tetsuji Okazaki, "The Japanese Firm under the Wartime Planned Economy," in Masahiko Aoki and Renald Dore, eds., *The Japanese Firm* (New York: Oxford University Press, 2000):350-378. Enatsu Yoshiki, *Banner Legacy: The Rise of the Fengtian Local Elite at the End of the Qing* (Michigan: University of Michigan Ann Arbor Press, 2004).

period played out in the Manchurian forests, encompasses a radical reordering of both geopolitical and local power, and thus triggering a drastic change of the property regimes and resource governance.

Using the unpublished Chinese and Japanese language sources from the provincial and municipal archives of Liaoning, Jilin and Heilongjiang in northeast China, the Asia Library in Jilin University, the National Diet Library in Tokyo, and the Hoover Institute, I challenge the notion that the history of the 20th century Northeast China's forests is a mere story of Japanese imperialism or a history of scientific forestry. Instead, I show that the forest government in Northeast China was a more complicated transnational history of a forested borderland space, formed through constant negotiation and collaboration between society and environment, and the larger political and economic developments of forest administration that were inspired by these negotiations and collaboration. Through constant tension and collaboration between society and environment, China and the imperialist powers, central and local governments, as well as Manchu and Han interactions, the institutional legacies of banners, Japanese imperialism, civilian reform, and the Beiyang national forest legislation, competed and intersected with each, creating China's "resource modernity" that redefined Northeast China. To illustrate and elaborate how resource modernity was shaped by different influences, I ground my project on the intersection of three scholarships of the history of the Manchurian frontier, Sino-Japanese relations, and environmental history, and seek to contribute to Northeast Asian studies as well as global forest history in three ways.

First, this project tells a local history about the Manchurian society during China's decentralization in the late imperial and the Republican Era. New Qing history research has greatly advanced of understanding about the reciprocal interaction between the Manchurian environment and the Qing plurality, but little do they talk about the Manchurian local society itself. My project then focuses on the social transition of the forested environment in

Manchuria from the New Policies' Era to the Beiyang period, and pays attention to the formation of the hybrid knowledge of *linye* (forestry) and the Qing legacies in land being both recognized and challenged by the new vision of the state forest tenure. Moreover, bringing the Beiyang period into the literature on the Manchurian history makes it possible to identify ecological processes that linked the late Qing and the puppet Manchukuo.

Second, this project centers on the multilayered Chinese and Japanese factors in the Manchurian forestry regime making. One of the problems, of the previous research on Northeast China during the late Qing and the Republican period, is that a lot of them were limited to Japanese imperialism, and only focused on the Japanese imperial agencies' impact on Manchuria, such as SMR or the Kwantung Army. Few studies have noticed the Chinese factors in shaping the forestry landscapes of Northeast China in the 20<sup>th</sup> century. By "Chinese," I mean both the late Qing's and the Republican Beiyang government's efforts to internalize the modern forestry knowledge from Japan, as well as the specific policies designed by the local fractional powers, such as the "provincial forest zones" developed by Zhang Zuolin in Fengtian. This study will carefully highlight the impact of the Chinese interpretation of *linye*, the national forest legislation, and the provincial monopolies of forests. This study will distinguish the different Japanese factors and investigate China's responses to them.

Third, this project also seeks to contribute to the Chinese and global environment and forest studies. Scholars have examined the paradigms and practices of tropical forests in India, Indonesia, Brazil during 19th-20th century, and discovered the ideology of "topicality" and the institution of "political forestry" developed around the tropical world.<sup>6</sup> However, the

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<sup>6</sup> Vandergeest, Peter, and Nancy Lee Peluso, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1," *Environment and History*, Vol.12, No. 1, 2006, pp.31-64. Vandergeest, Peter, and Nancy Lee Peluso, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 2," *Environment and History* Vol.12, No.4, 2006,

establishment of professional forestry in China was a more complicated process. Although China had failed in a series of imperial wars and had part of its territories ceded or leased to Western powers and Japan, the sovereign power of the Chinese government always existed and never ceased its trials of re-centralization. Therefore, the direct transplantation of the British-style forestry into the indigenous society, such as the story of India's Kumaon forests, did not happen in China.<sup>7</sup> Rather, the Chinese government and elites mixed the Japanese-translated Western forestry knowledge with the Chinese classical ideology of "good governance," creating a new forestry discourse and practice of *linye* that mobilized China's modern state-making. Thus, this dissertation offers a temperate-zone forest history of anti-imperialism in conversation with the tropical colonial forestry.

Further, Duara, in his *Sovereignty and Authenticity*, has pointed out that forests stood at the very heart of Manchukuo (1932-1945) environment policy and moral ideology, in that China was agriculturalist, and forest thus represented non-china.<sup>8</sup> This study will show that the late Qing and the Republican government were able to practice forestry, and the rules they set and the initiatives they took were later inherited by Manchukuo forestry management. Therefore, research on Northeast China's forestry also contributed a "Chineseness" to the environmental studies.

## FORESTRY AND THE MODERN RESOURCE GOVERNMENT

The government of forest is a lens through which nature, capitalism, and empire intersected. Generally speaking, the emergence of modern forestry and the development of

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359-393. Susanna B. Hecht, "From Fragmentation to Forest Resurgence: Paradigms, Representations, and Practices," in Susanna B. Hecht etc. eds., *The Social Lives of Forests: Past, Present, and Future of Woodland Resurgence* (Chicago: University of Chicago Press, 2014).

<sup>7</sup> Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects*, (Duke University Press, 2005).

<sup>8</sup> Duara, *Sovereignty, and Authenticity: Manchukuo and the East Asian Modern* (Rowman & Littlefield Publishers, 2004).

timber-oriented industries were closely related to capitalist industrialization and the formation of modern nation-states.<sup>9</sup> The growth of population and the demand for fuels prompted the state and society to pursue a more systematic management pattern of controlling resources and expanding supply. Therefore, there developed a set of scientific principles and statistical concepts to form and sustain the modern states.<sup>10</sup> The encountering between Western forestry and the non-Western indigenous society was a major focus in the studies of modern forestry, especially in the tropical world. Scholars have examined the paradigms and practices of tropical forests in Southeast Asia and Latin America in the twentieth century and characterized the transplantation of the Western forestry institution to the non-European world as “professional forestry.”<sup>11</sup> Nancy Peluso’s work on the professional forestry established in colonial and post-colonial Indonesia, Malaysia and Thailand, under the British and the later Japanese rules, shows that the so-called “scientific forestry management” was not only a top-

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<sup>9</sup> *The Forest on the Sea* tells a unique forest story in Venice about the war mobilization that speaks to the question of early modern state rationality. Navy development largely depends on timber supply for fleets making; therefore, the forest legislation and conservation was vital to a state’s navy power. By discussing the ways in which Venice strengthened its naval capability, the author argues that the control exerted on forests enhanced and legitimized state rationality. See Appuhn Karl, *A Forest on the Sea: Environmental Expertise in Renaissance Venice* (John Hopkins University Press, 2009). Appuhn, “Inventing Nature: Forests, Forestry, and State Power in Renaissance Venice, *the Journal of Modern History*, 72.4(2000): 851-89.

<sup>10</sup> About forestry and the formation of the modern capitalist world, see John Perlin, *A Forest Journey: the role of wood in the development of civilization*, (Harvard University Press, 1989); John Perlin, *the Foundation of Civilization*, (University of Minnesota Press, 2011); Bernahard Eduard Fernow, *A Brief History of Forestry: In Europe, the United States and Other Countries*, (Toronto: University Press, 1911); Jack Westoby, *Introduction to World Forestry*, (Wiley Press, 1991); Rolf Peter Sieferle, *The Subterranean Forest: Energy Systems and the Industrial Revolution*, (White Horse Press, 2010); Joachim Radkau, *Wood: A History*, (Polity Press, 2012); About deforestation and ecological implications, see J. Ives, David C. Pitt, *Deforestation: Social Dynamics in Watersheds and Mountain Ecosystems*, (Routledge Press, 1988); Schneider, Aaron L., *Deforestation and Development in Canada and the Tropics: The Impact on People and the Environment*, (University College of Cape Breton Press, 1989). About the newest reflections on the forest management and the capitalist world, see Anna Lowenhaupt Tsing, *The Mushrooms at the End of the World: On the Possibility of Life in Capitalist Ruins*, (Princeton University Press, 2015).

<sup>11</sup> Susanna Hecht, Kathleen Morrison, Christine Paddock, eds., *The Social Lives of Forest: Past, Present, and Future of Woodland Resurgence* (Chicago: University of Chicago Press, 2008). Nancy Peluso and Peter Vandergeest, “Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1” *Environmental History* 12.1 (2006): 31-64.

down pattern imposed by the European colonizers. Rather, it was a process of bottom-up where the local forestry bureau governor's agency constituted an essential part of the scientific transplantation.<sup>12</sup> Nancy Langston's *Forest Dreams, Forest Nightmares: The Paradox of Old Growth in the Inland West* offers another framework of control-resistance pattern in Java's colonial forestry. Shifting from the local governor's agency, she focuses on the consequences that the local people suffered from and their resistance towards the colonial rule regarding the forest.<sup>13</sup> James Scott and Arun Grawal characterized the mobilization pattern of the indigenous people in the British-style forestry as the making of "environmental subjects" or "forest stewards."<sup>14</sup>

In East Asia, Japan's forest imperialism was achieved through its extractive imperial expansions into Hokkaido, Korea, and Taiwan in the late nineteenth century, termed as *ringyo* (林業 forestry).<sup>15</sup> David Fedman has studied the Japanese forestry in colonial Korea, where the Japanese army and forestry specialists were successful in establishing a "new industrial geography" with the purpose of extracting timber and other natural resources. He argues that the Japanese colonial forestry pattern was deeply rooted in and based on the transportation networks and labor markets that had been established by Koreans before 1910. The colonial regime expanded its modern forestry industry by sponsoring more railroad lines, sawmills, and investing more capital.<sup>16</sup> Li Wenliang 李文良, instead, examines the land consolidation

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<sup>12</sup> Nancy Peluso and Peter Vandergeest, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1" *Environmental History* 12.1 (2006): 31-64. Nancy Peluso and Peter Vandergeest, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 2" *Environmental History* 12.1 (2006): 359-353.

<sup>13</sup> Nancy Langston, *Forest Dreams, Forest Nightmares: The Paradox of Old Growth in the Inland West* (Seattle: University of Washington Press, 1995).

<sup>14</sup> James, Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, (New Haven: Yale University Press, 1999).

<sup>15</sup> Tessa, Morris-Suzuki, "The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan's Imperial Order," *Japanese Studies*, 33.3(2014): 225-242.

<sup>16</sup> David Fedman, "*The Saw and the Seed: Japanese Forestry in Colonial Korea, 1895 – 1945*," (Ph.D. Dissertation. Stanford

and exploitation of Taoyuan daxi 桃園大溪 in colonial Taiwan. He argues that by rearranging and redefining the indigenous forestland according to Japan's forestry categories, Japan facilitated the formulation of private property right on the aborigine land. The existing indigenous infrastructure and ideology played a role in the establishment of modern forestry under the colonial regime.<sup>17</sup> Hong Guangji 洪廣冀 quoted Guha Ramacha to point out that in Western Europe, modern forestry was an important concept of capitalism. Whereas in the vast colonies controlled by Europeans and later Japanese, the modern forestry itself grew into an independent form of governance. It was the modern forestry rather than capitalism that redefined the modern world.<sup>18</sup>

In historical China, the government of forest was usually expressed in terms of the state's agricultural policy. For example, as early as in the Spring and Autumn Period, Guan Zhong 管仲 argued that people's basic welfare was based on the "mountain forest, moor, and grassland." [山林菹澤草萊者] He proposed to Duke Huan of Qi (*qihuangong* 齊桓公) that "to be a ruler and not to manage the mountain forest, moor, and grassland properly can not be established as the king of the world." [為人君而不能謹守其山林菹澤草萊，不可以立為天下王] Guan Zhong's governing principle thus linked the scrupulous conservation of mountains, forests, and grasslands with the establishment of the sovereign's authority and legitimacy. Afterward, the Chinese rulers of each dynasty formulated decrees and regulations to manage mountains and forests in order to maintain the order of their rules. Forest

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University, 2015), 186 -193.

<sup>17</sup> Li Wenliang 李文良, *Rizhi shiqi Taiwan linye zhengli shiye zhi yanjiu*—*yi taoyuan daxi diqu wei zhongxin* 日治時期台灣林野整理事業之研究——以桃園大溪地區為中心, Master thesis, National Taiwan University, 1999.

<sup>18</sup> Hong Guangyi 洪廣冀, *linxue, zibenzhuyi, yu bianqu tongzhi: rishi shiqi linye diaocha yu zhengli shiye de zai sikao*, 林學、資本主義與邊區統治：日治時期林業調查與整理事業的再思考, *Taiwanshi yanjiu* 臺灣史研究, 11.2 (2004): 54.

government was therefore established as an essential constituent of the Chinese concept of “good governance” that required the conservation of land resources for sufficient food supplies.<sup>19</sup>

In the Ming and Qing Dynasties, with rapid commercial development and increasing urbanization, the demand for fuel and construction materials thus increased in south China. How to get a sustainable supply of timber resources for industrial use became a new concern. Many scholars have studied China's forests and timbers in terms of fuel supply, to name a few, Li Bozhong's timber study of the Ming-Qing Jiangnan,<sup>20</sup> Pomeranz's research into Huangyun 黃運 of the fuel crisis,<sup>21</sup> and the fuel supply issues of the Yuan-Ming-Qing Beijing by Qiu Zhonglin 邱仲麟, Gong Shengshan 龔勝生, Gao Shouxian 高壽仙, and Sun Donghu 孫東虎.<sup>22</sup> The above studies all indicated that the Ming-Qing China experienced a serious shortage

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<sup>19</sup> R. Bin Wong, “Taxation and Good Governance in China, 1500-1914,” in B. Yun-Casalilla and Patrick O’ Brien, eds. *The Rise of Fiscal States: A Global History, 1500-1914* (Cambridge University Press, 2012): 353-377; Richard von Glahn, *The Economic History of China: From Antiquity to the Nineteenth Century* (Cambridge: Cambridge University Press, 2016).

<sup>20</sup> Li Bozhong 李伯重, “Mingqing shiqi jiangnan diqu de mucai wenti” 明清时期江南地区的木材问题, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 1(1986): 86-96. Li Bozhong 李伯重, Mingqing jiangnan gongnongye shengchan zhongde ranliao wenti 明清江南工农业生产中的燃料问题, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 4(1984): 34-49. Li Bozhong 李伯重, *Fazhan yu zhiyue—Mingqing jiangnan shengchanli yanjiu* 发展与制约——明清江南生产力研究 (Taipei: lianjing chubanshe, 2002).

<sup>21</sup> Kenneth Pomeranz, *The Making of the Hinterland: State, Society, and Economy in Inland North China, 1853-1937* (Berkeley: University of California Press, 1993).

<sup>22</sup> Qiu Zhonglin 邱仲麟, Renkou zengzhang, senlin kanfa, yu mingdai Beijing shenghuo ranliao de zhuanbian 人口增长、森林砍伐与明代北京生活燃料的转变, *Zhongyang yanjiuyuan lishi yuyan yanjiusuo jikan* 中央研究院历史语言研究所集刊, 74.1 (2003): 141-188. Qiu Zhonglin 邱仲麟, Mingdai de meikuang kaicai—shengtai bianqian, guanfang jucuo yu shehui shili de jiaohu zuoyong 明代的煤矿开采——生态变迁、官方举措与社会势力的交互作用, *Qinghua xuebao* 清华学报, 37.2 (2007): 361-399. Gong Shengsheng 龚胜生, Yuanmingqing shiqi Beijing chengde ranliao gongxiao xitong yanjiu 元明清时期北京城燃料供销系统研究, *Zhongguo lishi dili luncong* 中国历史地理论丛, 1 (1995): 141-156. Gao Shouxian 高寿仙, Mingdai Beijing ranliao de shiyong yu caigong 明代北京燃料的使用与采供, *Gugong bowuyuan yuankan* 故宫博物院院刊, 1 (2006): 123-140. Sun Donghu 孙东虎, Yuanmingqing Beijing de nengyuan gongying ji shengtai xiaoying 元明清北

of fuel, and it directly impeded China's economic development as well as the process of the Chinese capitalism sprout. Moreover, Pomeranz, Gunder Frank, and Adshead also took the timber and fuel shortage as one of the most fundamental factors that diverged the Western and the Chinese development paths.<sup>23</sup> Mark Elvin, Robert Marks, Peter Perdue, and other scholars also pointed out that as early as the eighteenth century, most areas in China had been under increasing pressure of resources. Population pressure and cultivated land reclamation caused ecological degradations and deforestation.<sup>24</sup>

What hasn't been captured in the above discussions on the forest is the region of Northeast China. As the closing-off borderland of Qing, Manchuria was, for a long time, outside the view of wood supply and timber market. Only until the late nineteenth century, when the second industrial revolution generated unprecedented demand for wood used in railroads and construction in Asia, that the land of Manchuria became sites of encounter. Heavily laden with timbers, the forest of Manchuria aroused contestation. As a result, the Qing government was forced to open the frontier forests for lumbering (Chapter 2). The

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京的能源供应及生态效应, *Zhongguo lishi dili lunwen* 中国历史地理论丛, 1 (2007): 134-144. Yuan Tingzhi 元延植, Qing zhongqi Beijing diqu de meitan buzhi he qingchao de duice 清中期北京地区的煤炭不足和清朝的对策, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 3 (1998): 66-76.

<sup>23</sup> Andrew Gunder Frank, *Reorient: Global Economy in the Asian Age* (Berkeley: University of California Press, 1998). Samuel Adrian M. Adshead, *Material Culture in Europe and China, 1400-1800: The Rise of Consumerism*, (New York: St. Martin's Press, 1997). Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Berkeley: University of California Press, 2000).

<sup>24</sup> Mark Elvin, *The Retreat of the Elephants: An Environment History of China*, (Yale University Press, 2004); Robert B. Marks, *Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China*, (Cambridge University Press, 1998); Peter C. Perdue, *Exhausting the earth: state and peasant in Hunan, 1500-1850*, Harvard University Press, 1987; Moreover, the theory of forest transition (or recovery) is recently widely discussed in the forest studies of Brazil and South China. Instead of focusing on ecological degradation, this approach focuses on forest recovery and discusses the institutions that enabled the recovery and the consequences of reforestation. For example, Susanna Hecht discovers that the remittance from the USA to Brazil was the main reason behind Amazon's reforestation. While Ian Miller, Meng Zhang, and other Chinese historians probe into the *fengshui* 風水 conception and the reforestation practice popular in South China to explain the forest recovery, see Susanna Hecht, *From Fragmentation to Forest Resurgence: Paradigms, Representations, and Practices* (Chicago: University of Chicago Press, 2014); Meng Zhang, "Timber Trade Along the Yangzi River: Market, Institutions, and Environment, 1750-1911," (Ph.D. Dissertation, UCLA, 2017).

imperial powers, especially Japan, managed to establish an extractive and industrial forestry management (*ringyo*) through wars and treaties. This study then focused on the process of how China mixed the old ideological legacies of “good governance” in the forest with the extractive style of Japan’s industrial forestry in creating its modern forest bureaucracy.

The first attempts to establish a forest bureaucracy dated back to 1907, when the Qing government established the first civil Forestry Bureau in Wuchang 五常 and Sihechuan 四合川 under the Jilin Provincial Government (Chapter 3). The first forestry administration had little to do with the desire to conserve forests; rather, it was implicated in the extractive designs of a forming fiscal state that needed both timber revenues and territorial sovereignty. The birth of a regional Forest Bureau under the Ministry of Agriculture and Commerce that govern Northeast China's forests from 1912 to 1917 was part of a process that officials from the central government and the provincial governments conflicted from almost the earliest days of the central forest administration. The then-Minister Zhou Ziqi 周自齊 particularly enthused about developing a centralized and specialized forestry bureaucracy in Northeast China. The creation of province-level forest works bureau in the three provinces of Fengtian Jilin, and Heilongjiang in 1915 generated efforts to manage forests through the joint authority of the state and the province (Chapter 4). Empowered by the state forest tenure system, each province developed their own provincial monopoly zones of forests, such as the “provincial forest zone” in Fengtian, and the “gold mines forest” as well as “road protection forest” in Heilongjiang. The designs of these special forest zones expanded the local institutional capacity and in some sense, also challenged the Beiyang government’s central authority.

A large chunk of Japanese scholarship on Northeast China’s modern forestry often compared Japan’s Meiji forest government with that of China’s and argued that China lacked

forest administration (*rinzan* 林政) and therefore failed to protect its forested territory.<sup>25</sup>

Admittedly, China had a long tradition in including its forest government in the domain of agricultural policy and land management. However, China lacked a professional management system of forest and forest products to raise revenues, conserve fertility, and enhance the manufacturing industry, organized by a stable central government with specialized science and enforcement. The divorce of forest government from the land or agricultural domain, and making it an administratively independent and statistically progressive system was what the Japanese deemed as modern forest administration.

In nineteenth-century China, forestry also became one of many strategies that Qing and the Beiyang government had tried to revitalize the state and defend the territory. Both

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<sup>25</sup> Wang Dachuan 王大川, *Kindai Manshū ringyō ni okeru nitchū gōben jigō hayashi ba-ken funsō o chūshin ni* 近代満州林業に於ける日中合弁事業--林場権紛争を中心に, *Keizaironsō bessatsu chōsa to kenkyū* 経済論叢別冊 調査と研究 (2005), 30: 62-75; Wang Dachuan 王大川, *Kindai Chūgoku Tōhoku chihō ni okeru ringyō kaiatsu* 近代中国東北地方における林業開発, (京都大学博士論文, 2009); Su Yunshan 蘇雲山; Iwai, Yoshitomi 岩井吉彌, *Hokuman tōshintetsudō ensen ni okeru shinrin kaiatsu kōzō no tokushitsu* 北満東清鉄道沿線における森林開発構造の特質, *Bulletin Of The Kyoto University Forests* 65 (1993):182-193; Toshio Kanno 萩野敏雄, *Chōsen Manshū Taiwan ringyō hattatsu shiron* 朝鮮・満州・台湾林業発達史論, (Rin'yakōsaikai 林野弘済会, 1965); Sotobayashi-kai Mamō bukai 外林会満蒙部会, *Mamō tairiku ringyō-shi* 満蒙大陸林業史, (Nōrin shuppan kabushikigaisha 農林出版株式会社, 1977); Ōjiseishi sanrin jigō-shi henshū iinkai 王子製紙山林事業史編集委員会, *Ōjiseishi sanrin jigō-shi* 王子製紙山林事業史, 1976; Kaneko fumio 金子文夫, *Kiyosu ni okeru Ōkura zaibatsu* 清洲における大倉財閥, in *Ōkura zaibatsu kenkyūkai-hen* 大倉財閥研究会 ed., *Ōkura zaibatsu no kenkyū* 大倉財閥の研究(Kondō shubbansha 近藤出版社, 1982); Tsukasa Toshin 塚東進, *Hinaka gōben ōryokukō to ki kōshi no bunseki - Chūgoku Tōhoku chiiki ni okeru Nihon shihon ni yoru ringyō shihai no tokushitsu* 日中合弁鴨緑江採木公司の分析-中国東北地域における日本資本による林業支配の特質, *Ashia keizai* アジア経済, 31.10 (1990): 37-56; Kanno Naoki 菅野直樹, *Kamo ōryokukō to ki kōshi to Nihon no Manshū shinshutsu -- shinrin shigen o meguru taigai kankei no henshen* 鴨鴨緑江採木公司与日本の満州進出--森林資源をめぐる対外関係の変遷, *Kokushi-gaku*, 172 (2000):45-76.

Russia's timber-consuming railway project and Japan's direct investment in the Yalu River forest alerted the Chinese elites and frontier governors that the old banner garrison system was unable to settle the ongoing complex occurring in Northeast China's forest. With the transmission of Western forestry knowledge and the recognition of the significant timber demand by the world market, to establish specialized state management over forest became China's new option. In 1912, the Ministry of Agriculture and Commerce (MAC) under the Beiyang government initiated China's first state forestry program, by establishing Northeast China's Forestry Bureau under the direct management of MAC, and mobilizing the state forest system. Until 1912, forest government was mostly considered as land harvest, and the interest in the forest was constructed around the rights and ownership associated with the land. However, with the promulgation of state forest system in Northeast China, the government of forest shifted from land to timbers, and thus challenged the old customs of private properties, though empowered some declining banner institutions to make profits out of timber supplies.

More importantly, the Chinese forestry officials took the chance to classify, register, and map the forestland under China rule. By 1912, Japan had already established the forest concessions along the Yalu River, inherited the auxiliary zones along the South Manchurian Railway, and sought to expand its territorial control through more forest investment. By launching the state forestry program, the Forestry Bureaus under the Beiyang government charged natural forests, mapped sovereign territory, and curbed Japan's timber purchases from the residents. Thus, the state forest knowledge produced and recorded by Chinese forestry officials were in the form of new categories, numerical tables, and forest maps and replaced the indigenous terms of *shan*, *di*, or *weji*, creating modern Chinese sovereignty. The practice of state forest also served as a new border defense strategy. Such shifts in the relationship

between knowledge, forest government, and territoriality produced what I call resource modernity.

## NORTHEAST CHINA: A SPACE OF LEGACIES

Manchuria (Northeast China), as an inter-imperial frontier in Northeast Asia, functioned as the same bed for different dreams.<sup>26</sup> The crossed histories and the continuous territorial/sovereign disputes suggest the dynamics and complexities of Manchuria.<sup>27</sup> The contested modern history of this region as a “cradle of conflicts” largely shaped the notion and institutions of the forest.<sup>28</sup> However, this study is not just a projection of the international rivalries between China, Japan, and Russia onto the regions’ forests.<sup>29</sup> Rather, the project

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<sup>26</sup> Hyun Ok Park, *Two Dreams in One Bed: Empire, Social Life, and the Origins of the North Korean Revolution in Manchuria* (Durham, N.C.: Duke University, 2005).

<sup>27</sup> Robert H. G. Lee, *The Manchurian Frontier in Ch’ing History* (Cambridge, MA: Harvard University Press, 1970); Nicola Di Cosmo and Don J. Wyatt, eds., *Political Frontiers, Ethnic Boundaries, and Human Geographies in Chinese History* (London: Routledge, 2003); Diana Lary, ed., *The Chinese State at the Borders* (Vancouver: University of British Columbia Press, 2007); Thomas R. Gottschang and Diana Lary, *Swallows and Settlers: The Great Migration from North China to Manchuria* (Ann Arbor: Ann Arbor Center for Chinese Studies, University of Michigan, 2000); Shao Dan, *Remote Homeland, Recovered Borderland: Manchus, Manchoukuo, and Manchuria, 1907–1985* (Honolulu: University of Hawai’i Press, 2011); and Patrick Fuliang Shan, *Taming China’s Wilderness: Immigration, Settlement, and the Shaping of the Heilongjiang Frontier* (London: Routledge, 2017).

<sup>28</sup> Owen Lattimore, *Manchuria: Cradle of Conflict* (New York: Macmillan, 1932); *Mongols of Manchuria: Their Tribal Divisions, Geographical Distribution, Historical Relations with Manchus and Chinese, and Present Political Problems* (New York: John Day, 1934); *Inner Asian Frontiers of China* (New York: American Geographical Society, 1940); and *Studies in Frontier History: Collected Papers, 1928–1958* (London: Oxford University Press, 1962).

<sup>29</sup> Studies on Russian encountering with China and Japan during the early 20th century have traditionally concentrated on Russia’s colonial penetration of Manchuria through the construction of the China-Eastern Railway. See James Hugh Carter, *Creating a Chinese Harbin: Nationalism in an International City, 1916–1932* (Ithaca, NY: Cornell University Press, 2002); Bruce A. Elleman and Stephen Kotkin, eds., *Manchurian Railways and the Opening of China: An International History* (Armonk, NY: M. E. Sharpe, 2009); David Wolff, *To the Harbin Station: The Liberal Alternative in Russian Manchuria*,

aims to use forest history to rethink about Qing's closing-off and migration policy, Japan's imperial forest expansion, and the local land property transformation.

Northeast China also held the largest share of China's ancient woodlands. Woodlands in this region were characterized by diversified categories, such as *weji* (窩集 ancient woodland), *shan* (山 mountain), *di* (地 land), and *lin* (林 forest), that linked varied tenure, property, and political economy. Different from the enormous studies on public goods nature of forests, Northeast China's forests in the Qing Dynasty were seldom regarded as public goods.<sup>30</sup> Rather, they were the exclusive treasures of the Qing royal family as “the forbidden mountains,” that provided the Manchu Royal family with tributes and the Qing empire a Sino-Russo buffer zone. However, in the late nineteenth century, the Russian and Japanese exploitation of forests profoundly changed Qing's beliefs about how the frontier forests should be managed: governed as a resource rather than a tribute-oriented conservancy.

Scholars have understood the Manchurian forests in two common frameworks: conservation and development.<sup>31</sup> The former/Conservative ideology includes the closing-off

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1898–1914 (Stanford, CA: Stanford University Press, 1999); Kimitaka Matsuzato, ed., *Russia and Its Northeast Asian Neighbors: China, Japan, and Korea, 1858–1945* (Lanham, MD: Lexington Books, 2017); The study of Japanese imperialism in Manchuria has received a substantial amount of attention. See Prasenjit Duara, *Sovereignty and Authenticity: Manchukuo and the East Asian Modern* (Lanham, MD: Rowman and Littlefield, 2003); Rana Mitter, *The Manchurian Myth: Nationalism, Resistance, and Collaboration in Modern China* (Berkeley: University of California Press, 2000); Louise Young, *Japan's Total Empire: Manchuria and the Culture of Wartime Imperialism* (Berkeley: University of California Press, 1998); and Yoshihisa Tak Matsusaka, *The Making of Japanese Manchuria, 1904–1932* (Cambridge, MA: Harvard University Asia Center, 2001).

<sup>30</sup> Northeast China's ancient woodland became public goods after 1949. See Strauss, Julia C., Forestry Reform and the Transformation of State Capacity in Fin-de-Siècle China, *The Journal of Asian Studies*, 68.4 (2009):1163-1188.

<sup>31</sup> Caffrey Patrick Joseph has completed his dissertation on the northeastern forests in 2002. He offers an analysis of forest management from the early Qing to the early PRC period. However, as the period he studies is from 1644 to 1949, he only touches on each transition period without going into it deeply enough and does not make a very comprehensive analysis

policy guided by the Manchu conception of “Purity (*Bolgo* in Manchu),” and the tributary representation by reserving the Yalu River forest as the “Sino-Choson buffer zone.”<sup>32</sup> The latter/Development ideology contains the Han people’s “agricultural imperialism,” and the massive deforestation for Japan’s forest industrial empire building.<sup>33</sup>

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regarding the learning, incorporation, and practice of “scientific forestry” by the Qing and the republican government.

Moreover, he lacks sufficient Japanese materials to make a dynamic narrative of forest history at the Northeast frontier. See Caffrey Patrick J., “*The Forests of Northeast China, 1600-1953: Environment, Politics and Society*,” Ph.D. Dissertation, Georgetown University, 2002.

<sup>32</sup> Seonmin Kim, *Ginseng and Borderland: Territorial Boundaries and Political Relations Between Qing China and Choson Korea, 1636-1912* (Berkeley: University of California Press, 2017); Jonathan Schlesinger, *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule* (Stanford, California: Stanford University, 2016).

<sup>33</sup> Isett, Christopher Mills, *State, Peasant, and Merchant in Qing Manchuria, 1644-1862*, (Stanford University Press, 2007).

About the deforestation created by the Japanese invasions, see zhongyang dang’an guan 中央档案馆, zhongguo di’er lishi dang’an guan 中国第二历史档案馆, jilinsheng shehui kexueyuan 吉林省社会科学院 eds., *riben diguo zhuyi qinhua dangan ziliao xuanbian 日本帝国主义侵华档案资料选编, dongbei jingji lueduo 东北经济掠夺* (Beijing: zhonghua shuju, 1991); Wang Chengli 王承礼, *zhongguo dongbei lunxian shisnian shi gangyao 中国东北沦陷十四年史纲要*(Beijing: zhongguo dabaikewan chubanshe, 1991); Wang Changfu 王长富, *dongbei jindai linye jingjishi 东北近代林业经济史* (Beijing: zhongguo linye chubanshe, 1991); Xu Shuming 许淑明, *Qingmo jilinsheng de yimin yu nongye kaifa 清末吉林省的移民与农业开发*, *zhongguo bianjiang shidi yanjiu 中国边疆史地研究* 4(1992): 18-27; Sun Chuanjie, Sun Jingli 孙传杰、孙静丽, *Riben dui woguo odngbei senlin ziyuan de lueduo 日本对我国东北森林资源的掠夺*, *Shijie lishi 世界历史* 6(1996): 75-81; Rao Ye 饶野, *20 shiji shangbanye riben dui yalujiang you’an senlin ziyuan de lueduo 20 世纪上半叶日本对鸭绿江右岸我国森林资源的掠夺*, *zhongguo bianjiang shidi yanjiu 中国边疆史地研究* 3(1997): 90-99; Chen Feng 陈锋, *Qingmo minguo nianjian riben duihua diaocha baogao zhongde caizheng yu jingji ziliao 清末民国年间日本对华调查报告中的财政与经济资料*, *Jindaishi yanjiu 近代史研究*, 3(2004): 291-314; Zhang Jie 张杰, *Qingdai yalujiang liuyu de fengjin yu kaifa 清代鸭绿江流域的封禁与开发*, *zhongguo bianjiang shidi yanjiu 中国边疆史地研究*, 4(1994): 42-52; Tao Mian 陶勉, *qingdai yalujiang youan huangdi kaiken jingguo 清代鸭绿江右岸荒地开垦经过*, *zhongguo bianjiang shidi yanjiu 中国边疆史地研究*, 1(1999): 56-58; Wang Xiliang 王希亮, *Jindai zhongguo dongbei senlin kaifa yu shengtai kongjian bianqian 近代中国东北森林开发与生态空间变迁*, *lishi yanjiu 历史研究* 1(2017): 85-103.

Recent Qing historiography adopts cultural perspectives by locating Manchu identity and Qing's plurality in Manchuria.<sup>34</sup> For example, new Qing historians have noticed the construction of the unique Manchu concept for nature and empire. Jonathan Schlesinger argues that the Manchu word *Bolgo* (Eng: purity) was a unique conception and practice in the northeastern frontier. By practicing the policy of “purifying the land,” and limiting the access to Manchuria, the Qing court worked to reconstruct the territory as an embodiment of “uncorrupted nature.”<sup>35</sup> Bello, instead, studies the Manchu identity-making in terms of imperial foraging, such as hunting and ginger picking, in the Manchurian forest ecosystem. According to him, the Qing government's policy towards Manchuria was to maintain a type of “cultured nature” in the forest eco-systems, which encouraged and preserved Manchu people's hunting and gathering habits. Moreover, this state-managed foraging in Northeast China during the Kangxi reign (1662-1722) became a primary strategy for both the borderland Manchu identity expression and the exploitation of the Manchurian resources. Bello's conclusion echoes Dr. Menzie's findings, but his framing of the issue is new and leads to a promising direction.<sup>36</sup> These works have advanced our understanding of reciprocal

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<sup>34</sup> Before the “New Qing History” has swiped the Qing history field, the Chinese and American Qing historians have already studied the relationship between Qing's hunting grounds and the Manchu identity. The Chinese scholar Zhao Zhen 趙珍's work shows that the royal hunting grounds were created by the Manchu rulers as both hunting areas and Manchu identity representations. By focusing on the human-land relations, environmental changes, and animal resource, she argues that there was the exhaustion of woods, animals, and land resources in the hunting grounds, due to the inappropriate management. See Zhaozhen 趙珍, *Ziyuan, huanjing, yu guojia quanli: qingdai weichang yanjiu* 資源、環境與國家權力：清代圍場研究 (Beijing: Renmin University Press, 1997). *Special Issues on Historical Geography*, 1992.

<sup>35</sup> Jonathan Schlesinger, *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule* (Stanford, California: Stanford University, 2016).

<sup>36</sup> Menzie's is the first scholar who ventures into Chinese forests and divides the Chinese forest ecosystem into six categories: hunting grounds, temples, kinship's commons, agricultural forests, economic forest, and natural forests. He considers the Manchu Royal Mulan hunting ground as a way to manage forests, and points out the enclosed hunting ground

interaction between the Manchurian environment and the Qing plurality, but the Manchurian local society is largely ignored. My project then seeks to plug this historiographical gap. It focuses on the social transition of the built environment in Manchuria when the tribute mountains were opened, and the bannerland were privatized in the New Policies' Era and pays attention to the function of local Forestry Bureau (Chapter 3).

The history after the 1860s witnessed the agricultural expansion and the large immigration of Han peasants into Northeast China. It was a Qing imperial policy to resolve the population and ecological pressures in the core regions such as Jiangnan, North China, and Lingnan. Works on Northeast China's migration history often portray the Han immigrants as deforesters who cleared forests for agriculture, and characterized the process of deforestation as "peasant colonization of Manchuria."<sup>37</sup> However, these studies centered too much on migrants as farmers but neglected another role that migrants had played: loggers. By the 1870s, the Qing state policy had shifted to encouraging migrant settlement as well as commercial logging. Thus, a substantial amount of migrants constituted the mainstream of loggers and gathered along the Yalu River. This study focuses on the commercialization of forest, rather than the agricultural deforestation, in the nineteenth-to-twentieth century, and explores the ways in which Qing's frontier legacies being challenged by forest extractions. (Chapter 2).

Shifting from migrant loggers, Han bannermen in the second half of the nineteenth century rose to power. Enatsu Yoshiki's study on the local bannermen in Fengtian at the end

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was the symbol and representation of the Manchu Identity. See Nicholas K. Menzies, *Forest and Land Management in Imperial China* (St. Martin's Press, 1994).

<sup>37</sup> James, Reardon-Anderson, *Reluctant Pioneers: China's expansion northward, 1644-1937*, (Stanford University Press, 2005); Isett, Christopher Mills, *State, Peasant, and Merchant in Qing Manchuria, 1644-1862*, (Stanford University Press, 2007).

of Qing offers great insight into the vital transition at the local level that had a long-term impact. Han bannermen assumed political power by organizing the local militia in defense of the Japanese during the Russo-Japanese War in 1904. In 1907, the civil governor-official Xu Shichang 徐世昌 sold the former manor lands and other properties to civil hands. The Han bannermen who used to work as managers of manor occupied the most. With both military and financial strength, Han bannermen functioned as informal local authorities, on whom both the late Qing government and the local Fengtian Government depended. It was also the same group elites who supported Zhang Zuolin's regime.<sup>38</sup> This study thus follows Yoshiki's findings and takes it as a historical origin for Fengtian's forestry officials' independence who often challenged the Beijing government's authority, and localized the forest government in the first place (Chapter 4).

## SINO-JAPANESE RELATIONS

In the late nineteenth century, the Manchurian forests linked natural resource extraction and territorial expansion, standing at the core of the Northeastern Asian eco-politics and international rivalries. Both the Japanese empire and the global market saw pines as a vital natural commodity for architectural and industrial constructions. Meanwhile, forests were physical spaces of interaction and confluence. By controlling part of the Manchurian forests and steadily building railroads and engaging in borderland logging, the Japanese empires both expanded their territories and caused territorial and sovereign disputes within Manchuria.

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<sup>38</sup> Enatsu, Yoshiki, *Banner Legacy: the Rise of the Fengtian Local Elite at the End of the Qing*. (The University of Michigan Ann Arbor, 2004); Huang Zijin 黃自進, "Jiuyi ba shibian shimo: cong wenwu zhuangbei dao wuli lueduo 九一八事變始末: 從'文裝武備'到'武力掠奪'" in Lu Fangshang 呂方上 ed. *zhongguo kangri zhanzheng shi xinbian 1 hezhan jueze 中國抗日戰爭史新編 1 核戰抉擇* (Guoshiguan 國史館, 2015): 29-117.

Scholars of Japanese history developed two ways to understand the Japanese imperialism in Northeast China. One strand of scholarship, featuring Peter Duus, focuses on the role of important Japanese imperial agencies' impact on Manchuria, such as the South Manchuria Railway Company (SMR)<sup>39</sup> or the Kwantung Army.<sup>40</sup> Another and also the newest trend shifted from the studies on metropolitan cores to the settlers and laborers' self-governance and agency, such as the SMR employees or ordinary Japanese settlers in Dalian.<sup>41</sup>

Historian Tak Matsusaka has an interesting observation in regard to the motivation of the Japanese encroachment in Manchuria. He did not agree that natural resource was Japan's target, he wrote, "Manchuria provided few raw materials that were not freely available from other sources at a lower cost and of better quality. Opportunities for profitable business investment were even less relevant to Japanese concerns since ventures in the territory tended to offer substantially lower rates of return than enterprises at home." This is a sharp observation but to which the later discussants seldom respond. So what was Japan's aim for Manchuria? Matsusaka thus concluded:

"Territory, rather than trade, lay at the heart of Japanese aspirations in Manchuria."<sup>42</sup>

This conclusion conflicts with our common sense that Japan's priority demand in Manchuria was resource, in a burgeoning world economic order based on the exploitation of

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<sup>39</sup> South Manchuria Railway Company, SMR for abbreviation.

<sup>40</sup> Peter Duus, Ramon Myers, Mark Peattie, eds., *the Japanese Informal Empire in China, 1895-1937* (Princeton University Press, 2014).

<sup>41</sup> This trend of scholarship focuses on the subtle negotiation and collaboration between social groups and state power; 2) the agency of colonial dwellers in South Manchuria, and the mutual interaction between the metropolitan core and the periphery colonies; 3) ordinary settler's self-governance. See Erik Esselstrom, *Crossing Empire's Edge: Foreign Military Police and Japanese Expansion in Northeast China* (Stanford University Press, 2009); Emer O'dwyer, *Significant Soil: Settler Colonialism and Japan's Urban Empire in Manchuria* (Harvard University Asia Center, 2015).

<sup>42</sup> Tak Matsusaka, *The Making of Japanese Manchuria, 1904-1932* (Cambridge, MA: Harvard University Asia Center, 2001).

and access to natural resources. But I take Tak Matsusaka's conclusion as a starting point of my project. As stated earlier, controlling the forestland was not only a way to expand the territory but also to acquire natural resources. After the Russo-Japanese War, Japan directly invested in the Yalu River forest by establishing the Yalu River Logging Company and transplanted a group of *zaibatsu* 財閥 enterprises specialized in timber business of railroad ties and pulps, such as Mitsui and Okura, to Northeast China.<sup>43</sup> Upon arrival, the Japanese timber enterprise had set up forest concessions, logging camps, pulp firms, or sawmills under its name. Thus Tak Matsusaka's observation linked the Japanese imperial policy, territory claim, and the forest industry together.

Japan's creation of modern forestry in the nineteenth and twentieth century went hand in hand with its imperial expansion. From the 1870s onward, with Japan's imperial expansion towards Hokkaido and later Taiwan, Karafuto, and Korea, new forms of forest knowledge were produced for colonial management. Sponsored by the Meiji government, forestry experts and scientists were dispatched to meticulously survey the empire's woodlands, measure the forestland areas, classify the plant species, and map the forest resources.<sup>44</sup> Statistics, maps, and numerical tables in the forestry documents and surveys became the basis for Japan's imperial forest extraction and the development lumber manufacture industry. The new series of practices of naming, classification, measuring, and marketing also coined new

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<sup>43</sup> Kaoru Sugihara, R. Bin Wong, "Industrial Revolution in Early Modern World History," in *Cambridge World History* 6.2 (2015):283-310. Tetsuji Okazaki, "The Japanese Firm under the Wartime Planned Economy," in Masahiko Aoki and Renald Dore, eds., *The Japanese Firm* (New York: Oxford University Press, 2000):350-378.

<sup>44</sup> In 1899, the Meiji government conducted a special survey "Hokkaido official forest type survey regulations" (Hokkaidō Kanbayashi shubetsu chōsa kitei 北海道官林種別調査規程) on the Hokkaido official forest that laid the foundation for Japan's state forest system formation. See Takayoshi Koseki 小関, 隆祺, *The Processes of Development of Forestry in Hokkaido* (Hokkaidō ringyō no hatten katei 北海道林業の発展過程), *Hokkaido University Agricultural Department Seminar Forest Research Report*, 1962-11, 22(1): 25-94.

terms, such as *shinrin* (森林 forest and woods), *kokuyourin* 國有林 (state forest or national forest), *rinya* (林野 un-owned woods and wilderness), *ringyo* (林業 literally “wood manufacture,” or “forest industry”), and *mokuzai* (木材 wood or timber) that were rarely seen before the Meiji period.<sup>45</sup> Just as Western environmental ideas had been stimulated by exploitations of tropical forest, terms such as *shinrin* (森林 forest and woods) and *ringyo* (林業) stimulated by Japan’s contact with the forested landscapes of surrounding colonies marked a new form of environmental government with what Morris-Suzuki called “a militantly modern scientific rationality” and what Katsuya Hirano called “extractive colonialism.”<sup>46</sup> After the Russo-Japanese War, Japan started forest surveys along the Yalu River and developed terms of “*sanrin*” “*shinrin*” “*rinya*” in their scientific forestry reports. Japan’s territory craving went along with their new vocabularies of forests.

#### ON “*LIN*:” A SHIFT IN MEANING

Two sets of archives in both Chinese and Japanese languages on forest management in Northeast China have inspired my interest in the translation of the term “forestry.” One was the Chinese language archives of “the Jilin Provincial Forestry Bureau (1907-1911)” (*Jilin quansheng linye zongju dang’an* 吉林全省林業總局檔案) stored in the Jilin, while the other was the Japanese language “Yalu River Forestry Records” (*Tarō ōryokukō ringyō-shi* 鴨綠江林業誌) compiled by the Sino-Japanese Yalu River Logging Company in 1919. Both archival

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<sup>45</sup> Tessa, Morris-Suzuki, “The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan’s Imperial Order,” *Japanese Studies*, 33.3(2014): pp:225-242.

<sup>46</sup> Tessa, Morris-Suzuki, “The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan’s Imperial Order,” *Japanese Studies*, 33.3(2014): pp:225-242.; Katsuya Hirano, The Politics of Colonial Translation: On the Narrative of the Ainu as a “Vanishing Ethnicity,” *The Asia-Pacific Journal*, Vol.7, Issue 4, Number 3, 2009. <https://apjif.org/-Katsuya-Hirano/3013/article.html>

titles contained the term “forestry” (林業). However, their contents about forestry largely contrasted. In the “Yalu River Forestry Records,” items were organized under titles such as “Chinese loggers,” “lumber firms,” and the “Yalu River Logging Company,” and they listed numerical tables and numbers about the timber price, raft transaction, lumber productions such as railroad ties by the sawmill. Whereas in the archives of the “Jilin Forestry Bureau,” there were mostly official documents about negotiations with Russian officials, settlement of bannermen conflicts, the tribute mountain boundary survey, and a few records on rafts and logs that the flood had carried away. The disparate ideas and practice of forestry indicated a nuance between the Chinese “*linye*” and the Japanese concept of “*ringyo*.”

Previous studies on Northeast China’s modern forestry all took for granted that the Chinese *linye* represented the same thing as the Japanese *ringyo* and adopted the same set of categories in their researches.<sup>47</sup> These studies all shared a unified narrative that Japan’s imperial forestry practice of “plundering” and “aggression” triggered China’s learning and practice of modern forestry, evidenced by the example of the 1907 Jilin Forestry Bureau.

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<sup>47</sup> Chenrong 陳嶸, *Zhongguo senlin shiliao 中國森林史料*, (Beijing: zhongguo linye chubanshe, 1983); Wang Changfu 王長富, *Zhongguo linye jingjishi 中國林業經濟史*, (Beijing: Dongbei linye daxue chubanshe, 1990); Wang Changfu 王長富, *Jindai dongbei linye jingjishi 近代東北林業經濟史*, (Beijing: zhongguo linye chubanshe, 1991); Wang Changfu 王長富 ed., *Dongbei jindai linye keji shiliao yanjiu 東北近代林業科技史料研究*, (Harbin: dongbei linye daxue chubanshe, 2000); Nanjing linye daxue yichan yanjiushi 南京林業大學遺產研究室 ed., *Zhongguo jindai linyeshi 中國近代林業史*, (Beijing: zhongguo linye chubanshe, 1989); *Zhongguo linxuehui 中國林學會* ed., *Zhongguo senlin de bianqian 中國森林的變遷*, (Beijing: linye chubanshe, 1996); Dongsansheng zhongguo jingshihui, Fushun shekeyuan 東三省中國經史會、撫順社科院 ed., *Dongbei diqu ziben zhuyi fazhan shi yanjiu 東北地區資本主義發展史研究*, (Harbin: Heilongjiang renmin chubanshe, 1987); *Zhongguo kexueyuan linye turang yanjiusuo 中國科學院林業土壤研究所* ed., *Dongbei jingji mucai zhi 東北經濟木材誌*, (Beijing: kexue chubanshe, 1964); Tao Yan 陶炎, *Dongbei linye fazhan shi 東北林業發展史*, (Changchun: jilin shehui kexueyuan, 1987); Huang Jiayuan 黃甲元, *Changbai shanqu kaifa shigao 長白山區開發史稿*, (Changchun: jilin wenshi chubanshe, 1992).

However, I argue that the meaning of *ringyo* changed when it traveled to China. The Chinese elites and officials reinterpreted the term with their agencies, such as the idea of “good governance” by offering people with fertile land, and reforestation concerning the ecological degradation in south China. However, the Japanese term *ringyo*, as I will show in Chapter One, encompassed meanings of sovereignty, rationality, and progressiveness.

Forests did not reshape Manchuria. Rather, the changing government of forests that encompassed both modern forest knowledge and the state property made a reordering of the forest landscape. This research points out that the term *lin/rin* 林 was more than the natural landscape of trees. Rather, it was the result of the knowledge construction for the formation of the modern resource regime. This project shows that the category *lin/rin* (林 wood) was established as the fixed standard term for “forest” in China after the initiation of the 1912 state forestry program. The separation of the forest ownership from the landownership was thus an epistemic and practical break that facilitated the changes in management priorities and laid the foundation for China modern resource government.

## CHAPTER ORGANIZATION

The dissertation is organized into six chapters. In the 1<sup>st</sup> chapter of “From *Weji* to *Senlin*: The Politics of Forestry and the Creation of Forest Knowledge,” I trace the formation of the hybrid knowledge of “forestry” in the late 19<sup>th</sup> century China that encompassed state power, western forestry, anti-imperialism and the Chinese traditional agriculture, and explore ways in which the forestry knowledge transformed into a new form of governance in China’s state-making process. Forests have everything to do with agriculture, and the agriculture-related policies and practices in China were fundamental to the Chinese state’s legitimacy and the successful local governance. In the view of traditional knowledge, forests and forestry was a branch of agriculture. However, under the influence of the Western division of science,

forestry gradually became an independent discipline in the contents of the imperial examination, and the forestry practice was positioned as an industry. By examining the changing taxonomies of forestry and the discussions among the Chinese elites, the frontier officials and the government ministers, in the Chinese and Japanese newspapers, pamphlets and memorials, I show how the Western forestry knowledge was accepted and transformed by the Chinese elites, and later entered into the reform vision of the politicians in the late Qing Dynasty.

The 2nd chapter “The Construction of Forestry Space: Japan’s *ringyo* strategy and the Extractive Forestry Along the Yalu River” explores the production, marketing and disputes of the Yalu River forests, and shows how timber production in the unexploited environmental frontier evolved from the “Sino-Chosŏn buffer zone” into the “forestry space,” further integrating this region into China proper in the early 20th century. Under the dual principles of Qing prohibition in Manchuria and the Qing-Chosŏn tributary relationship, large wood areas along the Yalu River were monopolized by the Manchu rulers, as imperial forests for tribute purposes such as ginseng.<sup>48</sup> By the 1870s, the Qing state legitimized the common access to Manchuria and encouraged migrant settlement as well as commercial logging, thus mobilizing a large influx of migrant population that constituted the later mainstream of loggers. Thus, the forested area between Willow Palisade and the Mount Changbai and the Yalu River in the late 19<sup>th</sup> century witnessed the making of the “forestry space,” where timber trades flourished, the multi-national lumber firms with forest concessions were built (especially the Japanese and Russian logging companies), and by monitoring the international disputes between the local lumbering communities and the foreign logging operators, the

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<sup>48</sup> Kim Seonmin, *Ginseng and Borderland: Territorial Boundaries and Political Relations Between Qing China and Choson Korea, 1636-1912*, Oakland: University of California Press, 2017.

Chinese state found a way to remake China's Sino-Korea borderland that differed from the traditional one.

In the 3<sup>rd</sup> and 4th chapters, I examine the changing policies and institutions over the Northeast China's forests in the late Qing and the Beiyang period, and discuss the reordering of the space where the older worlds of banner management and the new forestry agencies overlapped, and their mixture created new systems of meaning and space. In the late 19<sup>th</sup> century, China's political context shifted with the arrival of Western knowledge of forestry and the penetrations of Russia and Japan into Manchuria. In order to resist the imperial powers and to secure the timber taxes, the Qing government and the later Beiyang government initiated its own civil forestry management system, by developing the provincial forestry bureaus (*linyēju*), with the forestry experimental station (*linye shiyanchang*), the forestry institutes (*linye jiangxisuo*) and the forestry police (*linjing*), in areas that were once dominated by banner management. In 1912, The Beiyang government (1912-1928) created the Ministry of Agriculture and Forestry to assess and manage the forests in China. By promulgating the "Rules for the Allocation of State Forests in the Three Eastern Provinces" (*Dongsansheng guoyoulin fafang guize* 東三省國有林發放規則) and the first national Forest Law (*Senlinfa* 森林法), state forest tenure became an independent category and institution practiced by a self-consciously modern bureaucracy. The empowerment of the provincial forestry agencies in the domain of tribute mountains thus represented a reordering of the local space, a fact that changed the meaning of the imperial forests and the sovereignty representations they implied. Meanwhile, the overlapping of space also indicated a conflict of interests, between the local bannermen and the forestry officials, over the living space and timber resources.

Chapter 5 "Land, Mountain, and the Forest: Forest Rights and the Forestland Disputes in Fengtian Province in the Republican Era" examines the property disputes of forestland in

Fengtian and Jilin caused by the establishment of the Chinese state forestry in 1912, and explores the ways in which the Qing legacies of land practices being both recognized and challenged under the new vision of the state-owned forest tenures and new forms of knowledge production. Banner land was key to the organization of banner communities, including banner land and official manor. Under the state-issued land certificate system, villages in Northeast China had developed rules and management systems under the rubric of *land tenure* that defined forest property rights primarily in terms of land and cocoon rather than trees. However, after the fall of the Qing Dynasty, the customary land system came into conflict with a Beiyang government's newly established state forest system. This conflict is at the heart of this chapter. By exerting state ownership control on the natural forests in Northeast China, the Beiyang state forestry program was as an effort of recentralization in the northeastern frontier as well as an attempt to combat Japanese imperialism. However, in a forested space like Northeast China, the extension of state forest tenure into the land tenure system had led to a differentiation between land tenure and forest tenure on the same piece of land, made the status of private forestland ambiguous, and thus invoking a series of land property disputes. In other words, the customary land tenure that had long undergird Fengtian society was challenged by the practice of state forest tenure. Further, the bannerland disputes also turned into a force empowering the banner institutions in the Republic Era.

## Chapter 1. From *Weji* to *Senlin*: The Politics of Forestry and Creation of Forest Knowledge

### INTRODUCTION

Native woodlands constituted about forty percent of the Manchurian territory, extending from the mouth of the Yalu River northward to the Heilongjiang (Amur) Valley in an almost continuous belt over 1500 kilometers long (See Map1 and Map 2).<sup>49</sup> In the high Qing period, the forested imperial domains constituted a key component of Qing's forest governance. They connected the Manchu royal family with multiple forest tribes of Solon, Daur, and Oroncon through non-timber tribute submissions such as furs, and acted as buffers between Qing and Tsar Russia; whereas in the early twentieth century, both the imperial powers and the global market, saw timber as a vital natural commodity for architectural and industrial constructions. The new market demand of as well as the geopolitical tussles for timbers thus generated new perceptions of forest and called for a change in the way forests were governed.

Inspired by work from Foucault, we often assume that scientific management is based on the accumulation of accurate and actionable knowledge, often in the form of statistics.<sup>50</sup> In the case of Northeast China's forest, the knowledge production for its resource government is more than that. The trans-lingual practice between the classic Chinese and the Japanese *kanji* on modern forest government is particular. In this chapter, I trace the formation of the hybrid knowledge of *linye* (林業 CHI: wood manufacture or forestry) in the late-nineteenth and early-twentieth-century China that encompassed state power, Western forestry (through the Japanese literature), anti-imperialism, and the Chinese traditional agriculture, and explore

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<sup>49</sup> Wang Chi-Wu, *Forests of China* (Cambridge: Harvard University, 1961), 34.

<sup>50</sup> Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Duke University Press Books, 2005).

ways in which the forestry knowledge transformed into a new form of governance in China's state-making process. From the perspective of Chinese traditions, forests and forestry were a branch of agriculture, and the agriculture-related policies and practices were fundamental to the Chinese state's legitimacy and good governance. However, impacted by the Western division of science and the Japanese imperial forest practices, forestry gradually became an independent discipline tested in the imperial examinations. Thus, wood productions and forest management were not positioned as traditional agriculture, but rather, as an industry (*shiye* 實業 literally commerce and industry).

The trans-lingual practice underpinning the conceptual world of modern resource management used to be neglected by previous researchers. However, this chapter tries to reconstruct the categorical changes in Northeast China's forest management. By examining the changing taxonomies of forest (*weji* 窩集, *senlin* 森林) and forestry (*linye* 林業), based on the discussions among the Chinese elites, frontier officials, and government ministers, I show how the idea of *ringyo* (林業 JP: forestry) traveled from the Japanese expertise to China, and how it was internalized and modified by the Chinese elites, entering the Chinese elites' everyday lives and vernacular languages.

Section 1 examines the indigenous knowledge and management of *weji* (Manchu: old-growth forest in Northeast China) under the Qing rule, where the reserved *weji* served as the Qing empire defender and the royal tribute supplier, and the writings on *weji* were mostly narrative descriptions. Section 2 discusses the Japanese creation of modern forest knowledge coined as *shinrin/senlin* (森林, a modern term for "forest" in both Chinese and Japanese languages). By employing the form of statistics, botanical terms, and visual images, Japan offered a new set of classification, measurement, mapping, and working plans of Northeast China's forest through the practice of *ringyo* (林業 JP: forestry). Section 3 discusses how

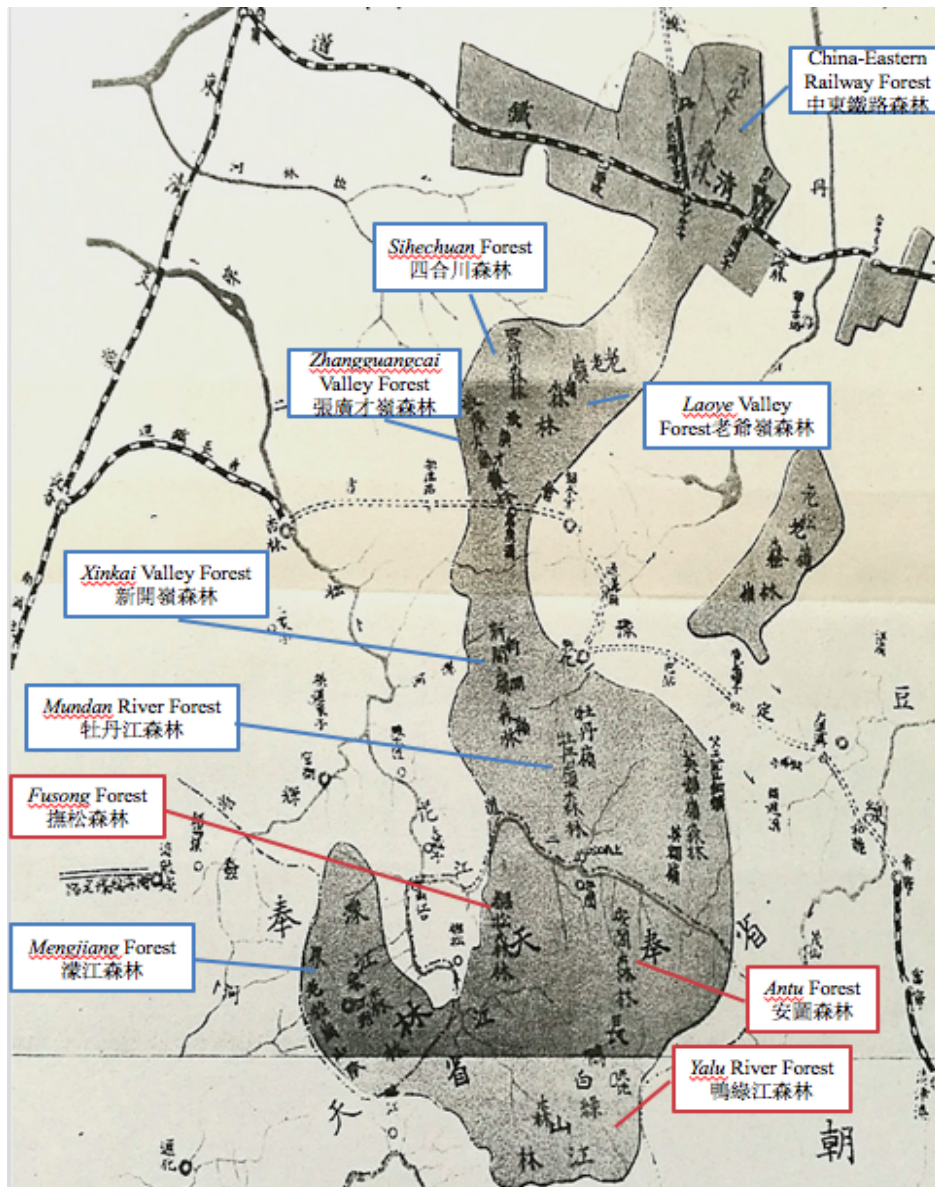
modern forestry knowledge translated by Japanese was modified and entered the reform vision of the Chinese politicians in the late Qing Dynasty, and Section 4 traces the changing taxonomies of forest and forestry and shows how the concept of *lin* 林 expanded to cover a wide range of new topics, including legitimacy and frontier disputes in Northeast China's context.

Map 1: Northeast China's Forest Distribution

Source: *Teikoku shinrin-kai* 帝国森林会 [Imperial Association of Forests], *Mamō no shinrin oyo ringyō. Shinrin shigen oyo hayashiba-hen* 満蒙の森林及林業. 森林資源及林場編 [Forest and Forestry in



*Manchuria and Mongolia: Forest Resources and the Forest Farms*, 1932.



Map 2: Forests in Jilin and Fengtian

Source: *Manshū shinrin ryakuzu* 滿洲森林略圖 [A Sketch Map of the Manchurian Forests], [Ou Ryo Kkou Seizai mugen kōshi an'nai 鴨綠江製材無限公司案內 A Guide to the Yalu River Wood Processing Company], compiled by the Yalu River Wood Processing Unlimited Company 鴨綠江製材無限公司, 1926, Dandong Municipal Library, China.

\*Note: the blue boxes refer to the forests in Jilin Province, and the red boxes represent the forests in Fengtian Province.

## QING'S IMPERIAL FOREST AND THE INDIGENOUS KNOWLEDGE

“Northeast China” or “Manchuria” in the Qing dynasty is a multi-layered and changing geographical notion. The Europeans, Japanese, Manchu, and Han people had their different geographical imaginations about the boundaries and ranges of it, based on different cartographies.<sup>51</sup> Since 1644, the Qing rulers have governed Manchuria by setting up three military jurisdictions headquartered at Shengjing, Jilin ula, and Qiqihar. In order to protect the geomantic omen of this area, the Qing rulers adopted the policy of strict separation. As early as in 1668, the Qing government promulgated a ban which prohibited the export of refugees through the border guards such as Shanhai Pass and Xifengkou. In 1677, demanded by the Kangxi Emperor, the Qing court carried out a policy of “four prohibitions” (*sijin* 四禁), that prohibited “migration, land reclamation, ginseng poaching, and the east pearl picking” in the vast areas east and north of the Willow Palisade.<sup>52</sup> Thus, the forested space beyond the Willow Palisade was made into paddocks for military drills and tribute mountains for tribute collections (See Map 3 and Map 4).

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<sup>51</sup> Mark Elliott, The Limits of Tartary: Manchuria in Imperial and National Geographies, *The Journal of Asian Studies*, 59.3 (2000): 603-646.

<sup>52</sup> Xushichang 徐世昌, *Dongsansheng zhenglue* 東三省政略, Vol.1, bianwu yanji pianqi 邊務 延吉篇 七, Xu Lihua 徐麗華 ed., *Zhongguo shaoshu minzu guji jicheng* (hanwen ban) 中國少數民族古籍集成 (漢文版) No. 36 (Chengdu: Sichuan renmin chubanshe, 2002), 59.

Map 3: The Shengjing Geography in the Qing Dynasty



Sources: huayi dijie 華夷地界 Shengjing 盛京 in *Historical Atlas of Northeast Asia* (Northeast Asian History Foundation, 2017), 43.



Map 4: The Qing Military Garrisons

Sources: Zhaozhen 趙珍, *Ziyuan, huanjing, yu guojia quanli: qingdai weichang yanjiu* 資源、環境與國家權力：清代圍場研究 (Beijing: Renmin University Press, 1997).

### *Indigenous Knowledge of Forest: Weji*

The Manchu vocabulary for “forest” is 窩集 (*weji*). *Weji*, transcribed in classic Chinese as 窩集 (or 勿几, 阿稽), specially refers to the untouched and old-growth trees in Jilin, Ningguta 寧古塔 (in today’s Hailin 海林 Municipal City in Heilongjiang Province), and the Amur River.<sup>53</sup> The restrictions on location and density made *weji* different from what we commonly know about trees. In the Qing Dynasty, the Qing emperors, geographers, and frontier exiles produced accounts of *weji*. These writings were mostly detailed, narrative descriptions. Typically, they were founded on individual experiences and scarcely employed numbers or quantification. For example, in the *Compilation of Kangxi's Investigation of Things* (*Kangxi jixia gewubian* 康熙幾暇格物編), the Kangxi emperor interprets *weji* as a forested space where trees, animals, and ginseng shared a harmonious relationship:

“*Weji* extended eastwards from Jilin Ula and Heilongjiang to the seaside and westwards to Russia. Wide or narrow, row after row, the trees were so dense to the degree that even the sunshine became rare. All kinds of big trees such as pines and cypresses grew with their kinds without mixing with others. Fallen leaves often accumulated several feet high that blocked the ground springs and rainwater, turning them into the mud, on which walking was very difficult. There were bears, martens, black and white chinchillas who fed on pine nuts and oak chestnuts. The *weji* also produced ginseng and all kinds of medicines, many of which were unrecognizable, similar to southern Hunan and Sichuan.”<sup>54</sup>

However, the Han scholars who were exiled to Ningguta portrayed *weji* in their poems and prose from a different perspective. During Shunzhi’s and Kangxi’s reigns, a group of Han intellectuals was sent to Ningguta as punishment. They went out of Shanhai Pass and traveled

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<sup>53</sup> Hu Zengyi 胡增益, *Xin manhan dacidian* 新滿漢大詞典 (Xinjiang: xinjiang renmin chubanshe, 1992), 817.

<sup>54</sup> Aisin Gioro hiowan yei 愛新覺羅·玄燁, *Kangxi jixia gewu bianyizhu* 康熙幾暇格物編譯註, annotated by Li Diyi 李迪译 (Shanghai: Shanghai guji chubanshe, 2008), 80.

all the way north along the East Road Post Station, leaving a large number of records about the dense forests and the unsafe environment in Northeast China. Fang Gongqian 方拱乾 was one of them. As an early Qing official who was implicated by his son in an imperial examination cheating case, he was sent to Ningguta with his family in 1659. In his memoir, he characterized Ningguta as “wilderness of more than four hundred miles, surrounded by tall trees called big *weji* and small *weji*.” According to him, the *weji* were as tall as a thousand *zhang* 章, and would not rot until their barks were peeled off. Fang Gongqian exclaimed over the volumes of the trees as “even ten thousand cattle were unable to transfer them.”<sup>55</sup> [荒野四百餘里，外皆有大樹林，曰大阿稽、小阿稽。千章之木，殺其皮以令之朽，萬牛不能送，時令人發深嘆焉]

Qian Zhixi 錢志熙, another Qing relegated poet, wrote in the preface of his *Records of Mountains and Waters in Ningguta* (*Ningguta shanshui ji* 寧古塔山水記): “there were tens of miles of forests that covered the sun and the moon; there were countless trees that were hundreds and thousands of meters tall (*qianxun baiwei zhicai* 千尋百圍之材).”<sup>56</sup> The same scene was also captured by Zhang Jinyan 張縉彥, an official who was sent to Ningguta for the literary inquisition. In his records about the Ningguta city, he wrote: “the forest species here included pines, birches, lindens, elms, and other trees. In the *weji*, trees that were

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<sup>55</sup> Fang Gongqian 方拱乾, *Ningguta zhi* 寧古塔誌 (also called *Jueyu jilue* 絕域紀略, in Zhang Chao 張潮, Yang Fugu 楊復古等, *Zhaodai Congshu* 昭代叢書, Vol.3., No. 26. (Shanghai: shanghai guji chubanshe,1990), 2-6.

<sup>56</sup> Qian Zhixi 錢志熙, *Ningguta shanshui jixu* 寧古塔山水記序, in Zhang Jinyan 張縉彥, *Ningguta shanshuiji yuwai ji* 寧古塔山水集·域外集, collated by Li Xingsheng 李興盛 (Harbin: Heilongjiang renmin chubanshe, 1984), 1-2.

thousands of meters tall (*qianxun zhicai* 千尋之材) were countless.”<sup>57</sup> [材木則松、檜、樺、椴、榆諸樹，在烏雞者，千尋之材，不可名數]

The terms that characterized the height of trees as “thousand *zhang* of wood” and “thousand *wei* of material” demonstrated themselves the depth and towering of the Ningguta *weji*. Yang Bin’s 楊賓 *Diaries of the Willow Palisade* (*Liubian jilue* 柳邊紀略) had a more detailed and dramatic records of the trees when he traveled through the two best-known and the most significant *weji* in Northeast China—the Namu *weji* (納穆窩集, today’s Laoyeling Mountain in east of Jilin City) and the Seqi *weji* (色齊窩集, today’s Zhangguangcai Mountain in Jiaohe 蛟河 Municipal City, Jilin Province). At the Namu forest, he wrote:

“After traveling through the Songhua River, I have already had a queer and odd experience. After entering the *weji*, the view was more unlimited. Trees roared in the wind, and cliffs fell with rocks jumping. The haze could not diffuse, how can the daylight shine? Ancient snow blocked the road, and the mourning streams destructed the paths. No one had ever been here, only the ghosts whistled.”  
[跋涉過混同，所歷已奇峭。結束入窩集，一望更深奧。樹密風怒號，崖崩石奔跳。陰霾不可開，白日安能照。古雪塞危途，哀湍宣壞道。更無人跡過，惟聞山鬼嘯]

From Yangbin’s poem, it was not difficult to see the denseness of the *weji*, and the perilousness of the environment when the haze could not diffuse, and the sunlight could not get through. Yang Bin depicted the regional biodiversity of Northeast China vividly from an emotional perspective. His other poem on his Seqi forest experience read:

“Fifty miles in the Namu forest, the journey became even harder. The Seqi forest was deeper, and I felt emotionally blocked before I started passing through it. The wolf chased me, and the pheasant danced to me. Bears roared at the entrance, and martens wandered at the pine roots. Clouds gathered and blocked the path. Black fogs almost blinded my eyes. Fortunately, there were chiselers (*zaoshanren* 鑿山人) who saved my slight sight of the sky.”<sup>58</sup>

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<sup>57</sup> Zhang Jinyan 張縉彥, *Ningguta shanshui ji* 寧古塔山水記, in *Ningguta shanshui ji, yuwai ji* 寧古塔山水集·域外集 (Harbin: Heilongjiang renmin chubanshe, 1984), 46.

<sup>58</sup> Yang Bin 楊賓, *Liubian jilue* 柳邊紀略, Vol.4, see Li Shutian 李澍田 ed., *Jilin jilue* 吉林紀略 (Changchun: Jilin wenshi chubanshe, 1985), 75.

[納木五十里，頗極登頓苦。色齊林更深，未入心已阻。豺狼逐我馳，山雞向我舞。谷口咆熊羆，松根躡貂鼠。云橫道不通，霧黑眼若瞽。幸有鑿山人，乃見天一縷]

The *weji* ecosystem consisted of wolves, pheasants, bears, minks and dense forests, displayed an unacquainted and perilous picture to the Han scholar who barely had any experiences in hunting or fishing. Wu Zhaoqian 吳兆騫, a poet of Suzhou, also left poems about the *Namu weji* and the *Seqi weji*. In his *Small Weji* (*Xiaowuji* 小烏稽), he characterized the environment as “thousands of years of ice and snow were wet in the sunny day, and ten thousand timbers were still in the clouds at noon [千年冰雪晴還濕，萬木云霾午未開].” In his *Big Weji* (*Dawuji* 大烏稽), he recorded:

“I left the mountain Inn at the top of the clouds in the morning, and I rested in the boundless forest on the high and steep mountain in the evening. Primitive forests lingered for more than a hundred miles, and hazel bushes were firmly enclosed for more than a thousand years. It was amazing that martens falling when they saw people coming, and bears hanging on trees steadily even when they saw humans coming. In this world full of miracles and few people, it must be that Dayu, who has made a great change in heaven and earth, has never come.”<sup>59</sup>

[朝辭石棧亂云巔，暮宿蒼林萬仞前。灌木帶天余百里，崩榛匝地自千年。棲冰貂鼠驚頻落，蜚樹熊羆穩獨懸。聞道隨刊神禹績，崎嶇曾未到窮邊]

The poems showed the hardship and danger of foreign woodlands in the eyes of the Han people. However, in the poems written by Emperor Kangxi and Emperor Qianlong on the *weji* in Jilin, the spirit and tone were brisker and more confident. For example, when Emperor Kangxi stationed in the Jilin City in 1682, he wrote *A Inspection on Weji* (*yue woji* 閱窩集覽):

“The pine forest was a dark mass extending for a hundred miles, and the place that people seldom visited was a place for elks. Rain and snow drifted to the ground, birds and weeds had their spring and autumn.”

[松林黯黯百十里，罕境偏為麋鹿遊。雨雪飄瀟難到地，啼鳥野草自春秋]

<sup>59</sup> Wu Zhaoqian 吳兆騫, *Qiuqieji* 秋茄集, collated by Ma Shouzhong 麻守中 (Shanghai: shanghai guji chubanshe, 1993), 38-

In 1743, Emperor Qianlong made his first Eastern Tour, stationed at the Kulene 庫勒訥 *weji* (in today's Jilin Hada 哈達 Mountain), a hundred miles southwest of Jilin City. He composed *A Verse on the Kulene Weji* (*zhubi kulene woji kouzhan* 駐蹕庫勒訥窩集口占) which read, “What was *weji*? It was outstanding viewing from a distance. What a sea of trees and you obtain the enlightenment of Hua-yen by looking at them. Purple flowers came out between the trees, and boundless forests locked the rock. It was like looking at the Bohai Sea, and you knew the salt before you had drunk it.”<sup>60</sup> [窩集夫何許，遙瞻已不凡。真堪稱樹海，乍可悟華嚴。紫脆粉間柯，蒼蕤鎖奧岩。恰如望瀛渤，未飲早知咸] The images of “dark pine forest” and the “sea of trees” in the two poems corresponded to the Han intellectuals’ descriptions of the luxuriance of forests, and the scarcity of human habitation in Jilin, but without any hint of being miserable.

### *Qing's Imperial Forest*

The Qing government designed the *weji* into three types. The first type was the tribute mountains (*gongshan* 貢山) along the ranges of the Changbai Mountain that provided wood and ginseng for imperial use under the Imperial Household Department (*neiwufu* 內務府); only the bannermen and the forest tribes of Solon, Daur, and Oroncon, who connected to Qing through the fur tribute submissions, were granted usufruct rights for sable hunting and pearl gathering. The second type was the imperial hunting reserves (圍場 *weichang*), governed by the Imperial Hunting Reserves Department (*weichangchu* 圍場處). The hunting reserves offered a military training space for banner soldiers, a contact zone between the Qing emperor

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<sup>60</sup> Hongli 愛新覺羅·弘歷, *Zhubi kulene woji* 駐蹕庫勒訥窩集, in Sa Ying'e 薩英額, *Jilin shizhi jilin waiji* 吉林史誌·吉林外記, collated by Shi Jixiang 史吉祥 and Zhang Yu 張羽 (Shanghai: shanghai guji chubanshe, 1995), 13.

and the Mongol noble families, and a site of tributes. The third type was the forestlands attached to the imperial tombs (陵地 *lingdi*), supervised by the Government Office of the Three Imperial Tombs (*sanling zongli shiwu yamen* 三陵總理事務衙門). According to the Kangxi Emperor, the evergreen pines and cypresses constituted a sacred and auspicious landscape.<sup>61</sup> It is noteworthy that these imperial forests were described in terms of *shan* (山 mountain) and *di* (地 land), instead of *lin* (林 woods or forest). While outside the eastern line of the Willow Palisade, the Yalu River forests were reserved by the Shengjing military governor as Sino-Chosŏn buffer zone. The Yalu River forests thus represented Qing's superior and benevolent rule towards Chosŏn Korea as a symbol of suzerainty.<sup>62</sup> In the aspect of timber harvesting, the government-run official lumber yards (*famuchang* 伐木場) limited lumbering to few areas along the Hun River, the Taizi River, and in Jilin.<sup>63</sup> As a result, Northeast China's forests had not been harvested or exploited on a large scale in the

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<sup>61</sup> Aisin Gioro hiowan yei 愛新覺羅·玄燁, Xingjing 興京, see Zhang Jiasheng 張佳生, *Duru jiajing: manzu zongshi wenxue* 獨入佳境: 滿族宗室文學 (Sheyang: liaohai chubanshe, 1997), 52. Other scholars also argue that Manchu identity was maintained by encouraging hunting and gathering habits in northeastern paddocks. See Nicholas K. Menzies, *Forest and Land Management in Imperial China* (Palgrave Macmillan, 1994).

<sup>62</sup> The Japanese scholar Yoshiyuki Ayihara defines the mountain forests in Fengtian as "government mountains" that "were used and managed by the government or individuals to which the government gave authority. I agree with him, and I use the term "banner forests" to capture the non-imperial hunting domains and croplands that bannermen of Manchus, Mongols, various forest tribes and Chinese all had access to. See Yoshiyuki Ayihara, "Forests as Commons in Early Modern China: An Analysis of Legal Cases,"

[https://www.researchgate.net/publication/330402949\\_Forests\\_as\\_Commons\\_in\\_Early\\_Modern\\_China\\_An\\_Analysis\\_of\\_Legal\\_Cases](https://www.researchgate.net/publication/330402949_Forests_as_Commons_in_Early_Modern_China_An_Analysis_of_Legal_Cases)

<sup>63</sup> Even so, in the Qing Dynasty's imperial timber acquisitions, Northeast China was not the main imperial timber supply area. See Yuan Chan 袁嬋, Li Fei 李飛, *Mingqing huangmu caiban jiqi yingxiang* 明清皇木采辦及其影響, in Yin Weilun 尹偉倫, Yan Geng 嚴耕 eds., *Zhongguo linye yu shengtaishi yanjiu* 中國林業與生態史研究 (Beijing: zhongguo jingji chubanshe, 2012), 123-133.

seventeenth to the eighteenth century.<sup>64</sup> The conservation of the forest was only one aspect of Qing's forest government. As the largest component of the Qing's imperial forest, *weji* had participated in Qing's confrontation with the Russian troops on the northern border, as well as the tribute connection between the Manchu emperor and the multiple forest tribes through fur submissions. Thus, Qing's government of *weji* did not focus on the forest itself. Instead, it centered on two purposes underpinned by forest: border defense and ethnic control.<sup>65</sup>

### *The Forest Defense*

The abundant forest resources and convenient waterway transportations have made Jilin a center for shipbuilding and military base for the inland waterway navy since the Ming Dynasty. The Ming *Liaodongzhi* 遼東志 recorded:

“Jianzhou 建州 located east of Songhua River had traditions similar to that of Kaiyuan 開原. The river branches were called *wentu* 穩突, and the surrounding mountains were famous for their timber productions. Our government built ships here when launching wars against Nu'ergan 奴兒干.”<sup>66</sup>

The Ming armies had initiated shipbuilding in Jilin since 1409. The soldiers felled timbers on the surrounding mountains in August and September every year and hauled the logs via cattle sleigh to the riverside in October. When the rivers thawed out in the spring, the logs were

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<sup>64</sup> During this period, the Qing government's ban on the Northeast was not effective, and private forest development still exists.

<sup>65</sup> David Bello, "The Cultured Nature of Imperial Foraging in Manchuria," *Late Imperial China* 31.2, (Dec. 2010): 1-33.; Jonathan Schlesinger, "*Inventing Nature in the Qing Empire: Environment, Identity in Northeast China and Mongolia, 1750-1850*," (PhD. Dissertation, Harvard University, 2012).

<sup>66</sup> Bi Gong, *Liaodong zhi* 遼東誌, Vol. 9, see Jilinsheng difangzhi bianzuan weiyuanhui 吉林省地方誌編纂委員會 eds., *Jilinshengzhi* 吉林省志 (Changchun: Jilin wenwu chubanshe, 1991), 243.

made into rafts, and floated downstream to Jilin.”<sup>67</sup> Therefore, Jilin was also named “shipyard” (*chuanchang* 船廠) in the Ming Dynasty.

The Qing rulers inherited the shipyard and established the Jilin Navy Camp (*Jilin shuishiying* 吉林水師營) in 1661. In the Emperor Kangxi’s realm, the Jilin Navy built warships for both the Generals of Jilin and of Heilongjiang.<sup>68</sup> The warships contained two categories: the small boats of four to five people, and the large ships that could take seventeen people.<sup>69</sup> In addition to the warship building in the official shipyards, ordinary residents in Jilin also built boats to join small campaigns. As witnessed by the Swiss missionary Ferdinand Verbiest, “all the residents in Jilin were capable of producing boats with special structures. These boats were equipped with riggings to cope with the Russian poachers who came to Jilin to net pearls.”<sup>70</sup>

In 1675, in order to prepare for wars at Yaksa against the Russians, the vice-General of Ningguta An Zhuhu 安珠瑚 moved his troops from Ningguta to Jilin. He and his men built another forty warships and ten more riverboats and practiced waterway drills every day.<sup>71</sup> The geographical shift of the general residence from Ningguta to Jilin ula laid the political ground for the rise of the Jilin town. In 1684, Kangxi Emperor established a navy camp in Qiqihar

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<sup>67</sup> Cong Peiyuan 叢佩遠, Song Dejin 宋德金, *Mingqing shidai jilin chuanchang jianzhi niandai kao* 明清時代吉林船廠建置年代考, *shehui kexue zhanxian* 社會科學戰線 4(1979): 178-179.

<sup>68</sup> Chang Shun 長順, Li Guilin 李桂林, *Jilin tongzhi* 吉林通誌, Vol. 56 (Changchun: Jilin wenshi chubanshe, 1986), 903.

<sup>69</sup> *Chaoxian lichao shilu* 朝鮮李朝實錄, Vol. 36, see jilin shifan xueyuan guji yanjiushi eds., 吉林師範學院古籍研究室, *Zhongguo xianglin diqu chaoxian dilizhi ziliao xuanbian* 中國相鄰地區朝鮮地理誌資料選編 (Changchun: Jilin wenshi chubanshe, 1996), 344.

<sup>70</sup> NanHuairan 南懷仁, *Dada luxing ji* 韃靼旅行記, see Wenkai 文凱ed., *Qingdai xiren jianwenlu* 清代西人見聞錄 (Zhongguo renmin daxue chubanshe, 1985): 77.

<sup>71</sup> Gao Shiqi 高士奇, *Hucong Dongxun rilu* 扈從東巡日錄, 57.

and equipped it with two large warships and fifteen small ships. Later, the emperor built a third navy camp in Mo'ergen 墨爾根 with six warships, and a fourth navy camp in Heilongjiang with thirty warships. The Jilin shipyard provided all the warships needed by the four navy camps.<sup>72</sup> As battleships had played vital roles in Qing's triumph of the 1685 Sino-Russo Yaksa war, *weji* thus contributed to Qing's frontier defense and laid the foundation for China's inland waterway navy development.

The rich timber sources around the Jilin shipyard not only provided materials for shipbuilding but also enabled the Jilin town, originated from the Jilin shipyard, to develop into a "town of wood" that was primarily built of timbers. In a report written by Nie Shicheng 聶士成 on his visit to Jilin in 1893 demanded by the-then Minister Li Hongzhang 李鴻章, he noticed the particular role that timber played in this town. He said, "the rice price in Jilin was meager, but the timber price was even lower than that in any province of China. All the residential houses, official offices, and walls were made of timbers. Moreover, the streets also paved by wooden boards."<sup>73</sup>

In addition to the warships made of *weji* timbers, the *weji* alone could serve as "forest walls" to defend the Qing empire by impeding the Russian invasions. This idea of developing the *weji* defense along the Sino-Russo borderland was put forward by Cao Tingjie 曹廷杰, a Qing official and geographer. In 1885, he finished his personal field trip to North Manchuria and wrote a book on the Manchurian geography. One of his articles, *A Research on the Northeastern Weji and Waters* (*genwei wojikao shuiyuan hekao* 艮維窩集水源合考),

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<sup>72</sup> Zhao Erxun 趙爾巽, *Ershiwu shi* 二十五史, Vol. 135 (Shanghai: Shanghai guji chubanshe, 1986), 893.

<sup>73</sup> Nie Shicheng 聶士成, *Dongyou jicheng* 東遊紀程, Vol.1, Li Xingsheng 李興盛eds., *Bohai guozhi changbian* 渤海國誌長編 (Harbin; Heilongjiang renmin chubanshe, 1995), 1005.

discussed the possibility of mobilizing the old-growth forests in Jilin and Heilongjiang for imperial defense. He wrote:

“The *weji* expanded from the Sino-Russo border in the north, to the sea in the east. Along the thousand-mile borderline, it was the severe environment created by *weji*, instead of the roadblocks, that prevented the Russian cavalries. As the ancient forest tribes who resided in the *weji* either engaged in nomadic activities, or lived on gathering and hunting, the old-growth forests rarely suffered from axes, and a thousand miles of them were scarcely traveled by a human. Therefore, the borderland forests were better defense even than that of the Great Wall. [東限于海，北接俄羅斯邊界，數千里未設卡倫。惟賴窩集之險，以限戎馬之足……從古部落之居于是者，非務遊牧，即事採捕，以故深山老林鮮罹斧斤之患，而數千百里絕少蹊徑，較之長城巨防尤為險阻]”<sup>74</sup>

Particularly, Cao Tingjie’s research of *weji* adopted the style of narrative descriptions. He listed the full name, location, and height of each *weji* site, including twenty-three *weji* in Jilin, sixty-three *weji* in Ningguta, and two *weji* in Heilongjiang. For example, his description of the Namu *weji* and the Seqi *weji*, were as follows:

“One hundred and twenty miles to the east (of Jilin) was Namu *weji* [In Manchu language, “Namu” means lettuce. The trees in Namu *weji* were more than three hundred feet tall. All rivers in the southeast of the town originated here. To the west was Namudabahan]”  
東一百二十裏，納穆窩集 [滿洲語：納穆，生菜也，高三百餘丈，城東南諸河俱發源於此，西接納穆達巴罕]

“Two hundred and twelve miles (to the east of Jilin) was Seqi *weji* [In Manchu language, “Seqi” means being cut. The trees were five *li* tall and were ten *li* in the perimeter. The eastern rivers and Ningguta rivers all originated from this place].  
二百十二裏，塞齊窩集 [滿洲語，塞齊，劃破之謂也，高五裏周圍十裏，城東諸河及寧古塔諸河俱發源於此]”<sup>75</sup>

Cao Tingjie’s survey of the old-growth forest was mainly conducted for the purpose of defending China against Russian aggression. Therefore, the forest knowledge he produced was more of a kind of military knowledge, rather than knowledge of the forest. He listed the *weji* locations according to their distances to the Qing military headquarters, such as “east of

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<sup>74</sup> Cao Tingjie 曹廷傑, *Genwei woji shuiyuan hekao* 艮維窩集水源合考, see Jin Yufu 金毓黻 ed., *Liaohai congshu* 遼海叢書, No. 7 (Shenyang: Liaoshen shushe, 1985), 16.

<sup>75</sup> *Ibid.*

Jilin ula” and “north of Ningguta.” Further, he employed the old Manchu name to address each *weji* site, which contrasted with what modern foresters do, to name forests after mountains and rivers, such as “the Songhua River forest.” His adoption of the Manchu forest names also indicated that the *weji* information might as well be common knowledge shared by banner soldiers. Cao especially paid attention to the size and location of the *weji* in the expectation that the natural landscape of the unexploited forests could serve as buffers and prevent the Russian Cossacks on horseback. His design of the borderland forest did coincide with the Han exile Yang Bin’s miserable experience in the Namu *weji*. However, what he did not expect was that the natural forest environment might have its potential to become a border defense, to Han people, but not to Russians.

### *Ethnic Control Through Tribute*

The Manchu people depended heavily on the resources of animals and plants provided by forests. After 1644, the products of the forests in Northeast China had become the primary source of imperial tributes and an important tax source for local governor-generals. Under the strict prohibition policy, the Qing rulers divided the northeastern natural resources into the tribute mountains (*gongshan* 貢山), the tribute rivers (*gonghe* 貢河), and the tribute streams (*gongjiang* 貢江), governed by Dasheng Ula General Government Office (*dasheng wula zongguan yamen* 打牲口烏拉總管衙門) under the Imperial Household Department, as well as *Guozilou* 果子樓 under the Jilin General.<sup>76</sup> The Dasheng Ula *Yamen* (1657-1911) was set

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<sup>76</sup> Seven mountains along the Mount Changbai range were assigned as the pine nuts and honey tribute suppliers: Mao'er Mountain 帽兒山, *Yantong yazi* 煙筒砑子, *Zhuqi* Mountain 珠奇山, *Bangchui yazi* 棒槌砑子, *Leiji yazi* 雷擊砑子, *Shansong* Valley 杉松嶺, and *Batai* Valley 八臺嶺. Chen Yue 陳躍, *Qingdai dongbei diqu shengtai huanjing bianqian yanjiu* 清代東北地區生態環境變遷研究 (Ph.D. Dissertation, Shandong University, 2011), 184.

up to collect tribute for the Royal family. It governed the *Sihehuolun* 四合霍倫 Tribute Mountain, located in Shulan 舒蘭, Wuchang 五常 and Emu 額穆 counties of Jilin Province, that produced Korean pine, east pearl, pine nuts, mink bark, ginseng, and other products. *Guozilou* 果子樓 belonged to the Department of Revenue of the Jilin General Government Office. It was responsible for collecting tributes from the hunting parks of the Jilin West, Bodune 伯都訥 and Alachuka 阿拉楚喀, and delivering them to the capital. In the early Qing Dynasty, in order to ensure the supply of tributes, in addition to demarcation and closure, a post road was built to transport the tributes. Centering on the Jilin City, there were three post roads: the West route, the North route, and the East route. The Ningguta-Jilin Ula Line of the Eastern Route was built in 1677. It consists of eleven stations, including Ula 烏拉 Station, Jiangmifeng 江密峰 Station, Emu 額穆 Station and Lafa 拉法 Station, Tuituan 退搏 station, Yiqisong 義氣松 station, Ehemu 額摩和 station, Tala 塔拉 station, Bi'erhan 必爾罕 station, Shalan 沙蘭 station, and Ningguta. Among them, Emu, Lafa and Tuituan managed the forests in the Laoye Valley forest (the *Namu weji*) and Zhangguangcai Valley forest (the *Seqi weji*). Thus, the remote and vast *weji* with abundant resources were incorporated into the Qing tribute management system and served the role as the imperial forests.

In the northern frontier beyond Ningguta, another three *alban* tributary system for collections of furs were established under the Imperial Household Department. The *alban* system thus served as a channel through which the Qing governor established a control over the Amur forest tribes as well as the trade of furs. According to Schlesinger, two things distinguished the Manchu *alban* tributary system from the so-called Chinese tributary system. One, the furs were the only tribute demanded by the Qing court. Second, the Manchurian

forest tribes of Solon, Daur, and Oroncon, replaced the vassal states in a general sense.<sup>77</sup> The first tribute system was a clan and village-based system operated through Ningguta, and Ilan hala where the tribal communities in the Lower Amur, the Pacific coast, and Sakhalin Island were the tribute bearers. Every certain month the special envoy dispatched by the court would visit Ningguta for the fur collection. Thus, Ningguta became a hub for the fur trade in the seventeenth-eighteenth centuries. The second tribute system was called “*hojihon*” (son-in-law in English) in which the communities at lower Amur not only paid fur tributes to the court but maintained marriage relationship with the court in Beijing. The third one was named “*culgan*” (gathering in English) operated in Qiqihar regulating the tribal communities in the Upper Amur and Manchurian highlands. Moreover, the court demanded that any sable trade outside the confines of the *culgan* was prohibited. As a consequence, the great profits generated from the fur trades evoked large amounts of illegal trespasser and overhunting of animals such as sables, squirrels, otters, foxes, badgers, and so on. This led to another two results. First, the Manchurian and Mongolian ecosystem, where wild animals inhabited in, could not keep up with consumer demand and therefore got trapped in the problem of resource depletion. Second, the overhunting of badgers triggered the rage of smallpox and other infectious diseases which ultimately undermined the *alban* tribute system.

The timber tributes of birch, pine, and cypress were mainly used as materials for the making of arrow archery. Two mountains, the *Zhaodaji* Mountain 照大雞山 and the Left Branch of Qing Valley (*zuozhimai qingling* 左支脈慶嶺) in Jilin were assigned as the imperial arrow suppliers. Under the Jilin General’s jurisdiction, a birch bark factory was established and was in charge of harvesting and transporting the birch barks to the Imperial

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<sup>77</sup> Jonathan Schlesinger, *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule* (Stanford, California: Stanford University, 2017).

Household Department, where they were made into saddles, arrows, and various decorations.<sup>78</sup> The assigned tribute mountains in Jilin generated 8,000 birch arrows every year, and the number increased to more than 200,000 arrows in 1871. The amount gradually declined thereafter until 1890 when the birch trees on the *Zhaodaji* Mountain were exhausted.<sup>79</sup>

## JAPAN'S IMPERIAL FOREST AND NEW FORMS OF KNOWLEDGE

### *The Creation of Ringyo* 林業

Japan's creation of modern forestry in the nineteenth and twentieth century went hand in hand with its imperial expansion. The forest management transition was also reflected by the vocabulary shift in its forest categories. In the Edo and early Meiji periods, forests managed by the estate of warriors (*daimyo*) were called *obayashi* 御林 and *oyama* 御山, and the forests managed by villagers were *muramochiyama* 村持山 and *gobayashi* 郷林. *Yama* 山 and *yashi* 林 were used separately to indicate forests, and the union of *mori* 森 and *yashi* 林 were not in common parlance.<sup>80</sup> From the 1870s onward, with Japan's imperial expansion towards Hokkaido and later Taiwan, Karafuto, and Korea, new forms of forest knowledge were produced for colonial management. Sponsored by the Meiji government, forestry experts and scientists were dispatched to meticulously survey the empire's woodlands, measure the

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<sup>78</sup> Cong Peiyuan 叢佩遠, *Dongbei sanbao jingji jianshi* 東北三寶經濟簡史 (Beijing: Nongye chubanshe, 1989), 336.

<sup>79</sup> Pan Jinglong 潘景隆, Zhang xuanru 張璇如, *Jilin gongpin* 吉林貢品 (Tianjin: Tianjin guji chubanshe, 1992), 223-226.

<sup>80</sup> Koji Matsushita, *National Forest Management*, in Yoshiya Iwai ed., *Forestry and Forest Industry in Japan* (Canada: UBC Press), 2002, 85.

forestland areas, classify the plant species, and map the forest resources.<sup>81</sup> Statistics, maps, and numerical tables in the forestry documents and surveys became the basis for Japan's imperial forest extraction and the development of the lumber manufacture industry. The new series of practices of naming, classification, measuring, and marketing also coined new terms, such as *shinrin* (森林 forest and woods), *kokuyourin* 國有林 (state forest or national forest), *rinya* (林野 un-owned woods and wilderness), *ringyo* (林業 literally “wood manufacture,” or “forest industry”), and *mokuzai* (木材 wood or timber) that were rarely seen before the Meiji period.<sup>82</sup> It was until 1899, that the Real Estate Registration Act (*Fudosan tokiho* 不動産登記法, Meiji 32 Act, No. 24) established the legal status for *rinya* (林野 ‘woods and moors’), which referred to a combination of forest and non-forest grassland, and officially recognized it as a land-tenure category.

The new forest categories contained new meanings under the Meiji government and the later Japanese empire. Just as Western environmental ideas had been stimulated by exploitations of tropical forest, the term *ringyo* (林業 forestry), for example, stimulated by Japan's contact with the forested landscapes of surrounding colonies marked a new form of environmental government, with what Morris-Suzuki called “a militantly modern scientific

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<sup>81</sup> In 1899, the Meiji government conducted a special survey “Hokkaido official forest type survey regulations” (Hokkaidō Kanbayashi shubetsu chōsa kitei 北海道官林種別調査規程) on the Hokkaido official forest that laid the foundation for Japan's state forest system formation. See Takayoshi Koseki 小関, 隆祺, *The Processes of Development of Forestry in Hokkaido* (Hokkaidō ringyō no hatten katei 北海道林業の発展過程), *Hokkaido University Agricultural Department Seminar Forest Research Report*, 1962-11, 22(1): 25-94.

<sup>82</sup> Tessa, Morris-Suzuki, “The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan's Imperial Order,” *Japanese Studies*, 33.3(2014): 225-242.

rationality” and what Katsuya Hirano called “extractive colonialism.”<sup>83</sup> Underpinned by the incentives of the second industrial revolution and the colonization of Hokkaido, Japan’s forestry management transformed into a capital-and technology-intensive manufacturing sector. It attracted both the government and commercial investment and produced railroad ties, papers, and other industrial products that in return, fueled Japan’s nation-state building and industrialization. However, the native people of Ainu suffered from violent occupation and brutal plundering under the name of modernization.<sup>84</sup> Considering the misfortune that the silenced Ainu had experienced, terms such as *ringyo* (林業) and *rinya* (林野) in Japan’s context thus encompassed not only scientific rationality, imperial sovereignty, and social progress but also unspeakable violence.

*New Forms of Forest Knowledge: shinrin/senlin*

In the nineteenth century, Japan’s forestry specialists paid special attention to China’s demand and supply of Japanese lumbers. Voluminous forestry survey focused on Japan’s lumber exports, and its competition with the American lumbers in China’s market. The first forest survey onto Northeast China was initiated by the Mountain Forest Bureau under the Japanese Ministry of Agriculture and Commerce.<sup>85</sup> Trained in Japan, and worked as a forestry expert, Miyajima Doshiro 宮嶋多喜郎 was appointed inspector general of China’s and Korea’s timber markets in 1902 and 1903. On arriving China, Miyajima Doshiro began with

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<sup>83</sup> Katsuya Hirano, The Politics of Colonial Translation: On the Narrative of the Ainu as a “Vanishing Ethnicity,” *The Asia-Pacific Journal*, Vol.7, Issue 4, Number 3, 2009. <https://apjjf.org/-Katsuya-Hirano/3013/article.html>

<sup>84</sup> Katsuya Hirano, Thanatopolitics in the Making of Japan’s Hokkaido: Settler Colonialism and Primitive Accumulation, *Critical Historical Studies*, 12.2. (2015): 191-218.

<sup>85</sup> Sugihara Kamesaburō 杉原龜三郎 was sent to survey China’s forest market in 1899. However, as he only traveled from Hangzhou to Beijing, his report did not include Northeast China.

two objectives: to survey China's timber trade; to explore the potential markets for Japan's surplus lumber products. Doshiro noted that China had a potentially unlimited demand for lumbers for its modern industrialization. According to his survey, since Japan had long supplied the railroad ties and matchwood to China, China's expanding market for daily-used wood would continue to depend on Japan. Therefore, he concluded that "with such a great demand across the water, Japan's response should be to arouse and monitor China's lumber need. The future of Japan's *ringyo* (JP: forestry) would be promising, and Japan's business would be more prosperous."<sup>86</sup>

At that time, Japan's top exports to China were cotton and silk.<sup>87</sup> After the investigation in China in 1903, Doshiro argued that other than cotton silk, Japanese lumbers would become the second most promising cargos in the Sino-Japanese trade. He stated that "It was no accident that the Japanese wood had become special supplies to China. In the future, the laying of railroad ties on the Chengdu-Wuhan Railway (*chuanhan tielu* 川汉铁路), the Guangzhou-Wuhan Railway (*yuehan tiedao* 粤汉铁道), and other railways will have to consume a very large number of railroad ties. While China's demand could not be satisfied by its internal production, it was bound to depend on Japan, Europe, and the United States for lumber supplies."<sup>88</sup> Therefore, the Japanese government should protect the lumber industry,

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<sup>86</sup> Noshoroshō sanrin kyoku, 農商務省山林局, *Seikan ryokoku shinrin shisatsu fukumei-sh* 清韓兩國森林視察復命書, 1903, 6-21.

<sup>87</sup> Togai Yoshio, 山口和雄著, *Mitsui Zaibatsu shi : Taishō, Shōwa hen* 近代日本の商品取引 : 三井物産を中心に (Tokyo sharin 東洋書林, 1998).

<sup>88</sup> Noshoroshō sanrin kyoku 農商務省山林局, *Seikan ryokoku shinrin shisatsu fukumei-sh* 清韓兩國森林視察復命書, 1903, 302

reward lumber exports, broaden trade routes, and develop forest sources within Japan, which was beneficial to the country.<sup>89</sup>

In addition to the lumber trade surveys, the forest situations in Fuzhou and Northeast China were Doshiro's second focus. Different from Cao Tingjie's attention to the forest along the Sino-Russo borderland, Doshiro's exploration of Northeast China's forest shifted southwards and started from the Yalu River and the Tumen River. The Japanese Military Department joined the forestry surveys in 1905 after the triumph of the Russo-Japanese War. Six surveys were conducted along the Yalu River and the Changbai Mountain, while the SMR participated in the Jilin forest surveys in 1907. The surveys and reports thus produced a new set of market-oriented and statistically-rational categories and numbers that constituted China's modern forest knowledge.

New categories preceded numbers. Doshiro used both categories *shinrin* 森林 and *sanrin* 山林 to address the forests in Northeast China and made the two terms equivalent to each other.<sup>90</sup> In the surveys, he divided the forest districts in terms of their botanical zones, such as evergreen, deciduous, dry, alpine, and riparian, that seldom existed in Qing geographers' writings. Moreover, he mobilized new taxonomies to replace the indigenous names of particular species. For example, he used "deciduous pine" (落葉松 *Rakuyō matsu*) to indicate what Chinese called "yellow flower pine" (黃花松 *huanghuasong*), adopted "Korean pine" (朝鮮松) for the Chinese "fir pine" (杉松 *shansong*), and even endorsed a Japanese term "five-needle pine" (五葉松 *goyomatsu*) to refer to the Chinese "red pine" (紅

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<sup>89</sup> Noshoroshō sanrin kyoku 農商務省山林局, *Seikan ryokoku shinrin shisatsu fukumei-sho* 清韓兩國森林視察復命書, 1903, 4-7.

<sup>90</sup> *Ibid.*, 42.

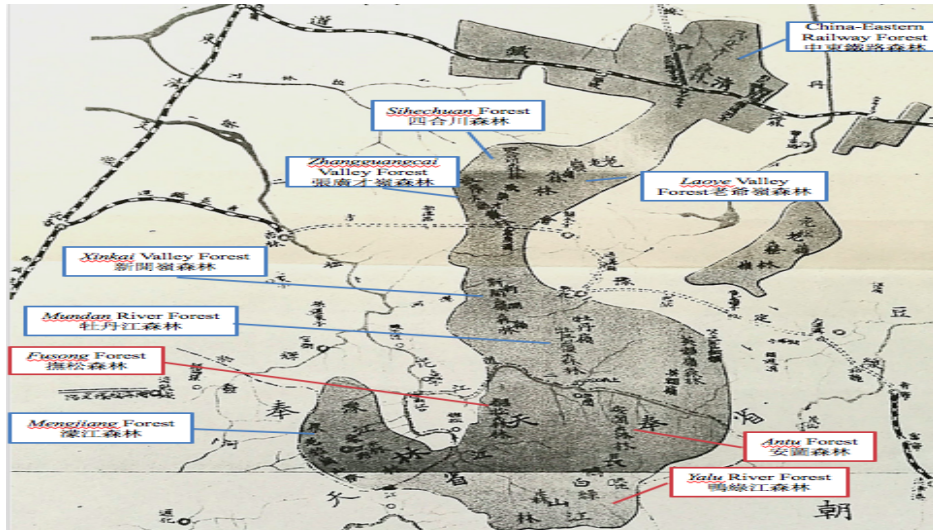
松 *hongsong*).<sup>91</sup> Further, to compare the forests in Northeast China and Fujian, he characterized the forest in Northeast China as “natural forest” (天然林 *ten'nen-rin*) and the forest in Fujian as “planned forest” (人工林 *jinko-rin*). Thus, the new forest terms and division under the concept of *senlin* 森林 challenged the Qing court’s *weji* and agricultural knowledge system.

Classification of the landscape into different zones of vegetation types and identification of basic species were foundational to assigning different kinds of numbers to each category for modern governance. Following the rule, the Japanese investigators produced numerical tables of the acreages, volumes of wood, and the number of trees for each forest district they surveyed, transforming the forest into forms of statistics.<sup>92</sup> Meanwhile, they provided elaborate maps and visual images to outline the fellable forest boundaries (See Map 4). Although Northeast China only became a Japanese colony until 1932, the forestry surveys conducted from 1899 to 1932 generated new classifications and productions of Northeast China’s forest that had profound implications. What we took for granted today as fundamental conceptions of Northeast China’s forest, such as the category of “natural forest” (天然林 *ten'nen-rin*), species identification of “deciduous pine” (落葉松 *Rakuyō matsu*), forest maps, and the organic system to standardize, transport, process, and market timbers in a progressive fashion so as to increase revenues, were modern resource knowledge of Japan production.

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<sup>91</sup> Ibid, 39.

<sup>92</sup> Minamimanshūtetsudō kabushikigaisha chōsa-ka-cho 南滿州鐵道株式会社調查課, *Kitsurin no ringyō* 吉林省之林業, 1924, 22.



Map 2: Forests in Jilin and Fengtian

Source: *Manshū shinrin ryakuzu* 滿洲森林略圖 [A Sketch Map of the Manchurian Forests], [*Ou Ryo Kkou Seizai mugen kōshi an'nai* 鴨綠江製材無限制公司案內 *A Guide to the Yalu River Wood Processing Company*], compiled by the Yalu River Wood Processing Unlimited Company 鴨綠江製材無限制公司, 1926, Dandong Municipal Library, China.

## THE INVENTION OF *LINYE* (FORESTRY) IN CHINA

The idea of *ringyo* (林業 wood manufacture or forestry) traveled. This neologism had been invented earlier by Meiji intellectuals in Japan to translate Western scientific and nationalist theories of “forestry” (*ringyo*) and got internalized in Japan’s colonial practices, found its way into the Qing and early republican elites’ discussion of China’s self-strengthening strategy. Although *ringyo* (林業) in Japanese and *linye* (林業 forestry) in Chinese shared the same Chinese characters, their representations were nuanced. *Ringyo* represented the Japanese creation of modern forestry industry through violent colonization, while *linye* was explained by Chinese elites as either agricultural promotion or tree planting in a positive tone. This section discusses how modern forestry knowledge was accepted, modified, and entered into the reform vision of the politicians in the late Qing Dynasty.

As a cultural symbol of the Manchu's rise to power, forests in Northeast China played a very important role in shaping the Qing rulers' authority and value in the early Qing Dynasty. However, after the First Sino-Japanese War, confronting the new pressures and invasions from Russia and Japan, the Qing frontier policy of closing-off lost efficacy. Meanwhile, with the introduction of western forestry knowledge and the foreign penetrations in Northeast China, the conception of Northeast China's forests by the government and the public had changed significantly. Under the influence of the modern sub-discipline, forestry gradually became an independent subject, and *linye* was interpreted as an "industry" (*shiye* 實業 or *chanye* 產業).

In the last decades of the nineteenth century, *linye* was first conceived and accepted with a strong emphasis on its economic benefits (*liyuan* 利源) and its practical application in promoting agriculture. In a letter written by Sun Yat-sen to Zheng Zaoru 鄭藻如 in 1890, Sun suggested that the establishment of a Society of Agronomy (*nongxuehui* 農學會) in China to encourage peasants to plant fruit and mulberry trees for profits and to accumulate timbers for firewood. He considered it a way to offset the loss caused by opium planting. He said, "the key was to encourage peasants, such as the Society for Promoting Agriculture in the West, to take the lead. This was one of many practical works that I hope to try."<sup>93</sup> Kang Youwei 康有為, the famous reformist in 1895, held the same view. In his famous Memorial to Emperor Guangxu in 1895, he also called for the set up of Society of Agronomy and resistance towards the Russian timbers. He wrote, "The foreign countries emphasized trees and livestock, and there were agricultural societies in urban settlements, which inspected the soil quality and distinguished between objects. China had vast land and a tremendous amount of natural resources, we should emulate the agricultural society in order to reap its benefits." As for the

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<sup>93</sup> Sun Yat-sen 孫中山, "A Letter to Zheng Zaoru" 致鄭藻如書, in Guangdong Social Academy 廣東省社科院, Modern China Institute, CASS 中國社科院近史所, and History Dept., Zhongshan University 中山大學歷史系 eds., *Sun Yat-sen Quanjì* 孫中山全集, 1 (Beijing: Zhonghua Shuju, 2006), 1-2.

benefits of planting trees, he wrote, “Russia had made millions of fortune in Siberia in timber business... Today, Russia’s timber transportation and canned fish were very popular in China and should be resisted.”<sup>94</sup> Both pioneer’ opinions reflected on one of the profound consequences of the Sino-Japanese War: a quest for the power of social organization in reforming China.

In September 1896, the Censor (*yushi* 御使) Huahui 華輝 proposed to the Qing court the idea of solving the problem of “insufficient annual income” and “poverty of people” by “planting widely” and “promoting water conservancy.” He stated: “Every land of whatever quality would find a tree species that fit, every kind of tree would contribute to some profits.....both the fruit trees and the firewood trees would be sufficient to supply the individuals with food and timbers and make more profit than the crop planting.” Huahui also suggested that the Qing court should reward the individuals who had planted trees in a number of more than fifty thousand or one hundred thousand, as well as punish the people who had felled trees for no reason.<sup>95</sup> In addition, he pointed out that planting trees could be combined with the construction of water infrastructure, which also has the significance of increasing benefits. “If we could take planting as the warp (*jing* 經), water conservancy as the weft (*wei* 緯); take water conservancy as the body (*ti* 體), and planting as the use (*yong* 用). For ten years, the land would be fertile, people’s livelihood would be getting better, and the national coffer would be getting richer.” According to Huahui’s citations of the western precedents on planting trees to make profits, we could infer that he had access to and was

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<sup>94</sup> Kang Youwei and others 康有為等, “A Memorial to Emperor Guangxu” 公車上書, in Gong Shuduo 龔書鐸, ed.

*Zhongguo Tongshi Cankao Ziliao (Jindai Bufen) xia* 中國通史參考資料(近代部分)下(Beijing: Zhonghua Shuju, 1985): 42.

<sup>95</sup> Huahui 華輝, A Memorial of Promoting Agriculture to Making Profits 請講求務本至計以開利源摺, in Yang Jialuo 楊家駱 ed., *Compilation of Literatures of the 1898 Reform 戊戌變法文獻匯編*, 22 (Taipei: Dingwen Shuju, 1973), pp.300-302.

influenced by the western knowledge of forestry; moreover, at least from the perspective of Huahui, China's traditional knowledge was unable to provide a solution to the problem that Qing government was facing in the late 19th century. In particular, Huahui was asking for inclusion of the state power in the promotion of *linye*, which was further advocated and disseminated by the famous Qing scholar Luo Zhenyu 羅振玉.

In the same year of 1896, Luo zhenyu initiated the Society of Agronomy (*nongxuehui* 農學會) in Shanghai with Jiang Fu 蔣黼 and Xu Shulan 徐舒蘭. After a systematic studies of agriculture, Luo Zhenyu claimed that the problem of China's lagging behind in agriculture and forestry development did not lie in any natural factors of land, weather, or population, but in the fact that China lacked "setting up agriculture as a discipline" and "establishing a specialized official to supervise, maintain, and promote agriculture."<sup>96</sup> Luo's idea of including modern agriculture knowledge in the Confucian classics and establishing a professional bureaucracy on natural resources marked a watershed in the conception of the agriculture/forestry management of the Qing period. It represented a new interaction between the knowledge and the state. Thus the imperial state was aspired with a new legitimacy to distribute power in setting up new bureaucracy towards land and forests.

The Society of Agronomy started a publication in 1897 called the Agricultural Journal (*nongxuebao* 農學報) that introduced Western agricultural knowledge by translating the Japanese agricultural works into Chinese. The first article whose title contained *linye* was published in 1899 when Shen Hong 沈紘 published his translation of the Japanese forestry specialist Suzuki-shinsan 鈴木審三's report *On Forestry (ringyo hen* 林業篇). Meanwhile,

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<sup>96</sup> Luo Zhenyu 羅振玉, "A Discussion on Agricultural Official" 農官私議, *Discussions on Agriculture 農事私議*, the first half, from Wang Yonghou 王永厚, *History of Agricultural Civilization 農業文明史話* (Zhongguo nongye kexue jishu chubanshe, 2006): 244.

the term *senlin* 森林 also appeared on publication in 1899, when the Agricultural Journal quoted the full passage of “Forest Protection” 森林保護學, written by Suzuki-shinsan 鈴木審三 and translated by Shen Hong 沈紘. According to the “Full-text Database Late Qing and Republican periodicals,” between 1900 to 1909, 159 items on *senlin* were published in different journals and newspapers, representing the popularity and acceptance of *senlin* as a modern equivalent for forest (see Table 2).

Table 2: Publications and Translations on Forestry in the Late Qing

Book Titles	Author	Translators	Organizations
<i>Nonglinxue</i> 農林學 [Agriculture and Forestry]	Honda Seiroku 本多靜六	Fan Diji 范迪吉	Shanghai wenxue huishe 上海會文學社 [Shanghai Society of Literature], 1893
<i>Zaolinxue</i> 造林學 [Siviculture]	Honda Seiroku 本多靜六	Lin Shen 林壬	Shanghai wenxue huishe 上海會文學社 [Shanghai Society of Literature]
<i>Senlinxue</i> 森林學 [Forestry]	Okuda Sada Mamoru 奧田貞衛	Fan Diji 范迪吉	Shanghai wenxue huishe 上海會文學社 [Shanghai Society of Literature], 1893
<i>Senlin baohu xue</i> 森林保護學 [Forest Conservation]	Nijima Yoshinao 新島善直	Fan Diji 范迪吉 and others	Shanghai wenxue huishe 上海會文學社 [Shanghai Society of Literature], 1893
<i>Senlin baohu xue</i> 森林保護學 [Forest Conservation]	Suzuki-shinsan 鈴木審	Shen Hong 沈紘	Shanghai nongxuehui 上海農學會 [Shanghai Society of Agronomy]
<i>Senlin xue</i> 森林學 [Forestry]	Okuda Sada Mamoru 奧田貞衛	Fan BingQing 樊炳清	Shanghai nongxuehui 上海農學會 [Shanghai Society of Agronomy]
<i>Luoyesong zaimei fa</i> 落葉松栽培法 [Larch Cultivation]	Kaoru Takamizawa 高見澤熏	Lin Shen 林壬	
<i>Jinsongshu zaimei fa</i> 金松樹栽培法 [Golden Pine Cultivation]	Kagami 加賀美	Lin Shen 林壬	Shanghai nongxuehui 上海農學會 [Shanghai Society of Agronomy]
<i>Riben shanlinhui zhangcheng zhaiyao</i> 日本山林會章程摘要 [Japan Forest Association Regulation Abstract]		Lin Shen 林壬	Shanghai nongxuehui 上海農學會 [Shanghai Society of Agronomy]

Sources: Zhonghua Ancient Books Database, <http://publish.ancientbooks.cn/docShuju/platformSublibIndex.jsp?libId=6>

The extensive discussion of forestry also enriched the scholars’ understanding of China’s timber shortage and resource dependence on foreign imports. Luo Zhenyu expressed his concerns on the foreign timber imports in his essay *Ways to Boost Forestry* (*zhenxing linye ce*

振興林業冊). He said, “according to the custom’s documents, the foreign timber imports to China expanded every year. If we do not do anything, this will lead to a trade deficit.

According to the botanists, there were five zones on the earth that were suitable for cultivation with sufficient water. Now China had a mild climate, and the extreme cold area was no more than fifty degrees north of the equator, so what tree species couldn’t grow? Those who had worries of lacking timbers have not done their jobs properly!”<sup>97</sup> The same concern was also expressed by a student from the Shanxi Agricultural and Forestry School in his graduation examination:

“A country's prosperity and strength depended on its national economy, so if you want to enrich the country, you must enrich the people first. Although there were many policies to enrich the people, you must revitalize forestry first. Why was it? Forestry, the source of social benefits, and the foundation of the people. There were no people of all countries that did not need timbers at all times and all over the world. Our forestry had fallen into disuse. Try to have a look in the wild, the mountains were deforested, the soil was dry, the spring dried up, and the wood is not available for even one arch. All the building materials, repairing railways, erecting electric wires, constructing ships, and even the use of folk utensils, have to depend on foreign imports. This is why the rich source was not open, and the economic right was overflowing.<sup>98</sup> [從來國家之富強視國民之經濟為消長，故欲富國必先富民，富民之政雖多，非先振興林業不可。何則？林業者，社會之利源，國民之根本，無論古今中外未有不需木材之邦國人民也。我國林業荒廢，莫甚於今日，試觀於野，童童濯濯，土膏既枯，泉流胥涸，欲求壹拱把之木而不可得。則凡建築房屋，修整鐵路，架設電線，構造輪船，以至民間器具之用，百工制造之需，不得不仰給於外邦，此富源所以不開，利權所以外溢也]

Both Luo Zhenyu and the forestry student pointed out China's timber shortage and argued for national reforestation to enrich the country in resistance to the foreign economic aggression. However, their perceptions of *linye* were rather agriculture-focused. For example, both of them defined *linye* as a source of wood supply, and neither of them incorporated the lumber

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<sup>97</sup> Luo Zhenyu 羅振玉, “Ways to Promote Forestry” 振興林業策, *Newspaper of Agriculture* 農學報, 1900, (102): 2-3.

<sup>98</sup> “Zhenxing linye: hexuan shanxi nonglin xuetang biye kaochi qianlie gegao” 振興林業策：合選山西農林學堂畢業考試前列各稿, *Dongfang zazhi* 東方雜誌, 3.6 (1906): 96-97.

manufacturing in their understanding of *linye*, a key element that constituted Japan's notion of *ringyo*. Nevertheless, by then, *linye* has become a popular discourse of self-strengthening that encompassed agricultural advance, anti-imperialist campaign, and economic benefits. Strongly advocated by both the public and the court, the Chinese officials' and elites' efforts to promote *linye* resulted in a reform of the New Policies. Liu Kunyi 劉坤一 and Zhang Zhidong's 張之洞 suggestions to reward people who grow grains, fruits, mulberries, cotton and timbers and to promote the tree species of elms, willows, and fruit trees were adopted by the Qing government.<sup>99</sup> As a consequence, the Ministry of Commerce (*shangbu* 商部) was set up to implement the new policies. Under this circumstance, a series of social organizations related to agriculture and forests came into establishment. For example, in Anhui Province, within five years, there were more than ten government-run companies and experiment stations being set up, with the titles of "agriculture and forestry (*nonglin* 農林)" or "arboriculture (*shuyi* 樹藝)." In 1906, the Central Bureau of Reclamation, Pasture and Arboriculture in Anhui Province (*anhui kenmu shuyi zongju* 安徽垦牧树艺总局) was established, governing three subsidiary bureaus. This new organization launched a massive survey on land, irrigation, and soil in Anhui, and plotted the barren mountains, plains, and the discarded pools in order to find compatible plants for each unit of land. In the local governor's eyes, "as long as we follow the new policy and work thoroughly, the future profits would be beyond calculation".<sup>100</sup> Furthermore, arboriculture also found its way into the content

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<sup>99</sup> Liu kunyi 劉坤一, Zhang Zhidong 張之洞, *Three Memorials of Reform* 江楚會奏變法三折, Zhang Zhidong Quanji 張之洞全集, Vol.1, (Wuhan: Wuhan chubanshe, 2008), 1402.

<sup>100</sup> Feng Xu 馮煦, Chen Shili 陳師禮, ed., *Wanzheng Jiyao* 皖政輯要, (Huangshan: Huangshan shushe, 2005), 793.

of the imperial examination with the establishments of the various forestry schools in each province.<sup>101</sup>

The popularity of arboriculture (*shuyi* 樹藝), an old term for forest cultivation in the traditional Chinese agriculture, was also mobilized in the new context of national promotion of forestry. In 1905, Manchuria Daily (*Manshu nichibun* 滿洲日報) published an article *On the Jilin Timbers* (*lun jilin muzhi* 論吉林木植), which thoroughly combed the new functions of the Jilin's forests in addition to “tributes.” At the beginning of the article, it said that “there were many forests in the high mountains of Jilin Province. The most famous ones were Seqi *weji*, Namu *weji*, Zhangguangcai 張廣財 Valley, Zhaodaji 照大雞 Valley, Songhua forest, and Fenghuang Mountain. They produced a lot of timbers and were able to cover the sky in any place. Then, the author listed sixteen types of Jilin timbers and their related arboriculture, such as the Chinese yew could be used as “box, casket, paddle, stand, and coffin.” The thick elm could be used as “axle” and “rim,” alder could be used as “ink-stone,” fruit pine and fir could be used as “beam, wall, coffin, rafter” and so on (see table 3). It was pointed out that Jilin should “set up a forest school urgently, take advantage of them according to each type of the timber species. Seize the opportunity when the railways were leading to all parts of the country, and the profits would be endless.”

The classification of the Jilin timbers and their application in this article completely jumped out of the box of Manchuness that had been attached to northeastern China's forest through Qing's century-long frontier policies by extracting the specific values of timbers from the compound implications embedded in *weji*. The new concept that replaced the Manchu's imperial forest was a new term with a scientific pitch: the native woodland (*tianranlin* 天然

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<sup>101</sup> Bao Qiangu 包千谷, Poem Selections of Bao Qiangu 包千谷詩文選, Bao Yingqing, 包應卿, Bao Yingn 包應森 ed., (Beijing: Zhongguo xiju chubanshe, 2004), 341.

林). In the context of native woodlands in Jilin Province, the value of forests lie in the production of timbers and the value of timbers was greater than other non-timber forest products. Therefore, the article argued that the development of forests should start from the timber itself. This also meant that forests (*lin* 林) and timbers (*mu* 木) had gradually become equal to each other in people's understanding by then. In addition, the author also mentioned the inclusion of state power, "As for the Jilin timbers, give a little more care to keep its source and perfect our techniques to make the most of its use. If we find the right way to do it, would there be no insufficiency? ... People (*renmin* 人民) had the intention of seeking profits but had no ability to make profits. Only when the government (*shang* 上) had a heart of benefiting people, could the governance of benefiting people (*limin zhizheng* 利民之政) be practiced." The author implied that it was not enough for the local people to participate in forest development alone. Without the intervention of the state power, the governance of benefiting people was unlikely to be realized.<sup>102</sup>

Table 3: The Timber Species and Applications of the Jilin Timbers

Forest Species	Applications
Chinese Yew	Box, casket, paddle, stand, and coffin
Manchurian Walnut	Skin for wrapping
Yellow Pine	Sculpture
Birch	Skin for bow and stem for arrow,
Thick Elm	Axle and rim
Yellow Elm	Axle
Osier Willow	boardwand
Chinese Maple	Oil mill and wood dust
Acer triflorum	Oil mill and wood dust
Alder ( <i>shuidonggua</i> 水冬瓜)	Ink stone
Syringa reticulata ( <i>baomazi</i> 爆马子)	Coffin
Basswood	Headstock
Fruit Pine	Beam of roof, wall, coffin, and rafter
Manchurian Fir	Beam of roof, wall, coffin, and rafter
Meliosma veitchiorum Hemsl ( <i>nuanmu</i> 暖木)	Cane
Chinese Pine	Coffin
Almond Pear	Spice
Oaks	Leaf for sericulture, pig feeding, and preparation for natural disasters

<sup>102</sup> "Lun jilin muzhi," 论吉林木植, *Manshu nichibun* 满洲日报, December 17, 1905, Thursday, No.132, Edition 5.

Source: On Jilin Timbers (*lun jilin muzhi* 论吉林木植), Manchuria Daily, December 17, 1905, Thursday, No. 132., Page 5.

### THE MEANING SHIFT IN *LIN*

New forest knowledge produced by the Japanese forestry surveys challenged the indigenous perception of forest in many ways. As discussed earlier, the Japanese neologism *ringyo* 林業 was a term that encompassed scientific rationality, imperial sovereignty, social progress, and unspeakable violence, and underpinned the expansion of the Japanese empire. However, when the Chinese elites embraced the term *ringyo* and translated it as *linye* in the late nineteenth century, the violent aspect of *ringyo* was erased. The Chinese reformers reinterpreted the term by mobilizing the traditional intellectual source of “good governance” and “agricultural promotion,” and made it a constituent of China’s self-strengthening project. In other words, the erasure of violence and the low-level of lumber mechanization was what made the Chinese *linye* differ from the Japanese *ringyo*.

As China and Japan shared the same Chinese writings for the term *ringyo/linye* 林業, the character of *rin/lin* 林 thus became a critical word. While in modern times, *lin* 林 conveyed multiple meanings. It stood between two antagonistic state projects: Japan’s imperial expansion and China’s anti-imperialist state-making; it contained two bifurcated meanings: the statistical rationality that modern forestry demanded, and the indigenous knowledge of the forest marked by “good governance.” Therefore, though sharing the same writing, *rin/lin* 林 stood for different things in China and Japan. The forest knowledge exchange between China and Japan in the nineteenth century thus engendered literary entanglement.

The Chinese character *lin* 林 was not always associated with the meaning of trees. For example, in Northeast China, forest and trees were primarily expressed in terms of *shan* (mountain) and *weji*, rather than *lin* 林. In traditional Chinese, *lin* 林 referred to a remote place

from the administrative town. Erya 爾雅 says: “Outside the *yi* (city) is called the *jiao* (farming land), outside the farming land is called called the *mu* (grazing land), outside the grazing land is called the *ye* (wilderness), outside the wilderness is called the *lin* (forest).”<sup>103</sup> [邑外謂之郊，郊外謂之牧，牧外謂之野，野外謂之林] Here *lin* referred to somewhere beyond wilderness.

Moreover, *Lin* 林 had another special meaning in Northeast China in the Qing Dynasty. It indicated a unit of the official manor (*guan Zhuang* 官莊) of pear trees (*yinghe* 櫻核), governed by the Imperial Household Department and the Shengjing Government Office. According to the Reports of Manchuria Traditional Manners and Customs (滿洲舊慣調查報告), there were six categories in Qing’s official land management in Northeast China: *zhuang* 庄, *yuan* 園, *shanchang* (山場), *lin* 林, *hu* 戶, and *hekou* 河口. *Zhuang* was a unit for rice-produced land, while *yuan* indicated the land that cultivated non-rice crops such as fruits, vegetables, and melons. *Shanchang* referred to the mountainous farms where fruit trees and silkworm-fed oaks were planted. *Hu* was a unit for a household that specialized in a profession such as collecting honey, planting reed and cotton, or hunting, fishing, and hawk training. *Hekou* referred the fishing ports near Niuzhuang.<sup>104</sup> Therefore, the term *lin* 林 only referred to the particular kind of pear trees in Northeast China, and other tree species were not named *lin*. It was not until 1912 when the Beiyang government launched China’s first state forestry program that *lin* was finally established as a scientific depiction of the forest landscape.

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<sup>103</sup> Ma Ruichen 馬瑞辰, *Maoshi zhuanjian tongshi* 毛詩傳箋通釋, Vol. 13 (Beijing: zhonghua shuju, 2012).

<sup>104</sup> Minamimanshūtetsudō kabushikigaisha chōsa-ka-cho 南滿州鐵道株式会社調査課, *Manshū kyūkan chōsa hōkoku-sho zenpen nouchi*: Naimufu Kansho 滿洲舊慣調査報告書前篇ノ内: 内務府官莊 (Ochanomizu shobō 御茶の水書房, 1985), 27.

## CONCLUSION

Before and after the 1895 Sino-Japanese war, due to the transition of the current political situation and the incoming of western forestry knowledge, the Chinese concept of forestry experienced a significant transition. The modern knowledge of the forest, together with the local forest practices, contributed to a series of new vocabularies of woodland management in the early twentieth century. In Northeast China's context, the Manchu term for forest—*Weji*-- was a compound concept that was institutionalized by the Qing government to include the ethnic identity, national security and the royal privilege revolving around the Manchu rulers. However, the deconstruction of *weji* into a timber-producing entity of *lin* 林 both identified, inherited from and erased the rich legacies it once contained.

The trans-lingual practice underpinning the conceptual world of modern resource management used to be neglected by previous researchers. However, this chapter reconstructed the categorical changes in the key forest terms such as *weji* 窩集, *senlin* 森林, *ringyo* 林業, and *linye* 林業, and argued that the word *lin* 林 was the result of a constructed knowledge of modern resource. The term *lin* 林 that seemingly contained the natural landscape of forest was never natural. Rather, it was an artificial construction and a result of the state's discipline of nature. Moreover, the colonial modernity that Japan imbued in *ringyo* was accepted, modified, and mobilized by the Chinese as a new form of resource governance that would revolutionize the process of China's modernization.

## Chapter 2. The Construction of Forestry Space: Japan's *ringyo* strategy and the Extractive Forestry Along the Yalu River

### INTRODUCTION

The destruction in Northeast China's forests was not unique. It happened elsewhere, in Guizhou, in North China, in Anhui, but without provoking the same kind of environmental politics and frontier disputes as emerged in northeastern China. What embedded in the case of the northeastern forest was the Qing rulership it once symbolized and the gradual decline with the arrivals of international exploiters. It also inspired struggles to resolve one of the fundamental questions underlying the destiny of the forests: what was the relation of the frontier to natural resources, and how did forest extractions in northeastern China redefine this frontier?

Under the closing-off policy and the Qing-Chosŏn tributary relationship, the Qing rulers had reserved extensive wooded areas between the Willow Palisade and the Yalu River as imperial forest since the seventeenth century. The purpose of keeping the forest reserves was to maintain a Qing-Chosŏn buffer zone by isolating the residents on both sides and by sharing a common forested territory.<sup>1</sup> However, the late nineteenth century witnessed radical changes in Manchuria. The second industrial revolution generated unprecedented demand for wood used in mines, railroads, and construction in East Asia. Heavily laden with timbers, the land of Manchuria soon became sites of encounter and social contestation. Nagged by the Russian pressure and the domestic famine issue, the Qing state legitimized the common access to Manchuria and opened the Yalu River forests for commercial lumbering. Meanwhile, the

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<sup>1</sup> Kim Seonmin has characterized the empty zone as a phase from "frontier" to "borderland," as the superior Qing took actions to allow the inferior tributary to keep its benefits. See Seonmin Kim, *Ginseng and Borderland: Territorial Boundaries and Political Relations Between Qing China and Choson Korea, 1636-1912* (Berkeley: University of California Press, 2017), 17.

Meiji elites, aiming for a remedy for the Malthusian trap at home, targeted the Korean Peninsula as well as Qing's Manchuria in a series of wars.<sup>2</sup> The triumphs of both the Sino-Japanese war (1894-1895) and the Russo-Japanese war (1904-1905) not only underpinned Japan's position in Northeast Asia but also paved the way for its military and extractive resource management in Manchuria's forests. With the establishment of the Sino-Japanese Yalu River Logging Company in 1908, Japan managed to build up its "lumbering empire" at the borderland of Qing and Korea.

Scholars of Japanese imperial history attributed Japan's imperial success to the concept of "bureau-pluralism," a policy characteristic of decentralization in the metropolis government and the active engagement of firms and *kazoku-based* associations.<sup>3</sup> By supervising the firms specialized in specific resource manufactures in the colonies (or semi-colonies), Japan gained economic advantages without direct territorial acquisition and avoided other competitors through signing treaties or making use of the international law.<sup>4</sup> Tak Matsusaka's argument that Japan craved for territory rather than resources in Manchuria reminded us of the territorial claim embedded in those economic enterprises.<sup>5</sup> Thus, the commodification of the Yalu River forests in the early twentieth century created an arena to examine Japan's *ringyo* 林業 (forestry) practice via timber firms and the redefinition of the frontier by lumbermen.

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<sup>2</sup> Lu, Sidney Xu, Eastward Ho! Japanese Settler Colonialism in Hokkaido and the Making of Japanese Migration to the American West, 1869–1888, *The Journal of Asian Studies*, 78.3 (2019): 521-547.

<sup>3</sup> Kaoru Sugihara, R. Bin Wong, "Industrial Revolution in Early Modern World History," in *Cambridge World History* 6.2 (2015):283-310. Tetsuji Okazaki, "The Japanese Firm under the Wartime Planned Economy," in Masahiko Aoki and Renald Dore, eds., *The Japanese Firm* (New York: Oxford University Press, 1996):350-378.

<sup>4</sup> Peter Duus; Ramon H Myers, Mark R Peattie, eds., *The Japanese Informal Empire in China, 1895-1937* (Princeton University Press, 2014).

<sup>5</sup> Tak Matsusaka, *The Making of Japanese Manchuria, 1904–1932* (Cambridge, MA: Harvard University Asia Center, 2001).

Chapter two explores the entrepreneurship and the disputes over the Yalu River forests in the nineteenth-to-twentieth century and argues that Qing tributary rulership, expressed through reservation of the Yalu River forests, was supplanted by a new order, through the extractive timber economy in the early twentieth century; moreover, the rise of the Chinese lumbering groups transformed the perception of the Yalu River forests from the Qing's imperial authority to a Chinese sovereign representation. Thomas Cox's framework of the "lumbermen's frontier" in American environmental history offers a fresh perspective to capture the Chinese migration into Northeast China and the remaking of China's nation-state northeastern frontier.<sup>6</sup>

Section 1 discusses the formation of Dongbianwai 東邊外 as a buffer zone between Qing and Chosŏn Korea by strict bans on logging and the lift on restrictions in the 1860s. Section 2 briefly presents a portrait of the Qing' commercial lumbering management since the 1870s, the logger (*muba* 木把) management and the *huozhan* 貨棧 management, based on which the 1908 Sino-Japanese Yalu River Logging Company vertically and horizontally integrated both and combined all aspect of the lumbering business in the Fengtian Province. Section 3 discusses the Japanese *ringyo* strategy that shaped the Yalu River forest infrastructure by treaties and regulations. Section 4 focuses on the Sino-Japanese and the Sino-Russo conflicts over the boundaries, ownerships, and prices of timber logs, between the Chinese loggers, local government, and the foreign powers. Section 5 addresses the question of the commodification of the forests through the Yalu River Logging Company's intensifying control of the forest industry.

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<sup>6</sup> Thomas Cox, *The Lumberman's Frontier: Three Centuries of Land Use, Society, and Change in America's Forests* (Oregon: Oregon State University Press, 2010).

1 FRONTIER AS BUFFER ZONE  
(*dongbianwai* 東邊外 beyond the eastern line of the Willow Palisade)

The Willow Palisade's constructions had witnessed the changing relationship between the Manchus, Han people, and Koreans. Since 1636, Hongtaiji had embarked on building the Willow Palisade along the front line of Fenghuangcheng 鳳凰城 in taking precautions against possible attacks from the Koreans, the then royal followers of the Ming Dynasty. After the collapse of Ming and the Qing Army's occupation of Beijing, the Qing continued the policy of separation and made a significant part of the Changbai Mountain area, north of the Willow Palisade, royal reserves and forbade any non-bannermen to enter. As Bello and Schlesinger have pointed out, both the boundary created by the Willow Palisade and the imperial reserves located beyond was mainly maintained by the Qing government to preserve the Manchu's hunting habits and the material privileges, an essential component of the Qing multi-ethnic ruling strategy. They termed it as the "cultured nature" and the "invented purity."<sup>7</sup>

In 1653, the Qing government promulgated the "Liaodong Immigration Reclamation Ordinance" and encouraged the Han peasants to settle in within the Willow Palisade by special preferential conditions. The easing of the regional policy, together with Manchuria's fertile land and the luxurious mountain products, had soon attracted both Han Chinese and Koreans, to find a way in and open trades. Thus, border crossing, along with illegal migration and smuggling between China and Chosŏn became a severe issue. Given the suzerain relationship that Chosŏn Korea had maintained with Qing, the Qing government began consciously prevent possible conflicts on China's side by broadening the lines of the Willow Palisade. During the reign of Kangxi, the border ditches were built vigorously from the

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<sup>7</sup> David Bello, *The Cultured Nature of Imperial Foraging in Manchuria*, *Late Imperial China* 31.2, (2010): 1-33.; Jonathan Schlesinger, "Inventing Nature in the Qing Empire: Environment, Identity in Northeast China and Mongolia, 1750-1850", (Ph.D. Dissertation, Harvard University, 2012).

Shanghai Pass in the west to Fenghuangcheng in the east, stretched about 40 miles eastward towards the Guanmen Town. Since then, the eastern line of the Willow Palisade (*dongbian* 東邊) with its four border gates (Fenghuangcheng, Aiyang 爨陽, Jianchang 城廠, and Wangqing 旺清) had transformed from a defense barrier (between Jurchens and Koreans) to a protection wall (between the Qing and the Chosŏn Korea).

The policy shifted to making an isolated *Dongbianwai* 東邊外 (beyond the eastern line of the Willow Palisade) came into shape in 1847, when the Qing army had repeated found expelled the migrant settlements on the West Bank of the Aiyang River, a major tributary of the Yalu River that ran across the eastern line of the Willow Palisade (see Image 1).<sup>8</sup> In order to put a complete end to such migration, the Imperial commissioner Bojun and other officials formulated “Six Articles of Detailed Regulations for the Survey of Shengjing Mountain.”

(*chakan shengjing shanchang xiangni shanhou zhangcheng liutiao* 查勘盛京山場詳擬善後章程六條) The contents were as follows:

First, three *kalun* 卡倫 were added to the West Bank of the Ai River for inspection.

Second, the inspectors (*tongxunguan* 統巡官) should go out of the Willow Palisade to inspect the *dongbianwai* every year in spring and autumn for verification.

Third, every three years in spring, the Shengjing Vice-Capital led the officers and soldiers to make a patrol outside the border gate.

Fourth, when the general inspector goes out of the Willow Palisade, he shall notify the local official post of Korea, of whether there was shelter or not, and the general inspector shall write the local official documents of the country.

Fifth, when the ginseng and grain transporters leave the border, the border officials should fill in the notes according to their names, and check them one by one when leaving the border to prevent the abuses from mixing up.

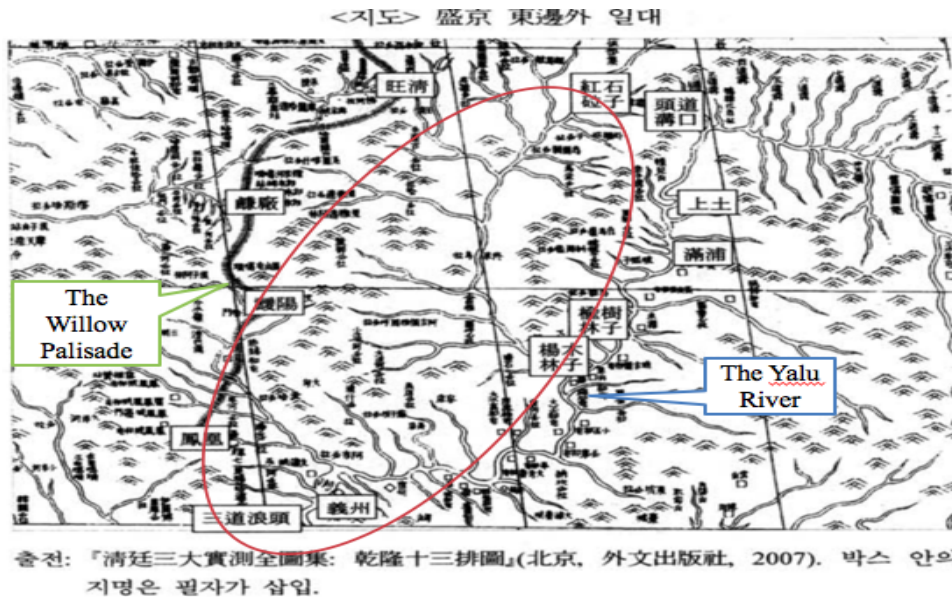
Sixth, the Three Waves Port (*sandao langtou* 三道浪頭, in today's Dandong Municipal City's Langtou County) was are the inevitable course to smuggle timber. We should add more officers and soldiers to this place and block them strictly.

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<sup>8</sup> 丘凡真 (구범진), “19 se ji seong-gyeong dōng biān oe san jang gwanli yǔ jo qīng gong dong hui cho,” 19世纪盛京东边外山场管理与朝清公同会哨 [The Management of the Dongbianwai Mountain Yard of Shengjing in the 19th Century and the Sino-Choson Public Meeting Post], in Northeastern Asia Historical Society, *Jindai bianjing de xingcheng yu bianjing minde shenghuo* 近代邊境的形成與邊境民的生活 (Northeast Asia Historical Society, 2009).

After that, the patrolling system led by the Shengjing General over the area between the eastern line of the Willow Palisade and the Yalu River became a norm. Thus, the Qing government had established a three-layered guard system to strengthen its control over this area: the seasonal inspection (*tongxun* 統巡), the every-three-year-patrolling (*xunluo* 巡邏), and the public post meeting system (*gongtong huishao* 公會哨). In addition to the enhanced guards, the Qing government and the Choson court gave severe punishment to the trespassers. For example, if any Chinese peasants and Koreans, who trespassed to each other's territory to poach ginseng and log forests, got arrested, the Koreans would be beheaded on the shore of the Yalu River, while the Chinese would be prisoned. Moreover, the local officials in the responsible districts would be dismissed. The difference in the punishment between the Qing subjects and Korean people also reflected Qing's superiority in the tributary hierarchy.

The severe ban on access to and logging in the area of *Dongbianwai* showed Qing's both superiority and responsibility. As stated in *Fengcheng suolu* 鳳城瑣錄 that "it was the gentle benevolence of the court to fear that the people on the frontier may disturb the tributary Choson Korea, and to set up officials and strict laws." [蓋恐邊民擾害屬國，乃朝廷柔遠之仁，設官置汛立法綦嚴] Under the traditional tributary (*zongfan* 宗藩) ideology, the Qing government was responsible for safeguarding Choson Korea's benefits by prohibiting any economic or military development in the shared buffer zone. In other words, forest extraction along the Yalu River was deemed as threats to the maintenance of the suzerainty relationship. The Sino-Choson tributary relationship thus contributed to the unspoiled landscape of the Yalu River forests on both territories of China and Korea and reserved good timber stands.



Map 5: *Dongbianwai* (東邊外 beyond the eastern line of the Willow Palisade)

Source: 丘凡真 (구범진), “The Management of the Dongbianwai Mountain Yard of Shengjing in the 19th Century and the Sino-Choson Public Meeting Post,” 19 世纪盛京东边外山场管理与朝清公同会哨, in Northeastern Historical Society 東北亞歷史財團編, *Jindai bianjing de xingcheng yu bianjing minde shenghuo* 近代邊境的形成與邊境民的生活, 2009.

## 2 QING’S OPENING FOR LUMBERING

In the 1860s, with the rising tensions of the Russian penetration and the North China famine issue, Qing’s borderland policy shifted from the suzerain reservation to migrant absorption and civil administration.<sup>9</sup> The continuous famines triggered a series of immigrations into the Yalu River valleys of the Shandong refugees. In 1874, the Qing government declared the opening up of “all the *Dongbian* (East of the Willow Palisade) areas” and set up three civil administrations in 1875: Andong 安東 County, Xiuyan Subprefecture (*xiuyan Zhou* 岫岩州) and Fenghuang Prefecture (*Fenghuangting* 鳳凰廳). In the

<sup>9</sup> Boduna 伯都納 pasture was opened up in 1825; the Jilin hunting area and the Alachuka 阿拉楚喀 hunting area were opened up in 1860; the ban on the Willow Palisade was lifted in 1861. See Wang Changfu 王長富, *Dongbei jindai linye jingji shi* 東北近代林業經濟史 (Beijing: Zhongguo linye chubanshe, 1991): 20-22.

following year, the Qing government established the Fenghuang Prefecture as the capital to control Xiuyan, Andong, and Kuandian 寬甸.<sup>10</sup> By the year of 1880, the Guangxu Emperor officially announced the implementation of the new policy towards Northeast China as “strengthening the borders with immigrants” (*yimin shibian* 移民實邊), and thus officially recognized the status of immigrants that later constituted the mainstream of loggers.<sup>11</sup>

With logging bans lifted on the Yalu River forests, the Qing emperor shifted his policy focus from restriction to tax collection. Around 1887, the Qing government set up three Timber Tax Bureaus (referred to as TTB) in charge of the timber tax collection and the logging certificate (*kanpiao* 砍票) allocation. They were 1) Dadonggou 大東溝 TTB, 2) Andong 安東 TTB, 3) Dongbiandao 東邊道 TTB. (See Map 1) In this way, the Yalu River forests were turned into a significant source of government revenue in the form of timber tax and an essential target of investment for both native and extra-provincial merchants. Moreover, Dadonggou 大東溝(or Donggou), located at the entrance to the China Yellow Sea, became a major distribution center for logs floating down the Yalu River. The loggers and merchants working at the lumber yards nearby grew into one of the most prosperous communities in China by the turn of the twentieth century.<sup>12</sup>

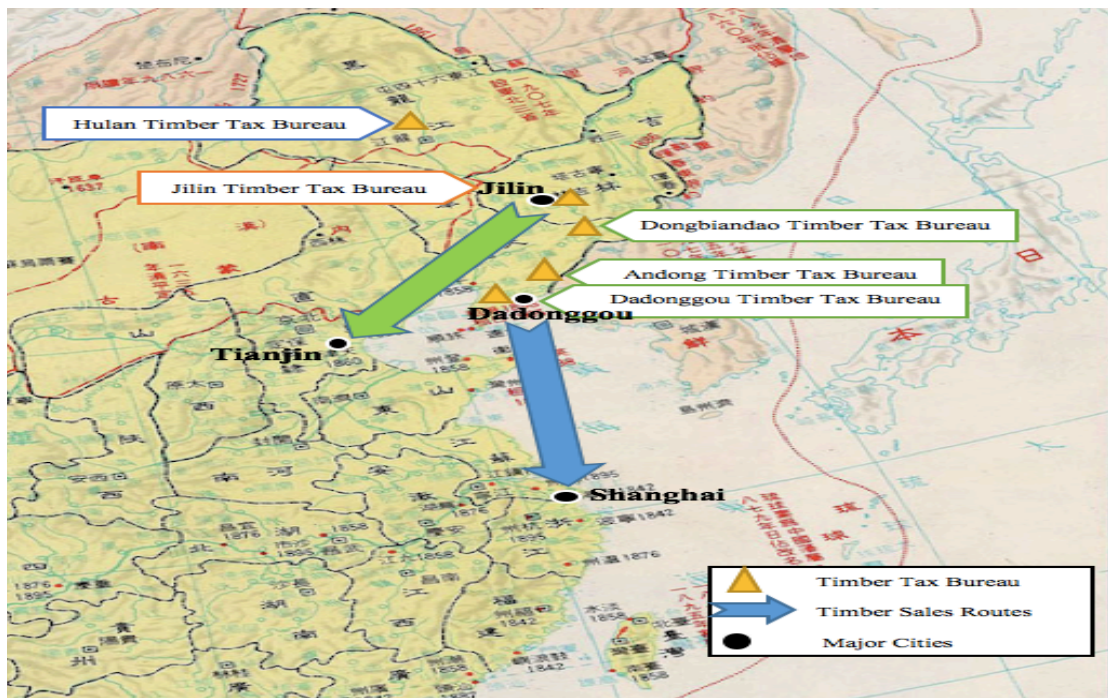
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<sup>10</sup> Wang Shunan 王樹楠, Wu Tingxie 吳延燮, Jin Yufu 金毓黻., *Fengtian tongzhi* 奉天通誌, Vol.44, *Dashizhi* 大事誌, Vol. 44 (Shenyang: Dongbei wenshi congshu bianweihui 東北文史叢書編輯委員會, 1983).

<sup>11</sup> Gao Qiang 高強, *Qingmo dongbei bianhuan yu yimin shibian wenti yanjiu* 清末东北边患与移民实边问题研究 (Xi'an: Shanxi jiaoyu chubanshe, 2009), 62-77.

<sup>12</sup> See Wang Changfu 王長富, *Dongbei jindai linye jingji shi* 東北近代林業經濟史 (Beijing: Zhongguo linye chubanshe, 1991), 34-35.

In the late 19th century (Guangxu era; 1870), lumbering opened along Yalu River. It generated two major and cooperating management patterns: (1) the *logger* management organization, characteristic of the vertical integration of timber logging and rafting, with a focus on log productions and the power of the head logger (*batou* 把頭), and (2) the lumber firm (*huozhan* 貨棧) management organization, characteristic of the horizontal integration of purchases and sales, with an emphasis on markets and the power of the head manager.



**Map 6.** Timber Trade Routes and Timber Tax Bureaus of Northeast China, 1896

Source: Tan Tingxiang 譚廷襄, *Zhongguo lishi ditu ji* 中國歷史地圖集, Qingdai ditu 清代地圖; map created by Xiang Chi.

### *Logger Management*

Lumbering absorbed a large number of farmers and rural labors, and turned them into contract loggers (*muba* 木把), organized into teams under “mountain head logger” (*shanbatou* 山把頭). The mountain head logger then grouped loggers into smaller units with specific tasks of logging, processing, and rafting according to their expertise. Therefore, a division of labor emerged between loggers who worked on logging and transporting via animal power on the mountain and raftsmen who were specialist in making rafts and driving them downstream to

the outlet. Loggers' and raftsmen's special techniques of logging and raft making/driving distinguished them from the non-specialist farming-logging locals.

*Labour in the Mountains (Shanchangzi huo 山場子活)*

The economic interests of logger teams in northeastern China were based on a hierarchical and centralized management system. At the apex was the head logger (*dabatou*) with abundant capital (borrowed or personally owned) and authority, in charge of decision-making, income and expenditure planning, and keeping an eye on all the loggers' daily routine. Under him were several under-loggers who shared responsibility for supervising various specific sectors, including holding sacrifice ceremonies, logging and transporting timbers, and solving any technological problems. Among the supervisors, a sled hauling head (*palitou* 爬犁頭) and a wooden slide head (*caozitou* 槽子頭) were in charge of log transportation on mountains. A sled hauling head was a man of abundant experience whose job was to handle the oxen, horses as well as loggers to transport timber logs by sled from the mountain top to the riversides. Draught animals played an essential part in land transportation. Therefore the sled hauling head must know very well of the cattle selection and training. Some of the heads were even originally horse dealers or cattle dealers. Log skidding could also be outsourced by individual households and paid by the piece.<sup>13</sup> (See Image 2) By using one sled and some ropes to connect four-five logs with two-three heads of cattle, a team of two loggers formed a small share of the labor force (*xiaoguzi* 小股子) and took charge of log transportation. A wooden slide head's job was to supervise timber logs transportation, however, not by sledding, but by gliding logs down through the slides made of timber (*jianzidao* 箭子道). The wooden slide head must first lead loggers to build the timbered slide in the snow mountains, which was very dangerous and took good care of them by establishing the windbreaks. Also, the wooden slide

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<sup>13</sup> Cao Baoming 曹保明, *Gudu de famuren 孤獨的伐木人* (Beijing: xiyuan chubanshe 西苑出版社, 2003), 19-21.

head needed to have a good knowledge of weather and undertook the task of calculating the time to get up to work, preventing winds from generating lubricants on the slide, for which he would be scolded and punished by the head logger.

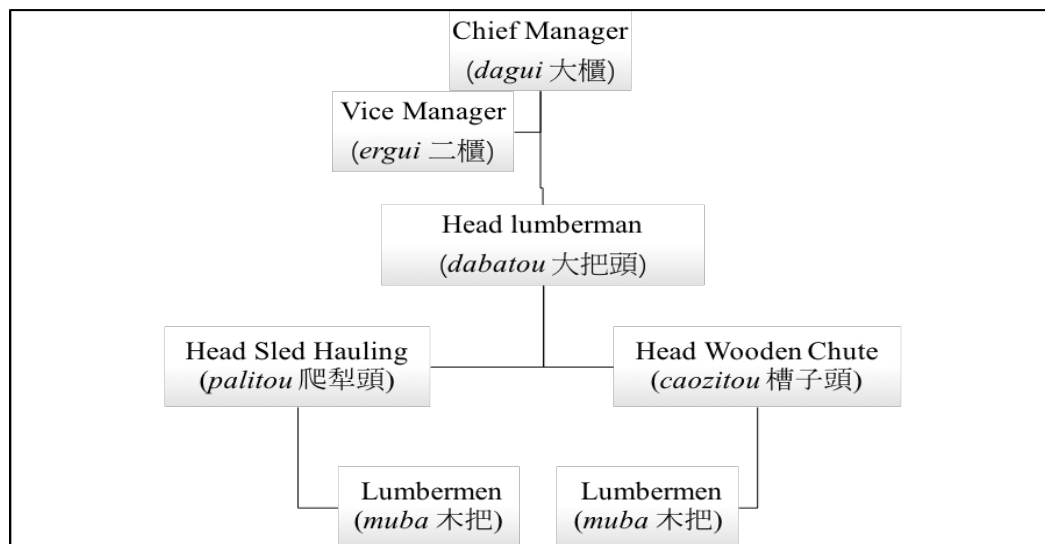
Figure 1: Log Hauling Via Animal Power



Source: <http://www.360doc.cn/mip/803107409.html>

The period between August and November were most suitable for timber logging, and rafting to markets began in December and January the next year. The selection of loggers took place at the beginning of the winter in October every year, by head logger or another under-logger called “priming person” (*dabanren* 打扮人). Loggers were usually chosen from among the young men who braved their journey to Northeast from Shandong and Shanxi provinces as well as the local villagers. They went through stringent physical examination of bodies, skins, teeth, legs, and feet before being selected, and one-thirds of salaries were prepaid as deposits while the rest would be cleared when the timber rafts reached Donggou 東溝 or Andong 安東. Under the leadership of experienced head logger, tens or hundreds of loggers worked together,

without any strict economic affiliations to each other.<sup>14</sup> In order to have an access to the mountains, *muba* needed to apply for the “ax permit” (*fupiao* 斧票) from the local government in advance with a payment of one *tael* of silver per ax to access to the forests, which ensured no limits on the quantity of timber logged.<sup>15</sup>



**Figure 2** Staff Hierarchy in the Mountain Yards

Source: Cao Baoming 曹保明, *Mubang de zuzhi jigou* 木幫的組織機構 in *Guandong mubang* 關東木幫, *Changchun wenshi ziliao* 長春文史資料, 46 1 (1995): 21-27.

### *Labor in the Waters (Shuichangzi huo 水場子活)*

Parallel to the mountain labors was the water labor system. Once the logs were transported to and gathered at the riversides, where they established a processing factory called processing factory (*chengchang* 橙廠) and started waterworks. Again the head logger was in charge of decision-making, planning and sending or hiring a head raftsman (*touzhaou* 頭棹) to manage the work, including the raft making and the raft driving. The first step was to make rafts. By connecting five-ten logs into one raft through the fabricated wickers (*raozi* 繞子), and then connecting five rafts into one raft boat, rafts were finished. The next step was to

<sup>14</sup> Lu Si 呂斯, *Yalu jiang shang de muba* 鴨綠江上的木把, in Dandongshi zhengxie weiyuanhui ed., *Yalujiang liuyu lishi ziliao huibian* 鴨綠江流域歷史資料匯編 (Dandong: Dandongshi zhengxie wenshi weiyuanhui, 2007), 648.

<sup>15</sup> Wang Changfu 王長富 ed., *Dongbei jindai linye jingji shi* 東北近代林業經濟史, 35-36; 39.

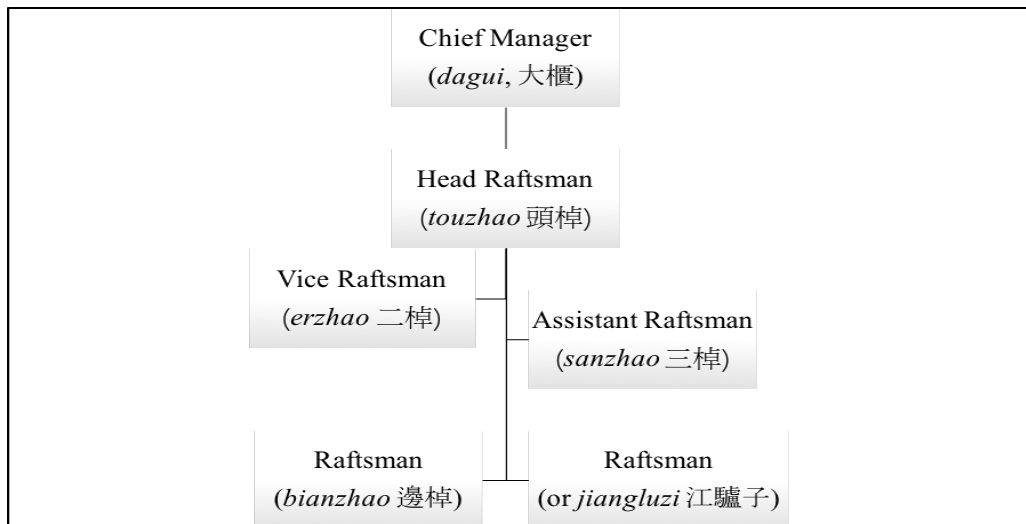
arrange five to six raftsmen for each raft boat and have them drive the rafts either up the Songhua River to the northern center of Jilin, or down the Yalu River to the southern center of Dadonggou (See Figure 3 and Figure 4).

Beneath the head logger was the head raftsman, who was in charge of navigating the raft by controlling the steering stick at the head based on his rich experience and knowledge of waters. One of the most important capabilities for a head raftsman was to distinguish and memorize the locations of stones in the rivers in order to avoid them in their sailings. The role of the vice raftsman was to guarantee that the head raftsman was able to have a secure and peaceful condition to navigate the rafts. Furthermore, the under-raftsman, and sometimes assistant raftsman included, were assistants to the head raftsman, who took care of ceremonies, tools preparation, and supplies of food and drink to every raftsman. Finally, ordinary raftsmen were the most laborious on the raft boat, as they were in charge of checking and repairing the joints of rafts by nails and axes without any stop. It usually took them five-eight years to get promotion to the position of head raftsmen.

The raft driving was time-consuming and usually took two-three months. As the head logger would provide all the living expenses for the raftsmen at the raft stops (*paiwozi* 排窩子) along the way, especially at the destinations where raftsmen/loggers could enjoy themselves at the local brothels and the Association for Loggers and Raftsman (*caochuanhui* 槽船會), these labors usually ended up in owing large debts to the head loggers and had to work for another year to pay off the debts. Only very few lucky birds may find their ways into becoming head loggers themselves within a few years by loyalty plus exceptional performance.<sup>16</sup>

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<sup>16</sup> See the example of Ji Yixun 季怡訓 in *Gudu de famuren* 孤獨的伐木人, 30.



**Figure 3** Staff Hierarchy in the Water Yards

Source: Cao Baoming 曹保明, Mubang de zuzhi jigou 木幫的組織機構 in Guandong mubang 關東木幫, *Changchun wenshi ziliao* 長春文史資料, 46 1 (1995): 27-29.

In this case, the *head logger* served as the overall management structure for the operation of the mountain yard and water yard, overseeing monthly operations, major repairs, care, and feeding of oxen, workers' issues, forest fire-prevention, and security. This kind of timber management of logging in the mountains and rafting in the waters dated back to the shipbuilding in the Ming Dynasty.<sup>17</sup> At the Yalu River, there were families like Jins 金, Wangs 王, Jiangs 姜 and Hu's 胡 who grounded their fortunes in the processions of woodland and cultivation of chief manager roles.<sup>18</sup>

<sup>17</sup> Cong Peiyuan 叢佩遠, Song Dejin 宋德金, *Mingqing shidai jilin chuanchang jianzhi niandai kao* 明清時代吉林船廠建置年代考, *shehui kexue zhanxian* 社會科學戰線 4(1979), 178-179.

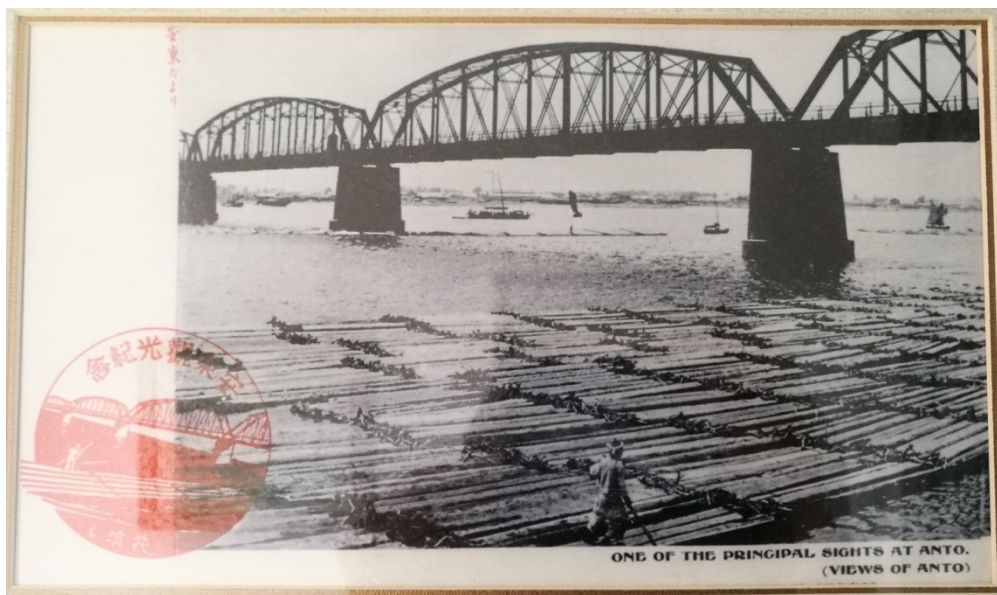
<sup>18</sup> Gudu de famuren 孤獨的伐木人, 21.

Figure 4: The Timber Rafts Driven by Three Raftsmen on the Yalu River



Source: A Japanese Postcard, photo taken by Xiang Chi at the Dandong Museum, June 2018.

Figure 5: Timber Rafts Below the Yalu Iron Bridge at Andong (J: Anto)



Source: A Japanese Postcard, photo taken by Xiang Chi at the Dandong Museum, June 2018.

### *Lumber Firm (huozhan or hangzhan) Management*

The lumber firm (*huozhan* 貨棧) system was a part of an extensive business network which contained units such as production sites, local banks, exchange houses and sales branches

in different provinces, under one organization name. The lumber firm in northeastern China had three primary functions: one was to fund the logger communities, especially the head logger with good reputations, to form their lumbering teams and to mediate the long-distance timber transactions charging some service fees (*kouqian* 口錢).<sup>19</sup> Second, the lumber firm connected buyers and sellers by contracts. For example, the lumber firm served as a broker and middleman between the timber centers of Andong and the sales territories of Shanghai, Yantai, and Tianjin. Finally, the lumber firm provided the storage service of timber logs before the final transaction. Some of them were also engaged in the shipping and construction industries.<sup>20</sup>

Lumber firms functioned based on credit, and their capital was small about 1000-2000 *yuan*. Due to the constant wars and insecure environment, the timber transactions were mostly in cash, and the payment due was the next day after the transaction. Only the big lumber firm could issue a small number of notes. These firms' shops usually set up guest rooms in the backyard in order to attract and accommodate the timber merchants from other provinces. The marketing season began in March when the Yalu River's ice melted and lasted for seven months until September. As the northern wind became strong in August, the log/raft driving was dangerous after August.<sup>21</sup>

The renowned head loggers formed alliances and partnerships with the lumber firm. As some private timber-logging groups were unable to financially self-support themselves for three to four months to log timbers in the mountains, the chief manager of the lumber firm were there to provide funds, goods, and materials, on condition that the timbers logged would be finally sold to them at a low price.<sup>22</sup> Usually, the head logger would sign a contract of sales in advance, performing between the lumber firm and the loggers, and guaranteed delivery of timbers to the

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<sup>19</sup> Andong shangye huiyisuo 安東商業會議所, *Yalu jiang mucai* 鴨綠江木材 (Tokyo: Tokyo University Library, 1922), 28.

<sup>20</sup> Noshoroshō sanrin kyoku, 農商務省山林局, *Shinkoku ringyō oyobiki-zai shōkyō shisatsu fukumei-sho* 清國林業及木材商況視察復命書 (Hokkaido University Library, 1905), 221; 118-223.

<sup>21</sup> *Ibid.*, 137

<sup>22</sup> See Wang Changfu 王長富 ed., *Dongbei jindai linye jingji shi* 東北近代林業經濟史, 39.

lumber firm after the harvest. Until then the head logger would receive the loan provided by the lumber firm.<sup>23</sup>

After the logs arrived, the lumber firm would then work as a broker between the domestic and international sellers and buyers and a timber tax payment agent. By 1903, *Changfengzhan* 長豐棧 and *Yuhesheng* 玉合升 were the two wealthiest lumber firms. Other, such as *Zhonghede* 中合德, *Tongqingzhan* 同慶棧, and *Heshengzhan* 合盛棧 headquartered in Dadonggou were able to hire more than thirty employees (Table 4).<sup>24</sup> The total number of lumber firms in Andong (30) outweighed that in Donggou (14) but smaller scales. (Table 4). Only two lumber firms (*Xinshengzhan* and *Zhonghezhan*) were able to hire more than forty labors. According to Japanese investigations that the number of lumber firms in Andong developed into more than 1000 around 1922.<sup>25</sup>

Table 4: Lumber Firms and the Managers in Dadonggou 大東溝, 1902

Lumber Firms	Managers	the Number of Clerks
Changfengzhan 長豐棧	Zhao Qiyi 趙其億	45
Yuhesheng 玉合升	Le Yaorong 樂耀榮	38
Zhonghede 中和德	Tian Fuyun 田福運	36
Tongqingzhan 同慶棧	Zhan Qichang 戰其昌	35
Heshengzhan 合盛棧	Mao Hongming 毛鴻明	16
Baoyuanzhan 寶源棧	Zang Weizhen 臧維楨	12
Jishunzhan 吉順棧	Wang Licheng 王立成	13
Yongchengzhan 永成棧	Sun Zhixi 孫志喜	10
Taishunzhan 泰順棧	Zheng Wenhuan 鄭文煥	5
Demaozhan 德茂棧	Ai Ziheng 艾子恒	8
Yidezhan 義德棧	Liu Fengxiang 劉鳳祥	7
Quanshunzhan 全順棧	Dong Guoji 董國基	7
Zengshengzhan 增盛棧	Sun Fuyun 孫福云	6
Wanshunzhan 萬順棧	Pan Fu 潘福	8

Source: *Liaozhan* 料棧 [Lumber Firms], in *Yaru kawa ryūiki no un'yō to chōsa* 鴨綠江流域作業及調査 [The Survey of the Yalu River Area], Dandong Municipal Library, Dandong.

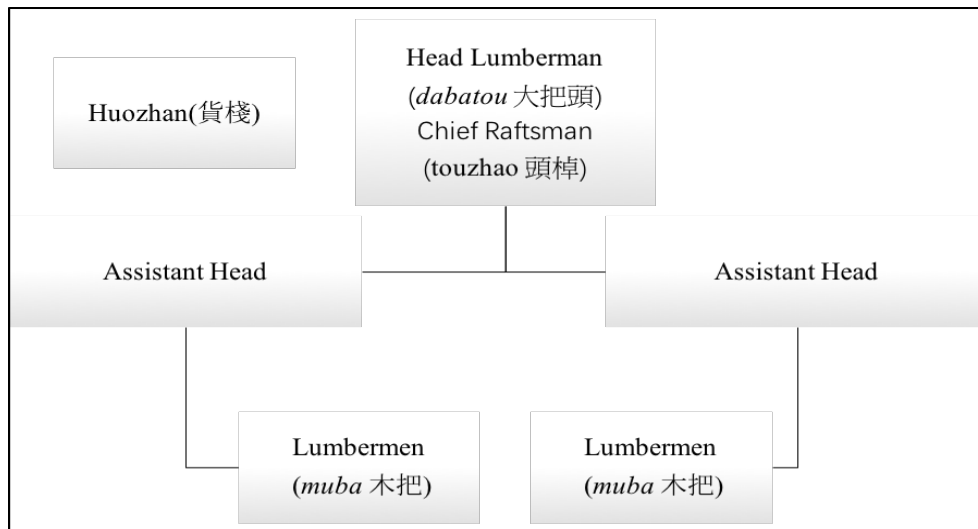
<sup>23</sup> Noshoroshō sanrin kyoku, 農商務省山林局, *Shinkoku ringyō oyobiki-zai shōkyō shisatsu fukumei-sho* 清國林業及木材商況視察復命書 (Hokkaido University Library, 1905), 220.

<sup>24</sup> Ibid, 34-39.

<sup>25</sup> See "Appendix 12" in *Yalujiang mucai* 鴨綠江木材, 17-18.

Table 5: Lumber Firms and the Managers in Shahezi 沙河子, Andong 安東, 1902

Firms	Managers	the Number of Clerks
Jixiangzhan 繼祥棧	Man Ziyu 滿子裕	19
Guangtaihou 廣泰厚	Zheng Shengwu 鄭盛五	21
Fuqingzhan 福慶棧	Zou Shouju 鄒守矩	15
Yongyuanzhan 永遠棧	Wang Yukui 王榆魁	20
Yongxingfu 永興福	Wang Xinting 王心亭	30
Guangyuanzhan 廣元棧	Zheng Xifu 鄭希輔	6
Dongyichang 東益昌	Zhang Yintang 張蔭堂	30
Xinfengzhan 新豐棧	Leng Guanyi 冷貫一	42
Qianyizeng 謙益增	Jiang Yunting 姜云亭	11
Baoshengzhan 寶盛棧	Ma Depu 馬德普	14
Yuhezhan 玉合棧	Tang Yuanyin 湯元音	25
Xingshengzhan 興盛棧	Fang Shaojiu 方韶九	42
Changlongsheng 長隆盛	Duan Yunpeng 段云彭	35
Fulongxiang 福隆祥	Shi Ke'ren 時可任	26
Fushengzhan 福盛祥	Lin Xiuzhu 林修竹	23
Heshunzhan 和順棧	Zhan Shoupeng 戰壽彭	34
Zhongxingzhan 中興棧	Zou Gongjiu 鄒功久	30
Zhonghezhan 中和棧	Gan Huatang 干華堂	49
Fengyuzhan 豐裕棧	Chu Wenbo 初文博	33
Gongyisheng 公義盛	Qu Shuzhen 曲樹榛	22
Yixingde 義興德	Li Dechun 李德春	15
Daxingchang 大興長	Chen Boshan 陳柏山	26
Yizenghe 義增合	Li Fenggang 李鳳崗	6
Fufengzhan 福豐棧	Wang Naiyou 王乃猷	13
Yuchengzhan 玉成棧	Teng Qinde 滕欽德	10
Deyucheng 德裕成	Chen Yuqi 陳銓祺	10
Yuhe zhanfang 玉合棧房	Zhang Ziting 張粹亭	14
Hengfadong 恒發東	Han Xiusheng 韓秀升	15
Yuanmaoli 元茂利	Zhou Hongkai 周宏開	7
Qiandehe 謙德和	Wu Letian 武樂天	22



**Figure 6** Staff Structure in the *Huozhan* Management System

Source: Andong shangye huiyi suo 安東商業會議所, *yalujiang mucai* 鴨綠江木材 (Tokyo: Tokyo University Library, 1922), 28-30.

Timber business was of crucial importance to Dadonggou’s 大東溝 commerce and economic development.<sup>26</sup> Qing established its first government-run timber firm in 1902 at Donggou, named, the Dadong Timber Firm, and the Dongbiandao’s governor-official Yuan Dahua 袁大化 served as the manager. The Dadong Timber Firm set its headquarter at Dadonggou and had eight branch offices along the Yalu River, including Yangyutou 羊魚頭, Fu’erjiang 富爾江, Andong, Zhongjiangtai 中江臺, Mashitai 馬市臺, the entrance of the Hun River, Shajianzi 沙尖子, and Huanren 桓仁. At the headquarter, 200 armed inspectors (*xunyong* 巡勇) were in charge of sorting out rafts, supervising timber merchants, and collecting timber taxes for the government. The firm operated on a shareholding system and had a capital of 200,000 *taels of silver*.<sup>27</sup> Local loggers were allowed to borrow credit from the company, but 40% of their income generated by log trades would be used as debt payment. The surplus of the income, if any, belonged to loggers themselves.<sup>28</sup> In this way, the Dadong Timber Firm not only

<sup>26</sup> “Yalujiang caimuye zhi yange yu andong shangye zhi lianxi” 鴨綠江采木業之沿革與安東商業之關係, *Shangong yuekan* 商工月刊, 3 (1911): 35.

<sup>27</sup> Linye faduan 林业发端, in *Dalu* 大陆, 5 (1903): 11.

<sup>28</sup> Dandongshi difangzhi bangongshi ed. 丹東市地方誌辦公室, *Dandongshi zhi* 丹東市誌, 6 (Shenyang: Liaoning

protected the development of local timber business but also increased local fiscal income. The Qing officials thus spoke highly of Yuan and his Dadong Timber Firm. In a report from the Zhili governor-general Yuan Shikai to the Qing court, Yuan claimed:

“Yuan Dahua who previously set up Dadong Timber Firm during his official stay at Dongbiandao (Dongbian Prefecture) had made a great contribution. He not only protected the Chinese timber merchants but also maintained the timer firm’s operation. The firm repaid the society by contributing to the local famine relief and meeting the local timber demands. It was a truly important and beneficial work to the society.”<sup>29</sup>

In 1903, the Russian Far East Governor-general of Russia Alexyev founded the Far East Forestry Firm in Tonghua 通化 in the upper reaches of the Yalu River. The Russian firm hired local loggers and logged trees in the areas of the Yalu River and its tributary Hun River. Disputes arose when Alexyev’s loggers regularly stole the logs and rafts transported by the Chinese loggers to Donggou. Japan made use of the Sino-Russian logger conflict to step in the Yalu River forest development. In 1903, under the name of helping local Chinese timber suppliers to confront the Russian firm, Japan took over a Korean Government Chartered Logging Firm in Seoul, and changed it into a Japanese-Qing joint venture: the Sino-Japanese Yisheng company 中日義盛公司. The unpleasant encountering of the Russian and Japanese forest firms laid the foundation for the later contestation.<sup>30</sup>

### 3 LOGGING BOOM AND JAPAN’S RINGYO STRATEGY

The foreign tapping onto the Manchurian forests took place in the late nineteenth century via territorial and logging treaties where the forest was seldom the main focus. In

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kexuejishu chubanshe, 1996), 191.

<sup>29</sup> Wei Zhen 魏震, *Nan manzhou luxing riji* 南滿洲旅行日記, 96. <http://jds.cass.cn/UploadFiles/zyqk/2010/12/jdszl45.pdf>

<sup>30</sup> Shin kami no ringyō-kan (ōryokukō hotori no shi kaisha) 新紙の林業観 (鴨綠江畔の四会社), Dai Nihon sanrin kaiho 大日本山林會報, 249. 8 (1903): 70-71.

1860, under an agreement brokered by a Russian diplomat, China lost more than 400,000 square kilometers forested territory to Russia; and in 1904 Russia negotiated the timber supply with the Qing government over the auxiliary zone of the China-Eastern Railway. In the Sino-Russo treaties and negotiations before 1904, what Tsar Russia indeed aimed for was an entrance to the Pacific and a railway network in the far east to transport the troops. Forest and timber were rather the by-products for the railway construction.

The first treaty that explicitly put forest as an independent and main target was the 1905 Sino-Japanese Agreement on the Three Eastern Provinces (*zhongri huiyi dongsansheng shiyi* 中日會議東三省事宜). After the triumph of the Russo-Japanese War, Japan and Russia ended up in the Treaty of Portsmouth that regulated Russia's transference of its rights and interests in South Manchuria to Japan on September 5, 1905. In the same year, on December 22, Japan negotiated the forest control with the Qing government over the Yalu River. The result was an additional provision that granted the full logging rights over the forest on the right bank of the Yalu River to Japan as requested. The treaty's addendum read that "the Chinese government should grant the logging rights to the Sino-Japanese Yalu River Logging Company. The specific details, such as where to log, how the company would be set up, and what proportion of shares would be owned by Chinese and Japanese stockholders, should be discussed in a new contract in the future."<sup>31</sup> "The future new contract" thus empowered Japan with full right to revise the items for unlimited access towards the Yalu River forests.

Table 6: Forest-Related Treaties in Northeast China

Time	Treaty	Forest Tapping	Location
1896	Sino-Russo China-Eastern Railway Contract ( <i>zhongdong tielu hetong</i> 中東鐵路合同)	Railway constructions	Heilongjiang Jilin
1901	Sino-Russo Jilin Revisions On the Coal Mine Opening Contract ( <i>gaiding jilin kaicai meikuang hetong</i> 改訂吉林開採煤礦合同)	Mines	Jilin

<sup>31</sup> *Zhongri xinding dongsansheng tiaoyue* 中日新訂東三省條約, in *Jilinsheng dangangan* 吉林省檔案館, *Jilin shifan xueyuan guji yanjiusuo* 吉林師範學院古籍研究所, *Qingdai minguo jilin dangan shiliao xuanbian: shewai jingji maoyi* 清代民國吉林檔案史料選編·涉外經濟貿易 (Changchun: Jilin shifan xueyuan guji yanjiusuo, 1995), 63.

1902	Sino-Russo Contract for the Coal Mine Opening in Heilongjiang ( <i>Heilongjiang kaicai meikuang hetong</i> 黑龍江開採煤礦合同)	Mines	Heilongjiang
1904	Sino-Russo Logging Contract for the China-Eastern Railway in Heilongjiang Province ( <i>Heilongjiang dongsheng tielu gongsi dingli famu hetong</i> 黑龍江省東省鐵路公司訂立伐木合同)	Logging for railways	Ineffective
1905	Sino-Japan Decisions on the Three Eastern Provinces Matter ( <i>zhongri huiyi dongsansheng shiyi</i> 中日會議東三省事宜)	Logging rights of the right bank of the Yalu River Forest	Yalu River
1906	Sino-Japan Military Timber Contract for the Yalu River and the Hun River ( <i>yahun liangjiang junyong muzhi hetong</i> 鴨渾兩江軍用木植合同)	Military timber use	Yalu River Hun River
1907	Sino-Russo Jilin Timber Contract ( <i>Jilin muzhi hetong</i> 吉林木植合同)	Logging for railways	Jilin
1908	Sino-Russo Logging Contract in Heilongjiang for the China-Eastern Railway ( <i>Heilongjiang tielu gongsi famu hetong</i> 黑龍江鐵路公司伐木合同 <sup>32)</sup> )	Logging for railways	Heilongjiang
1908	Sino-Japanese Regulations on the Yalu River Logging Company ( <i>yalujiang caimu gongsi zhangcheng</i> 鴨綠江採木公司章程)	Timber firm	Yalu River
1908	Sino-Japanese Yalu River Logging Company Regulations on Details ( <i>caimu gongsi shiwu zhangcheng</i> 採木公司事務章程)	Timber firm	Yalu River
1908	Sino-Japanese Contract for Merging the Yalu River Forest ( <i>hebing yalujiang senlin hetong</i> 合併鴨綠江森林合同)	Timber firm	Yalu River
1910	Sino-Japanese Decisions on the Floating Log Arrangement by the Yalu River Logging Company ( <i>yalujiang caimu gongsi guanyu piaoliumu zhengli guiding zhi yidingshu</i> 鴨綠江採木公司關於漂流木整理規定之議定書)	Floating log issue	Yalu River
1918	Sino-Japanese Contract on Merging the Huasen Sawmill ( <i>hebing huasen gongsi zhicai hetong</i> 合併華森公司製材合同)	Sawmill	Jilin
1918	Sino-Japanese Contract for the Forest Loans and Gold Mine Loans in Jilin and Heilongjiang ( <i>jihei liangsheng jinkuang ji senlin jiekuan hetong</i> 吉黑兩省金礦及森林借款合同)	Timber firm as mortgage	Jilin Heilongjiang
1925	Sino-Japan-Russo Contract for Merging the China-Eastern Hailin Logging Company ( <i>hebing zhongdong hailin caimu gongsi hetong</i> 合併中東海林採木公司合同)	Timber	The Great Ksingan

Source: Nagai Risa 永井リサ, Taiga no soshitsu タイガの喪失, in Ayumu Yasutomi-Fukao Yoko 安富歩 深尾葉子 eds., *Manshū no seiritsu: Shinrin no shōjin to kindai kūkan no keisei* 滿洲の成立: 森林の消尽と近代空間の形成 (Nagoya University Press, 2009), 7-8.

<sup>32</sup> Heilongjiang zhigao 黑龍江志稿, Vol.37, *Jiaoshezhi luquan* 13 交涉志 路權 (Harbin: Heilongjiang renmin chubanshe, 1992), 13.

Japan's enthusiastic crave for the Yalu River forests had much to do with its *Ringyo* (forestry) surveys conducted by the Ministry of Agriculture and Commerce's Forestry Department since the 1900s. Aiming for new markets for its domestic timber surplus, especially the Hokkaido timbers, the Japanese government sent people to China and Korea to investigate forests, industry, and markets. The *Ringyo* reports they provided created a whole new set of Northeast China's forest knowledge (as discussed in Chapter One) and thus identified the development of the Yalu River lumbering industry and the cultivation of the Chinese market as lucrative for growth (See appendix). The ministry urged corporations like the Mitsui and Mitsubishi to open operations in Northeast China.<sup>33</sup>

Chinese timber transactions used to center on Donggou 東溝 (or Dadonggou 大東溝), a port town in the south close to the China Yellow Sea, whereas the Japanese's arrival challenged the old business order by developing a northern port: Andong 安東 (whose old name was Shahe 沙河 or Zhenjiang 鎮江). Andong was originally established as a military defense town against Korea. In 1876, the Qing government elevated it into a county (*xian*). It had a population of 20,000 mostly of immigrants from Shandong Province. By 1900, timber transaction had been re-centered in Dadonggou whereas Andong was more of a transaction hub of silk, cotton, and the Japan-produced match, paper, and cigarette.

The new round of timber trade in Andong began with the 1905 treaties. In the following year, Shenyang, Andong, and Dadonggou were officially opened up as international trading ports. The Japanese Ministry then initiated a program of developing a new market (*shinshi*) at the Seventh Valley (*qidaogou* 七道溝), north of the China-ruled Donggou, to attract and to accommodate the Japanese timber enterprises such as Mitsui and Okura. The action caught

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<sup>33</sup> Miodrag Mitrasinovic, *Travel, Space, and Architecture*, [https://books.google.com/books?id=9cmXCwAAQBAJ&pg=PT211&lpg=PT211&dq=yalu+river+logging+company&source=bl&ots=I2ySdXWXDo&sig=ACfU3U2FVjxqVMHI07kRjP-n7NxnMJJ\\_7Q&hl=en&sa=X&ved=2ahUKewi5gdaAo\\_rjAhVWuZ4KHZRLDm4Q6AEwCnoECA5QAQ#v=onepage&q=yalu%20river%20logging%20company&f=false](https://books.google.com/books?id=9cmXCwAAQBAJ&pg=PT211&lpg=PT211&dq=yalu+river+logging+company&source=bl&ots=I2ySdXWXDo&sig=ACfU3U2FVjxqVMHI07kRjP-n7NxnMJJ_7Q&hl=en&sa=X&ved=2ahUKewi5gdaAo_rjAhVWuZ4KHZRLDm4Q6AEwCnoECA5QAQ#v=onepage&q=yalu%20river%20logging%20company&f=false)

the local Chinese official's attention. The Fengtian governor, in response, drafted a plan to develop the Donggou Market against the Japanese's New Market program, where he characterized the competition between the two towns as Sino-Japan "business war." In the report, he listed the advantages and disadvantages of Andong and Donggou and gave his solution. For Andong, the advantage was its convenient location close to the Yalu River Railway Bridge in-construction and the Andong-Fengtian railway line. For example, it had been one of the three most geographically convenient trading centers in Fengtian Province and ranked No. one as the center for transporting different commodities to mainland China. Further, Andong was famous for its bulk exports of timber and silk cocoon, and imports of foreign cloth, flour, kerosene, and the Shandong rice and cabbages. -Since the Japanese had requested exemption of import taxes for any Japanese enterprise; the official Wei Zhen 魏震 wrote, "the Chinese government should immediately recruit rich merchants and send them to Andong to run factories and banks."<sup>34</sup> While for the development of Donggou, the official was confident that the timber trades in Andong, no matter how well the Japanese managed, could not win over that in Donggou, as Donggou had the most convenient way to China's timber consumers. The rivalry between the two markets saw the logging boom in Northeast Asia, as well as Japan's increasingly tight control over timber taxes. However, what the official did not expect was that the structure of timber markets in Northeast China had already changed since the Japan-Russia War. With the establishment of the Sino-Japanese Yalu River Logging Company in 1908, Japan managed to build up its "lumbering empire" at the Changbai mountains and the Yalu River under the ideology of *ringyo* 林業 (see Figure 6). The conflicts entailed and the prosperous timber trades would soon change the ecological and economic forest landscape in Northeast China.

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<sup>34</sup> Weizhen 魏震, *Nanmanzhou diaocha riji* 南滿洲調查日記, 1904, 93-96.



monopolized the timber logging rights of the Yalu River and made a fortune out of loggers' timber transportation. They established five military checkpoints (*kalun* 卡倫 or *Chuzhangsuo* 出張所) at the Hun River mouth, Yangyutou, Mao'er Mountain, the First Valley (*toudaogou*) and Korea's Uiju to inspect log rafts floated down to Andong and issued special permit (*zhunpiao* 准票) and passport to the Chinese loggers at a high price. Otherwise, the floating rafts with incomplete documents would be confiscated. Further, they requested the ships carrying timbers purchase flag tickets and have Hinomaru Japanese flags hung on the ships. Once the loggers/raftsmen handed in a detailed list of the categories and quantities of the rafts to one of the above checkpoints, the Japanese Military Timber Factory would demand half of the timbers at a low price; for the other half of the rafts, the factory issued loggers with another permit with a red flag. In this way, Japan soon dominated the forest sources in South Manchuria.

In 1906, two local timber shops *Dingtai* 鼎泰號 and *Yuande* 源德號 reported to the Tianjin Customs officials that during the war, the deliveries of the northeastern pines from Andong to Tianjin came to a stop. Therefore they could do nothing but to import timber logs from Japan to replace the northeastern pines.<sup>35</sup> However, in the middle of shipping, the Russian warships sank Tianjin merchants' ships under the accusation of "providing financial help to the Japanese army." The accident led to the bankruptcy of the two timber stores in Tianjin.

### *Frictions Over the Floating logs (piaoliumu 漂流木)*

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<sup>35</sup> Yuan Shikai wei mushang gouyun daomuchuanzhi bei e junjian jichenshi zhajin shanghai 袁世凯为木商购运道木船只被俄军舰击沉事札津商会, Tianjinshi danganguan 天津市档案馆ed., Yuan Shikai tianjin dangan shiliao xuanbian 袁世凯天津档案史料选编 (Tianjin: Tianjin guji chubanshe, 1990), 212-213.

After the war, the Japanese army implemented a deforestation policy that was even harsher than the Russians.<sup>36</sup> Based on the Portsmouth Treaty that divided south Manchuria into the Japanese sphere of influence, the Japanese army seized the opportunity to take forcible possessions of forests along the Yalu River and sold timbers to the foreign countries. Meanwhile, the name of “military needs,” the Japanese merchants and soldiers recurrently robbed the floating logs on the Yalu River owned by the Chinese loggers and left only half to them. With the escalation of the foreign manipulation on timber logs, the Chinese loggers often assembled thousands of them and launched campaigns against the Japanese armies.

One of the problems that loggers/raftsmen often faced during water transport was the floating log issue, that individual logs being carried away by floods and rustlers, or rafts stranded during drives. After the Russo-Japanese War, Japan’s involvement in the Yalu River timber business worsened the transport ecology. Korean log rustlers under the Japanese army were notorious for stealing logs on the Yalu River. Working as extraterritorial proxies for the Japanese government, the Koreans robbed Chinese floating logs or rafts, removed brands, and marketed them at a higher price to either the rightful owners or other merchants for profits, thus resulting in several serious fights between the Japanese soldiers/Korean loggers and Chinese loggers.

The frequent tensions and conflicts over timber logs soon led to a situation on the verge of a crisis. However, the Chinese loggers had lost their trust in the local agency, such as the Dadong Timber Company, for conflict mediation. Under Yuan Dahua’s realm, the Dadong Timber Firm used to serve as a mediator between the Chinese loggers and the Japanese army

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<sup>36</sup> Wang Yunfeng 王雲峰, *Mudu andong qishi nian* 木都安東七十年, see *Zhongguo renmin zhengzhi xieshang huiyi liaoningsheng weiyuanhui wenshiziliao weiyuanhui* 中國人民政治協商會議遼寧省委員會文史資料委員會 ed., *Liaoning wenshi ziliao xuanji* 遼寧文史資料選輯, 26 (Shenyang: Liaoning wenshi chubanshe, 1989), 152.

regarding the floating log distributions. Yet, after Yuan transferred to a new office in Fujian Province in south China, the firm's development faltered. Loggers constantly complained about the firm's inadequate management and its confiscation of loggers' lost logs. According to the then Dongbiandao head Zhang Xiluan 張錫鑾, "the firm took possession of the dispersed and miscellaneous timbers and refuse to allow the original owners to claim them, which was inconsistent with the firm's original purpose." The complaints reduced the firm's credit among the local logger community.<sup>37</sup> In the end, the foreign powers, such as the Russian or Japanese army, became new authorities that Chinese loggers turned to when it came to disputing resolutions. The shift was exemplified in two Sino-Japanese disputes over the log rustlers.

In September 1904, the Japanese merchant Ito Kyoto, colluding with the Korean soldiers, forcibly possessed the logs owned by Chinese at the lumberyard at the External Fork Valley (*waichagou* 外岔溝). Ito's action directly evoked Chinese loggers' longstanding grievances over the Japanese interference. Soon around four hundred local loggers assembled and broke up a fight. As a result, the Chinese loggers successfully captured the six Korean rustlers who played the leading roles in stealing logs. Instead of sending the six rustlers to the local court, the Chinese loggers bound them to the Russian military camp. The choice of sending Korean soldiers to the Russians for justice is worth pondering. Previously the Chinese Dadong Timber Firm or the local government served as a means of authority or conservator when Chinese loggers engaged in disputes with foreign powers. Whereas turning to the Russian military camp indicated a huge shift in the local mindset. It showed the Chinese loggers' disbelief in the local agency's capability to protect their benefits, politically and economically.

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<sup>37</sup> Weizhen 魏震, *Nanmanzhou diaocha riji* 南滿洲調查日記, 1904, 96.

Such international disputes over the floating logs evoked new tensions between the Chinese loggers and the local officials who often resorted to reconciling resolution when it came to a conflict. Since the triumph of the Russo-Japanese War, the Japanese Military Lumber Factory had confiscated a large number of timber logs stored in Tonghua 通化 and owned by the Chinese loggers. Consequently, the Chinese loggers assembled in thousands and broke in armed fights with the Japanese Army.<sup>38</sup> The “disturbance,” as the local government considered it, was quelled by the local magistrate Wu Guangguo 吳光國, the then magistrate of Ji’an County. He announced a vernacular propitiatory notice that reflected a different perspective on the loggers’ fight. The notice blamed the loggers for starting the fight, but at the same time called for China’s self-strengthening. He wrote:

As loggers, your ancestors were the famous craftsmen in ancient times. According to *Zuozhuan*, where there are forested mountains, artisans are observing the time and judging the occasion. Zi Xia says that one hundred craftsmen living together would make a workshop (*si* 肆). Mencius says that if the axes enter the forested mountains according to time, then timbers would be sufficient for use. I considered you. In the social hierarchies of the four ranks, from the scholar-officials, peasants, artisans, to merchants, you have had a civilized title and deserve the same praise as the scholars and officials. What an honor you have! Why don’t you maintain the civilized thoughts and try to win credits for your ancient ancestors of artisans? Why do you fight and quarrel over such a little matter? Nowadays, just because the Japanese soldiers had confiscated your timbers, you guys assembled six hundred to seven hundred people to fight with weapons. How rude it is! Just think about it, do you treat your artisan title fairly? In the future, in your every act and every move, you should at least concern about your status. Have consideration for the imperial court (*chaoting* 朝廷)! Ask yourselves: where does your money for clothes and food come from? Weren’t the timbers owned by the rivers and mountains of the state (*guojia jiangshan* 國家江山)? What you drink, eat, wear and dress, do they not come from the state’s profits (*guojia yuli* 國家餘利)? It’s fine that you guys made no contribution to the state, but aren’t the trouble you created the trouble for the state! You may run away after the fight, but can the state sit watching? I have always told you, you mustn’t behave rudely and cause trouble. Respect the law and obey the orders, endure the tribulation, and think about self-improvement, study civilization, and learn to read. Only when everyone encourages learning and everyone becomes conscious of shame, can no foreign power bully us or call us barbarians. At that time wherever we go, we will be respected!... You must never again cause trouble for the local county, and never again induce the unexpected calamity for the state. Be good subjects (*liangmin* 良民) I don’t

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<sup>38</sup> Weizhen 魏震, *Nanmanzhou diaocha riji* 南滿洲調查日記, 1904, 95.

expect for your repayment. I only want you to not go beyond your boundaries.....If you ever cause trouble again, be careful that you might lose your wealth and life!<sup>39</sup>

Wu Guangguo's exhortation revealed several aspects of the local government's attitude towards northeastern China's forests. First, the idea of "state forests" was for the first time clearly expressed. In the announcement, Wu argued that the natural sources were owned by the state (*guojia* 國家). That was to say, the property rights of the northeastern forests were the Qing state's, though he mixed up the meanings of the "state" and the "court." However, Wu had no intention to defend the ownership rights for either the Chinese state or the Chinese loggers. What he cared was the maintenance of China's sovereignty. He was concerned that the Sino-Japanese dispute at the local level, entailed by the logger fights, would escalate to a state-level conflict that might finally threaten China's sovereignty. Therefore, he asked for the Chinese loggers to accept the timber losses and bear the sacrifices, in the expectation that the loggers could see the bigger picture that he saw. The magistrate Wu pinned his hope on loggers' self-sufferings in order to protect the Qing state's sovereignty. However, on the loggers' side, what they cared about were their welfare. These loggers had lived on lumbering for decades, and they expected a secure environment where their property rights, specifically, the logs ownerships and their commercial benefits, would be protected by the Qing state and officials. Any foreign interruption on logging or rafting were threats on their poor livelihoods. Thus, the loggers' welfare concerns and Wu's compromise strategy came to a clash that revealed a fundamental conflict between state interests and personal interests, in regard to the frontier forest resources. Both sides had developed very different and even contradictory

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<sup>39</sup> Ji'an xian zhishi wu guangguo linshi baihua jiequangao 輯安縣知事吳光國臨時白話解勸稿 1906.5.2, in Zhongguo renmin zhengzhi xieshang huiyi jilinsheng jianshi weiyuanhui wenshi ziliao weiyuanhui ed., 中國人民政治協商會議吉林省集安市委員會文史資料委員會, *Ji'an kangri douzhengshiliao wenshi ziliao xuan* 集安抗日鬥爭史料·文史資料選, No. 14 (Ji'an: Ji'an shi zhengxie wenshi ziliao weiyuanhui, 2008), 57-58.

attitudes based on their own needs. In the end, this bifurcated expectations towards each other resulted in the loggers' eventual cooperation and commitment to the foreign powers.

### *Conflict Over the Floating Log Price*

Floating log collections continued to be a source of friction, and it deepened the labor division between loggers and lumber firms in the late Qing and the early Republican period. As the international disputes on floating logs greatly shocked the local Chinese government, in order to avoid any future fights, between 1907 and 1909, the newly-established Sino-Japanese Yalu River Logging Company imposed centralized management over floating logs. It stipulated that all logs and rafts floating on the Yalu River were to be collected and returned to the rightful owners by the company alone. However, since loggers had to pay the price set by the company to take logs back, otherwise, the company had a right to sell out the logs after a designated period, fights and protests among Chinese loggers over the unfairly high price broke out again. This time, “a reasonable price” to purchase logs back became the new focus for both sides.

In 1909, a bureaucratic institution the Floating Log Bureau (*piaoliu muju* 漂流木局, referred as FLB) was founded, under the supervision of the head of Xingfeng Prefecture (*xingfengdao* 興鳳道), to replace the Yalu River Logging Company in regard with floating log collections. The FLB had a board of a director, clerk, treasurer, and six board members. The *huozhan* merchant Li Yutang 李玉堂 served as the first director. In order to collect and return logs at a reasonable price, the prefecture heads Qi and Shen entrusted the wealthy lumber firm managers to take full responsibility of redeeming the floating logs from the Japan side and selling them to Chinese loggers at a lower price. The restructuring of the Floating Log Bureau was out of good intention. As the successor Zhu Shuxin 朱淑薪 explained in his report, that only the lumber merchants with reliable financial sources were able to advance in

cash to redeem logs collected by the Japanese sawmill, therefore he had to rely on them to establish the FLB. Moreover, he considered the FLB as a middleman between the Japan side and the Chinese loggers that would reduce frictions as well as the price for redeeming floating logs. Yet, one thing that Zhu Shunxin did not take into full account was the very low participation of loggers in this new bureau.

The lack of loggers' representative in the new FLB board soon triggered new discords. The loggers distrusted the FLB's protection over loggers' benefits. Rather, they denounced the FLB's act as "exploitation."<sup>40</sup> In a complaint filed by the logger representative Xin Youshan 辛酉山 to Fengtian's interim provincial assembly in 1912, he stressed on the separation between loggers and lumber firms in regard to the labor division. He said, "loggers and lumber firms operated in each own business with clear boundaries. Loggers made a living by cutting wood, while lumber firms sold wood for loggers." He then listed three charges posed by the Floating Log Bureau during the waterway transportation, and characterized the FLB's function as "embezzlement instead of protection." The charges were: first, for every washed-away log collected by the bureau at the lower reaches of the Yalu River, loggers had to pay 0.25 *yuan* per log to take them back. Moreover, at the time of the raft arrivals, one *tael* per raft was charged as "bureau fee" (*jufei* 局費), if the raft's value reached 100 *taels*. On top of that, the bureau divided each raft into five sections and charged each section for another 0.4 *yuan* as tuition (*xuekuan* 學款). According to Xin Youshan, from 1909 to 1912, the FLB had generated a total of more than 400,000 *taels* of silver, but never disclosed its detailed income and expenditure. "The FLB not only evaded state taxation but also seriously exploited the loggers who worked along the Yalu River and the Hun River." Unconvinced by the head of

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<sup>40</sup> "wei donglu guanchashi chengfu andong linshi muye gaizu banfa shi" 為東路觀察使呈復安東臨時木業改組辦法事, March 1913, Liaoning Provincial Archives, JC010-01-012158.

Xingfeng Prefecture, Xin Youshan wrote, “the prefecture head Zhu Shuxin made an excuse and only favored the bureau.” Therefore, the logger representative petitioned to establish a separate loggers’ lumbering association—the Lumbering Protection Office of the the Two Rivers (the Yalu River and its tributary Hun River) (*liangjiang baohu muye shiwusuo* 鴨渾兩江保護木業事務所) —an organization that loggers believed that would fully represent their benefits and enable them to take charge of the floating logs by themselves, without being exploited by lumber merchants. Gong Haiting 宮海亭, another logger representative, even mobilized the then-popular discourse of “autocracy” and “republicanism” to justify their requests. He said, “previously in the Manchu-ruled Qing dynasty, loggers were under pressure from the autocratic government. They established a government-run floating log bureau that spared no effort in exploiting flesh and blood of the people. Now that the Republic of China was in full swing and the Temporary Provisional Constitution contained the clause that people had property rights and the freedom of business, assembly, and association.” [從前在滿清時代木把受壓力於專制政府之下，遂有官辦雜字號遷流而為漂流局剝削脂膏不遺余力，今民國鼎新，臨時約法內載人民有保有財產及營業集會結社之自由，則凡所有前清無當於理之法律章程，皆在應行派出之列，代表等方慶得伸公理]Therefore, he considered the new constitution entitle them an independent association and that the floating log bureau was the “unreasonable regulation that should be dispatched.” Mediated by the prefecture head Zhu Shuxin, a unified Public Lumbering Association of the Yalu River and the Hun River) (*Yahun liangjiang gongli muye gonghui* 鴨渾兩江公立木業總會) that combine both loggers and lumber firms was finally established in 1913, to replace the Floating Log Bureau. It had two sub-bureaus in Linjiang 臨江 and Tonghua 通化 and another eight branches spreading along the Yalu River.

The lumber firm managers and the head loggers used to work closely as a team in the 1900s, mutually contributing to the prosperity of the Yalu River's lumbering. The wealth gap between loggers and managers, though existed, did not loom large as a problem. However, as Japan penetrated deeply in the Yalu River timber business, the local officials more and more depended on the growing wealth of the lumber firms in their negotiations with Japan. The lumber firm managers' status thus got mostly elevated while the loggers' interests were often silenced. The new situation challenged the old connection between loggers and managers and generated discords between them. As more timber merchant associations and guilds were established in the 1920s, the separation between logger's associations and lumber firm's associations became a trend. According to a Fengtian Timber Merchant Guild Inventory in 1928, among the forty-one association members, there were none loggers included but only firm managers (See table 7).

Table 7: Fengtian Timber Merchant Guild Inventory, 1928

Firm Names	Locations	Managers	Ages	Native Places
Rongqignlong 荣庆隆	South Market	Zhang Puchen 张璞臣	47	Fengtian 奉天
Guangyuanmao 广远茂	South Market	Zhang Zhenjiu 张真久	48	Zhili 直隶
Ruiyuangong 瑞源公	South Market	Zhang Shouchen 张受臣	45	Linyu 临榆
Yongchunchang 永春长	South Market	Gao Shiqing 高世卿	32	Chang li 昌黎
Heshengtai 合盛泰	Royal Temple	Lu Diankui 鲁殿魁	48	Zhili 直隶
Fuquanhou 福全厚	South Market	Lin Gengsan 林庚三	41	Shandong 山东
Yuangong Lumber Factory 远东木厂	South Market	Hou Xintang 候信堂	53	Changli 昌黎
Dadong Company 大东公司	South Market	Li Ziji 李子记	35	Zhili 直隶
Dongbei Lumber Factory 东北木厂	South Market	Bai Xiufeng 白秀峰	46	Fengtian 奉天
Tongxingxiang 同兴祥	South Market	Li Runqing 李润清	42	Zhili 直隶
Hengtongyong 亨通湧	North Market	Zhang Pinyi 张品一	42	Zhili 直隶
Fengji Lumber Factory 奉吉木厂	South Market	Meng Shutang 孟述堂	42	Zhili 直隶

Jilongqing 吉隆庆	North Market	Zheng Anjiu 郑安久	52	Fengtian 奉天
Huadong Company 华东公司	North Market	Wang Zuqing 王左青	52	Zhili 直隶
Rongchang Company 荣昌公司	North Market	Zhai Xiangpu 翟香圃	42	Liaoyang 辽阳
Qingji Comapny 庆记 公司	North Market	Ma Guiwu 马贵五	34	Zhili 直隶
Dechangmao 德昌懋	North Market	Xing Peiming 邢佩名	36	Fengtian 奉天
Deyuxing 德裕兴	North Market	Zhu Baichuan 朱百川	38	Linyu 临榆
Beiman Lumber Factory 北满木厂	North Market	Chen Fuchen 陈福臣	53	Changli 昌黎
Heshun Company 和顺公司	North Market	He Huimin 何惠民	52	Fengtian 奉天
Liuhe Company 六合公司	West Tower 西塔	Dai Tianmin 戴天民	32	Liaoyang 辽阳
Yongshengmao 永生懋	Ten Houses (10 间 房)	Luo Hongfu 罗鸿福	48	Linyu 临榆
Fushengjiu 福生久	North Market	Jiang Chunyu 姜春雨	54	Shenyang 沈阳
Gongjiheng 公集恒	Ten Houses (10 间 房)	Cheng Yuxiu 程毓秀	59	Shenyang 沈阳
Gongxingyi 公兴益	Ten Houses (10 间 房)	Du Jingpo 杜静坡	37	Zhili 直隶
Sanyu Lumber Factory 三裕木局	Ten Houses (10 间 房)	Zhao Chengyi 赵成义	40	Benxi 本溪
Xingshunyong 兴顺永	Royal Temple	Yan Zhongdong 阎中 东	29	Fengtian 奉天
Hongchang Company 鸿昌公司	Royal Temple	Yan Hongtu 阎宏图	32	Shanxi 山西
Dexingyong 德兴永	Royal Temple	Xu Qixian 徐启先	53	Linyu 临榆
Zhongdong Lumber Factory 中东木厂	Royal Temple	Li Ruizi 李润滋	35	Changli 昌黎
Houji Lumber Bureau 厚记木局	Royal Temple	Li Xingyuan 李星元	39	Fengtian 奉天
Guangchangyuan 广昌源	Royal Temple	Li Zhichen 李治臣	57	Funing 撫寧
Hengyuanyong 恒源湧	Bao'an bu 保安堡	Fei Wenge 费文閣	49	Changli 昌黎
Rishunfa 日顺发	Ten Houses (10 间 房)	Wang Zitang 王自堂	46	Changli 直隸
Yuanmaodong 源茂东	Ten Houses (10 间 房)	Zhang Yufan 張于範	36	Benxi 本溪
Zhenshenghe 振生和	New Village Market 新村市	Liu Pinxin 劉品心	42	Fengtian 奉天
Baoquanchang 宝全长	Small West Gate	Zhang Zhishan 張止善	42	Fengtian 奉天
Tongherun 同和润	North Market	He Yintang 何蔭堂	30	Leting 樂亭

Shunyi Dong 順益東	Big North Gate	Li Pusan 李璞三	51	Funing 撫寧
Deqingyong 德慶湧	Big North Gate	Zhao Nanzhi 趙南智	40	Funing 撫寧
Guangyuanyong 廣源湧	Big North Gate	Zhao Weihao 趙未浩	40	Fengtian 奉天

Sources: “Fengtian shengzhang gongshu wei shangbuju cheng mushang daibiao jiarufeng dengqing zai shangbu sheli mushang tongye huishi” 奉天省長公署為商埠局呈木商代表賈儒風等請在商埠設立木商同業會事, 192803, LPA, JC010-01-012166

The consequences of the Sino-Japanese disputes and settlements over the frontier forests were complicated. On the one hand, the local logger society cooperated with whoever capable of guaranteeing their benefits, regardless of the sovereign identities, be it merchants from Japan or Russia. In some instances, the foreign powers even became new authorities in settling timber disputes. On the other hand, a unified national identity—the Chinese citizenship—in terms of the logging and trading rights, was being rapidly formed and repeatedly stressed during the restructuring of Northeast China’s economic and ecological landscape. Specifically, ongoing constructions of boundaries between the national and non-national members were inscribed in the punishments for illegal logging. According to the government stipulation on Korean’s application for immigration to China, only after being granted the Chinese citizenship, the new Korean-Chinese had a right to log and farm in China. Otherwise, they would be labeled as “Korean bandits” (*hanfei* 韓匪) and got arrested. Moreover, if Koreans were caught cooperating with Chinese citizens in logging on China’s territory, for example, the right bank of Yalu River, then Koreans would be considered for punishment, while the Chinese would be deemed as victims, who must have been cheated by Koreans.<sup>41</sup> Thus, the identity of the logger was thus more significant than the act of logging itself.

<sup>41</sup> “Shengjing jiangjun tingjie, fengtian fuyin zengyun wei hanfei yuejie zirao yutou dengchu gei fengtian jiaoshe zongju zhawen” 盛京將軍廷傑、奉天府尹增韞為韓匪越界滋擾魚頭等處給奉天交涉總局劄文, Dongbei bianjiang dangan xuanji 東北邊疆檔案選輯, Vol.36, Mar, 1905 (Guilin: Guangxi shifan daxue chubanshe, 2007), 291; “Fengtian Xingzheng

Depending on commercial lumbering to secure the sovereign status of Northeast China gradually became a consensus among the late Qing government officials and elites in the 1910s. In a secret memorial from the then Commissioner for Foreign Affairs of Hubei Province Xiong Xiling 熊希齡 to Zhao Erxun 趙爾巽, the then Viceroy of Three Northeast Provinces, after the Japanese annexation of Korea, Xiong proposed to take advantage of the early twentieth-century imperial power politics in forest extractions. He advocated on “allowing the merchants from all countries to invest in the northeastern minerals and forests by setting up companies and raising capital via floating shares.” According to him, the international contractors need to hire the Chinese labors to build more railways for the timber and mineral transportations, then “in due course, the different railroads crisscrossing and the Chinese integrating with the foreigners, would suffice to undermine the Russian and the Japanese interferences.”<sup>42</sup> Xiong’s plan placed the northeastern forests in a whole new context, where the forests as potential commodities and industrial necessities, would trigger the international competition. Thus, the competition and counterbalance between the imperial powers over the economic values of the northeastern forests would rescue China from being colonized by any solo imperial power. Forests in northeastern China, therefore, played a crucial role in forming the core connotation of Chinese sovereignty defending the borderland.

### *Sino-Russo Conflicts Over Forest Fires*

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gongshu wei jinzhi hanren sikan linmu zhizao luoquan shi gei ji'an xian zhishi zhiling” 奉天行政公署為禁止韓人私砍林木製造羅圈事給輯安縣知事指令,” Dongbei bianjiang dangan xuanji, Vol.43, (Sep, 1912), 51; “Kuandian xian hanqiao fangchenghan wei zhunfa ruji zhizhao shi gei qiubingxi shenqing shu” 寬甸縣韓僑方承翰為準發入籍執照事給裘炳熙申請書, Dongbei bianjiang dangan xuanji, Vol.43, (Nov, 1912), 112.

<sup>42</sup> Xiong Xiling 熊希齡, “Zouwei chaoxian jibing, manzhou yiwei, fei dabian zhengce wuyi jiuwang tucun jinshu guanjian gongzhe michen yangqi” 奏為朝鮮既並, 滿洲益危, 非大變政策無以救亡圖存謹抒管見恭折密陳仰祈, 1910, No.1 Historical Archives, Zhao Er’xun Archives 趙爾巽檔案, Vol.112.

Comparing with the Chinese loggers' fights, the Russian workers in the sawmills safeguarded their rights and interests differently. The forest conflicts in Heilongjiang took the form of lumber factory fires. In May 1914, two head heads of Russia and China reported to the local military office that their lumber factories had been attacked by the Chinese beard bandits (*hufei* 胡匪).<sup>43</sup> According to them, the *hufei* had burned down approximately two hundred logs owned by the Russian timber merchant Риера также думаю, and more than one hundred and fifty logs owned by the Chinese timber merchant Liu Fuquan 刘福全. What was worse, the bandits also destroyed a turntable used to transport logs from the mountain top to the mountain foot. The two head loggers then asked for both military protection and indemnity for the burnout timbers from the local government. The local military office soon sent people to investigate the case. However, as the truth unfolded, the reality of fires was a more complicated story. Not only *hufei*, but also the Russian workers participated in setting fires and burning timbers in the sawmill. In a letter from the head of Ha'erbin Bureau of Foreign Affairs (*Ha'erbin jiaosheju* 交涉局, referred as BFA) to the Jilin BFA, the official wrote:

When the Russian sawmill workers went in conflict with their employers, they set fire and burned the lumber factory. However, the sawmill owners often did nothing to punish the Russian workers, but to blame the Chinese bandits and seize the chance to demand compensation from the local Chinese government. A few days ago, in a Russian cabinet-making factory, as the Russian workers did not get along well with the factory owner, the workers burned the timbers at the Seventh Platform Valley (Qizhan'gou 七站沟). Fortunately, three teams of us managed to put out the fire in time. Otherwise, the Russian factory owner would make it an excuse and blame us..... The logs that bandits burned were only the barks so that the wood materials were not yet destroyed.

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<sup>43</sup> *Hufei* 胡匪 and *mazei* 馬賊 were bandits who controlled part of the forest and lived on robbery in Northeast China in the late Qing and early Republican Period.

The above document offered three interesting observations: first, fires set on timber by the Russian sawmill workers, under cover of the so-called “beard bandies,” (*hufei* 胡匪) was not only a form of social resistance towards the forest exploiters but also an anger expression towards the Russian wealth inequality. In some sense, setting fire to woods by *hufei* came to becoming a resistance as well as social anger expression towards the exploiters in the Northeast; second, the northeastern bandit (*hufei*) problem was not as serious as the Russian sawmill owners accounted. On the contrary, they made use of the *hufei* problem to seek benefit by planting the timber losses caused by the Russian workers on the Chinese bandits; third, as the cases of lumber factory fires increased, the local Bureau of Foreign Affairs and the Tax Bureau were often blamed by the superiors for their inefficiency to settle the bandit issue, thus triggering the discontentment and tension within the local bureaucracy.

## 5 HORIZONTAL AND VERTICAL INTEGRATION: THE SINO-JAPANESE YALU RIVER COMPANY

### *The Operation of the YRLC*

In July 1906, setting up a Sino-Japanese Logging Company at the Yalu River was put on the agenda. Firmly pushed by the Japanese ambassador Hayashi Gonsuke, both sides debated on the boundaries of the forest concessions attached to the company. The Qing government planned to assign the forested areas from the eighteenth ditch to twenty-fourth ditch of the Yalu River to the company as its special timber concessions. However, the Japanese side insisted on including “the forests along the Hun River” and extending “the years of logging rights,” thus making the matter complicated (see Table 8).<sup>44</sup> On the one hand,

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<sup>44</sup> *Dongsansheng gonglue* 東三省政略, No. 3, see Huang jiayuan 黃甲元 ed., *Changbai shanqu kaifa shigao* 長白山區開發史稿 (Changchun: Jilin wenshi chubanshe, 1992), 242.

the Qing government was concerned about the local timber economy and the local welfare of the residents who depended their livelihoods on forests that might be destroyed by dividing the Hun River forests to the Sino-Japanese Logging Company; on the other hand, the Japanese side strongly demanded the inclusion of the Hun River forests. The negotiation then came to an impasse. Finally, the Qing government compromised. Both reached an agreement on four conditions. First, the newly-established Yalu River Logging Company would secure logging opportunities for the Chinese loggers and merchants living in the Hun River forests; second, the company would provide capital to the Chinese loggers and timber merchants for lumbering; third, the company would guarantee enough timbers for China's Zhejiang Railway constructions and the daily needs of the residents. Fourth, the company would promise to sell the timber at a reasonable market price and forbid any monopoly.

In May 1907, the Fengtian Department of Finance (*Fengtian duzhisi* 奉天度支司), Department of Foreign Affairs (*jiaoshesi*), and the Japanese consul in Andong Saburo Okabe drafted the final regulations of the Yalu River Logging Company, stipulating that the company would offer 5% of its net profits to the Qing government every year<sup>45</sup>. Moreover, Japan agreed to move away all the timber factories previously established during the Russo-Japanese war.<sup>46</sup> The provisions of the co-managed Sino-Japanese Yalu River Logging Company seemed beneficial to China. However, due to the inadequate supervisions, the Japanese side soon controlled the logging activities along the Hun River.<sup>47</sup> As Japan's rule in the South Manchuria became stable, the Sino-Japan Yalu River Logging Company gradually extended its forest logging rights and monopolized the local lumbering industry.

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<sup>45</sup> Huang Jiayuan 黄甲元 ed, *Changbai shanqu kaifa shigao* 長白山開發史稿 (Changchun: Jilin wenshi chubanshe, 1992), 245.

<sup>46</sup> *Zhongri heban yalu jiang muzhi gongsi zhangcheng* 中日合辦鴨綠江木植公司章程, Liaoningsheng guojia shuiwuju 遼寧省國家稅務局 ed., *Liaoning shuishou lishi ziliao xuanbian* (1840-1948) 遼寧稅收歷史資料選編 (1840-1948) (Shenyang: Liaoning renmin chubanshe, 2000), 111.

<sup>47</sup> *Ibid.*, 533.

Table 8 The Forest Area Along the Yalu River

Areas	Forest Coverage (Unit: <i>machi</i> )	Total Volume (Unit: <i>chi</i> )
The First Valley 頭道溝	4.802	3.030.175
Behind the Valley 嶺後	34.656	19.060.800
The Second Valley 二道溝	27.987	6.545.950
The Third Valley 三道溝	39.193	16.234.218
The Fourth Valley 四道溝	15.732	4.354.230
The Fifth Valley 五道溝	44.605	19.306.936
The Sixth Valley 六道溝	15.888	3.324.376
The Seventh Valley 七道溝	45.983	19.999.561
The Eighth to the Eleventh Valley 八至 十一道溝	75.257	28.265.722
The Twelfth Valley 十二道溝	9.481	1.399.765
The Thirteenth Valley 十三道溝	3.882	7.388.601
The Fourteenth Valley 十四道溝	8.522	1.276.222
The Fifteenth Valley 十五道溝	23.956	2.647.160
The Sixteenth to the Eighteenth Valley 十六至十八道溝	9.863	3.465.075
The Nineteenth Valley 十九道溝	6.338	12.169.320
The Twentieth to the Twenty-first Valley 二十至二十一道溝	34.344	1.708.062
The Twenty-second Valley 二十二道溝	14.577	6.719.2824
The Twenty-third to the Twenty-fourth Valley 二十三至二十四道溝	11.498	4.519.200
Total	453.57	170.393.888

Source: *Dongsheng tielu dongsheng jingji yuekan bianjibu* 東省鐵路東省經濟月刊編輯部, “minguo 16nian yalujiang caimu gongsi diaocha de yalujiang yan’an diqu senlin mianji biao” 民國 16 年鴨綠江采木公司調查的鴨綠江沿岸地區森林面積表, *Dongsheng jingji yuekan* 東省經濟月刊, Harbin: Dongsheng tielu guanliju, 4(5/6), 1928, 181

By 1908, the Yalu River Logging Company was the largest lumber firm in the Yalu River area (See Image 6). It headquartered in Andong, a port town north of Donggou, with three branch bureaus (*fenju*) for logging in Tonghua County, Mao’er Mountain, and Changbai Prefecture in the upriver, and three branch offices (*fensuo* 分所) for sales in Shahe town, Mashitai town, and Xinjiapo town in the downriver. The Chinese characters for the company branch were “branch bureau” (*fenju* 分局), indicating the little distinction between a bureau and an enterprise in northeastern China by then. In 1916, the number of the branch bureaus

expanded to six, including the Thirteenth Valley of the Yalu River (*shisan daogou*), the Eighth River (*badao jiang*), Linjiang county, and Fangzheng county.



Figure 8: Yalu River Logging Company Building

Source: Postcard of the Yalu River Logging Company Building,  
<https://www.meipian.cn/duges2t?from=groupmessage>

With the preferential treatment under treaties negotiated after the Sino-Japanese and Russo-Japanese wars, the Yalu River Logging Company was soon prospering, providing unified control of the capital, logging camps, lumber rails, rafting, lumberyards and wholesales, and expanding timber concessions to include upriver territory in Jilin and Heilongjiang provinces. In particular, it fully integrated existing Chinese institutions, especially partnerships with pre-existing contract loggers and lumber firms.

The three branch bureaus sponsored contract loggers in two ways: indirect management by serving loans and direct management. For the first type, the Tonghua branch bureau and the Mao'er Mountain branch bureau extended credit to logger teams, “imitating the customary

practice in which *huozhan* sponsored loggers.”<sup>48</sup> (仿照料棧答辦木把之習慣耳) Following what previous lumber firms had done, the branch bureaus funded loggers’ travels to the mountains and the food and tools needed during lumbering. The head loggers were therefore categorized as “sponsored head loggers” (*daijin batou*). The returns were in kind. The sponsored head loggers and their teams were expected to serve the debts by supplying the YRLC with a certain number of timber rafts set by the contracts. Received at a lower price than market from loggers, the company then traded them at a market price to offset the loans. The surplus, if any, would be returned to sponsored head loggers; otherwise, they were supposed to continue working until a full capital, and interest repayment was completed. The second type of direct management of loggers was practiced by the Changbai Prefecture branch bureau. It directly appointed loggers to lumber in the mountains and paid them salaries for logging and rafting. The head loggers directly under the Changbai Prefecture branch bureau was called “head loggers under direct management” (*zhiying batou* 直營把頭). In 1909, the Tonghua branch sponsored 132 logger heads, and the number increased to 140 in 1910; while the Mao’er branch had 53 sponsored logger heads in 1909 and 1910.

Both cooperation patterns had their advantages and disadvantages. For sponsored head loggers, the credit borrowed from the branch bureau empowered them in ways in which they dominated timber productions and completed self-wealth accumulations. However, the profits made by selling logs produced by them often failed to suffice the loans that they had borrowed. The long-term logger debts would soon become an issue for both the sponsored loggers and the Yalu River Logging Company. For the second type, the advantage of the direct management of

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<sup>48</sup> Disan niandu qiandai ziben ji shouhui jiekuan qingxing” 第三年度前貸資本及收回借款情形, LPA, 7873

loggers was the full controllability of the logger debts, as the branch bureau distributed funds according to real needs. Yet, the disadvantage was explicit: small pay, small gain.<sup>49</sup>

The YRLC undertook various projects to improve logging and driving conditions along the river. With Japan's investment and technology, the infrastructure soon upgraded. In 1908, the Japanese built the first undertaking of sort, two Lumber Line railways in the Nineteenth Valley and the Sixth Valley for log transportation. Further, a log pond (*zhumuchi* 貯木池) as lumberyard was constructed in the Sixth Valley. The major timber productions that the YRLC produced and managed were three kinds: timber rafts (*mufa* 木筏), floating logs (*piaomu* 漂木), and consignment sales (*tuoshou mucai* 托售木材) by extra-provincial companies (mainly from Shanghai). Beginning with rural markets of Liaoyang 遼陽, Benxi 本溪, Hulan 呼蘭, and Fushun 撫順, the timber trade moved through the principle regional marketing centers of Andong, Jilin, and Yingkou 營口, until reaching the international market. According to an estimation, between 1909 to 1929, 9490 *tai* of timbers were transported to Andong, with a total number of 36,936,000 *lian*, averaging 1,150,000 *lian* per year, i.e. 1,400,000 *lian* in 1909, and declined thereafter. Since 1916, the amount increased again, reaching a record of 3,900,000 *lian* by 1921, and then decreased to 1,500,000 *lian*.<sup>50</sup>

Table 9: Wood Productions in the Yalu River Basin

Years	Rafts (Unit: <i>zhang</i> )	Volume of Timber (Unit: <i>chidi</i> )	Estimated Value (Unit: <i>taels</i> )
1909	4859	--	--
1910	3823	--	--
1911	--	--	--
1912	3139	1.182.093	1.639.478
1913	1.674	738.328	1.349.107
1914	6266	2392603	3,223,345

<sup>49</sup> “Disan niandu qiandai ziben ji shouhui jiekuan qingxing” 第三年度前貸資本及收回借款情形, LPA, 7873

<sup>50</sup> Qu Shiqian 曲适谦, “Dongsansheng linye zhi gaikuang,” 東三省林業之概況, *Dongsansheng guanyinhao jingji yuekan* 東三省官銀號經濟月刊, 1929 1 (4): 7.

1915	3443	1290299	2,994,227
1916	4739	1824865	2,378,758
1917	4989	1,969,206	3,508,452
1918	7173	2,446,217	6,375,444
1919	6,205	2,241,580	7,000,233
1920	5281	2,218,283	6,426,567
1921	10,229	3,277,038	2,222,740
1922	7,072	2,497,951	7,483,775
1923	4,347	1,900,230	8,371,359
1924	4,057	1,671,415	6,213,606
1925	4991	1,786,100	5,946,735
1926	3,014	1,084,273	3,909,846
1928	2,666	--	--

Source: Wang Jiegong 王介公, *Andong xianzhi* 安東縣志, Vol. 8, 1931; Qu Shiqian 曲适谦, “Dongsansheng linye zhi gaikuang,” 東三省林業之概況, *Dongsansheng guanyinhao jingji yuekan* 東三省官銀號經濟月刊, 1929 1 (4): 7; Yu Youren 于右任, *Yalujiang you'an zhi linye* 鴨綠江右岸之林業, 1931, pp.48-49., China's National Library.

Note: 1 rafts (*zhang* 張)=23 *fu* 副/符=23\*11 *lian* 連=23\*11\*11 logs (*gen* 根)

As the YRLC was jointly-run by China and Japan, it had two managers of both Chinese and Japanese. From 1908 when it came into the establishment, until 1930, six Chinese managers served this role, including Hu Zongying 胡宗瀛, Cheng Daoyuan 城道元, Qian Rong 钱荣, Tong Zhaoyuan 佟兆元, Li Youlan 李友兰, and Qiao Gengyun 乔庚云 (See table 10). Hu Zongying served as the first Chinese manager of the YRLC. He was a legendary figure in China's forest history but was ignored by most of the previous studies. He had joined the *Dongbiandao* head in the Mount Changbai forest survey as early as in 1904, as one of the pioneers in the Mount Changbai investigation under the Qing government. Four years later (in 1908) when the new YRLC being set up, he was deemed the best candidate for the manager position. Later in 1912 when the Beiyang government replaced the Qing, Hu was again selected to be the first director running the Three Eastern Provinces Forest Works Bureau in Jilin (which will be discussed in details in Chapter Three). He witnessed and joined in the significant shift in Northeast China's forestry development and represented a continuation of northeastern China's forestry practice from the Qing Dynasty to the Republican period. The Chinese

managers in the YRLC not only oversaw the company’s operation, but also played the role of a bridge between the Chinese government and the Japanese government when it came to the issues of timber tax reduction, profit share negotiation, and logger conflict mediation.

Table 10: Chinese Managers of the Yalu River Logging Company

Years	Managers on the Chinese Side
1908	Hu Zongying 胡宗瀛
1912	Cheng Daoyuan 城道元
1914	Qian Rong 钱荣
1917	Tong Zhaoyuan 佟兆元
1919	Li Youlan 李友兰
1923	Qiao Gengyun 乔庚云

Figure 9: Map of Jilin Sawmill (the branch of the Yalu River Logging Company)



Source: Wang Jiegong 王介公, *Andong xianzhi* 安東縣志, Vol. 8, 1931<sup>51</sup>

The construction of the 1917 sawmill marked the real beginning of the great Yalu River lumbering empire. In 1917, based on its abundant human and material resources, the Yalu River Logging Company set up the very first co-sponsored sawmill with Okura zaibatsu in

<sup>51</sup> Wang Jiegong 王介公, *Andong xianzhi* 安東縣志, Vol. 8, 1931.

the Six Valley in Andong based on a capital of 500,000 *yen*. In 1921 it built and later a branch sawmill in Jilin. The establishment of the Jilin branch, which not only expanded Japan's forest exploitation from Yalu River area in Andong to the Songhua River area in Jilin but also upgraded the wood processing technology from elementary logging to the advanced manufacturing. Previous Chinese timber *huozhan* and companies centered on logging and log trades alone, while the new Jilin branch of sawmill thus triggered a series of co-managed sawmills in republican Jilin Province.

One of the main characteristics of the Japanese *ringyo* management was its detailed and scientific investigations of forests and markets before their establishments of firms and sawmills. From May 1914 to Sep 1915, the South Manchuria Railway Company organized an important survey in eight counties in the areas of Sungari River, Tumen River, and Mudan River. The investigation was led by an authoritative forestry expert Koide Fusakichi 小出房吉 from Hokkaido University. He offered an academic report after the investigation. The report read that the forests in these areas were over-mature and that they were ready to be logged for use. In the meantime, he suggested that forests be logged without considering the damages to saplings or any clearing of the logging sites. As the log price was low, the damages to trees during transportation was never a problem. His reports then became the guidelines for the Japanese timber management in northeast China. The scientific knowledge and professional analysis of forestry also laid the foundation for Japan's seemingly extensive and destructive management of northeastern forests, as well as a guiding bible for Japanese timber enterprises establishments. Until the end of 1929, there were almost 162 timber enterprises set up in northeastern China, including 42 wood processing companies. (See table 11) These timber enterprises thus constituted an essential component of Japan's *ringyo* strategy by carrying out the military and extractive management of forest and expanding the empire's territory.

Table 11 The Distribution of Japanese Timber Enterprises in Northeast China in 1929

Names	Number of Enterprises	Number of Sawmills
Dalian 大連	21	7
Andong 安東	60	22
Yingkou 營口	1	—
Fushun 撫順	4	3
Fengtian 奉天	13	1
Changchun 長春	19	3
Jilin 吉林	35	3
Ha'erbin 哈爾濱	7	1
Juzijie 局子街	1	1
Longjing Village 龍井村	1	1
Total	162	42

Resource: Statistics of Business in Andong.

## CONCLUSION

Spanning from Antu County downwards to the city of Andong, lumbering along the Yalu River has absorbed a great number of peasants and migrant and turned them into contract loggers (*muba*) and raft makers. The development of commercial lumbering in Northeast China initiated a major transformation in resource managements and political relations. Thus, the forested area between Willow Palisade and the Changbai Mountains and the Yalu River in the late nineteenth century witnessed the making of the “forestry space,” where timber trades flourished, the multi-national lumber firms were built, and by monitoring the international disputes between the migrant lumbering communities and the foreign logging operators, the Chinese state found a way to remake China’s northeastern frontier that differed from the traditional ones.

In 1878, the Qing government established the first Timber Tax Station in Andong and therefore generating a legible logging zone, where timber trades flourished, and logging

communities grew powerful. However, the legacies of the Sino-Chosŏn tributary (*zongfan*) relation sustained in another way that Korea allowed the Chinese loggers to log on the left bank of the Yalu River on the territory of Choson Korea. It was not until 1910 when Korea signed the Japan-Korea Annexation Treaty that finally ended the customary logging rights and invoked a new frontier boundary demarcation.

The Yalu River Logging Company established under the *ringyo* ideology, contributed to the upgrading industry from logging to sawmills and fueled timber extractive economy; on the other hand, Japanese lumbering depended on existing Chinese institutions, especially partnerships with pre-existing contract lumberjacks and lumber firms. The new forest conflicts that encompassed Chinese lumbering groups, Korean migrants, the local government and the foreign powers not only blurred the boundary between suzerainty and sovereignty through the “forest buffer zone,” but also transformed the shared territory of *Dongbianwai* (beyond the eastern line of the Willow Palisade) into a sovereign frontier with clear territorial demarcations of nation-states.

### Chapter 3. The Jilin Forestry Bureau: Civil Forestry On the Qing Tribute Mountains

#### INTRODUCTION

Northeast China played two different roles in the Qing dynasty. One was the frontier, and the other was Manchu's sacred homeland. As the frontier, Northeast China attracted the attention of not only the central government but also Russia and Japan, for the rich forest resources it contained, as well as the strategic space it performed as. China joined the global discourse on industrialization and a world economic order based on the exploitation of and access to natural resources in the late nineteenth century, during which various patterns of practices of "professional forestry" were established in Southeast Asia and Latin America, as indispensable components of European colonial empire.<sup>1</sup> Scholars have examined the paradigms and practices of tropical forests in India, Indonesia, Brazil and so on during the nineteenth-twentieth century, and discovered the ideology of "topicality" and the institution of "political forestry" developed around the tropical world.<sup>2</sup> However, the forestry practices in Northeast China in the late nineteenth and early twentieth century showed very different characteristics. First, the Northeast China forests were in the temperate zone and produced different kinds of forest products and woods; second, the local communities who lived in Northeast China's forests did not end up in the role of "forest steward" that the indigenous tribal in Southeast Asia used to play; third and most important of all, the pattern of "professional forestry" was first established by the Qing and the Beiyang governments and

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<sup>1</sup> Nancy Peluso and Peter Vandergeest, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1" *Environmental History* 12.1 (2006): 31-64. Nancy Peluso and Peter Vandergeest, "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 2" *Environmental History* 12.1 (2006): 359-353.

<sup>2</sup> Susanna Hecht, Kathleen Morrison, Christine Paddock, eds., *The Social Lives of Forest: Past, Present, and Future of Woodland Resurgence* (Chicago: University of Chicago Press, 2008).

was later inherited by the Japanese empire, different from that directly built by the European empires in Southeast Asia or Latin America. In particular, the New Policies Reform, launched by the Qing government in 1901, aimed at re-establishing the state centralization capacity, saw both the central and local governments unceasingly adjust their forest strategies towards Russian's and Japan's penetrations, and finally establish a compatible forest management system.

This chapter offers the changing policies and institutions over Northeast China's forests in the late Qing, focusing on the shifts in state policies in this forested tribute mountains. The China-Eastern railway built by Russians in 1896 first connected the three provinces in Northeast China. On the one hand, the Qing government successfully limited Russia's timber logging to only the areas along the railway; but on the other hand, the severest deforestation also took place along the China-Eastern railway. In response, the Qing government and the later Beiyang government established a series of government-run forest firms and local forestry bureaus to compete with the Russian and the later Japanese firms in managing the natural resources. Thus, a study of northeastern forest management not only provides us with multiple understandings and practices of state-level, bureau-level, and private industry in twentieth-century East Asia but also offers us an environmental perspective from which to view the multiple trajectories through which modern state rationality was achieved.

In joining the Russian and Japanese powers in establishing controls over forests resources, the Qing government widened its role through the founding of the Jilin Provincial Forestry Bureau in 1907, which marked a watershed in the state's involvement in the timber industry, a fact that would change the value of the natural resources and the sovereignty representations they implied. On top of that, the northeastern forests since then became an important target of state revenue extraction as fiscal pressures on the Chinese state increased.

Section 1 focuses on the three ways of banner management of trees with different tree cultivation licenses issued by banner institutions. Section 2 and Section 3 discuss the Qing government's shift in Northeast forest policy after the Russia-Japan War in 1905: the establishment and the failure of the Jilin Forestry Bureau. In Section 4 and Section 5, I discuss forestry practices from centralization to diversified practices in the Beiyang period in Fengtian, Jilin, and Heilongjiang. The reordering of the space where the older worlds of banner management and the new forestry agencies overlapped and their mixture created new systems of meaning and space. Meanwhile, the overlapping of space also indicated a conflict of interests, between the local bannermen and the forestry officials, over the living space and timber resources. In all, this chapter aims to reconstruct the pattern of sovereign forestry management in Northeast China, a pattern different from the colonial "political forestry" in the tropical world, and discuss the good, the bad and the ugly of Qing government's policy formation towards natural resources and its consequences.

## BANNER FORESTRY IN NORTHEAST CHINA

In the Qing Dynasty, Northeast China was a forest space that was also dominated by banner management. In addition to providing furs, ginseng, and arrows to the royal court, the forests also provided livelihoods for banner people who acted as the forest stewards by that time. There were three ways that the banner agencies dealt with trees alone: (1) Official Land for Tree Cultivation along the Willow Palisade; (2) License for tree cultivation on the bannerland; (3) Wood certificate for reforestation.

*Official Land for Tree Cultivation* (*yangshu guandi* 養樹官地)

The land system in Manchuria was hierarchical and was mainly divided into banner land and civil land. According to Sudo Yoshiyuki, bannerland, also named *guandi* 官地,<sup>3</sup> consisted of the bannerland for the Manchu banner communities, various types of the manors owned by the Qing court and the Manchu /Mongol nobles,<sup>4</sup> and un-reclaimed lands.<sup>5</sup> The bannerland owners in the Qing relied on the skilled banner Chinese for agricultural cultivation and land rent collection. These Han bannermen were *zhuangtou* 莊頭, Sanling officials, and other servants of the court, and generated income to the Qing imperial household. With the expansion of banners, the bannerland system developed *suiquedi* 隨缺, *wutian* 伍田, *taidingdi* 臺丁地 in Fengtian and Jilin, and *zhuangtun* 莊屯 in Heilongjiang to include and support more banner soldiers.<sup>6</sup>

The official land for tree cultivation (*yangshu guandi*) was a special type of bannerland attached to the military defense gate along the Willow Palisade. Beginning in the Shunzhi period, the Qing army equipped the Willow Palisade with defense gates very ninety miles and stationed troops as each gate. As the defense wall needed seasonal repairs, each defense gate government office assigned a plot of land, especially for tree cultivation and timber supply. The land was recorded as “official land for wall construction and tree cultivation (*xiubian*

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<sup>3</sup> Enatsu Yoshiki translated “*guandi*”官地 as “public land.”

<sup>4</sup> “Qing court” refers to the Imperial Household Department (1644-1911), the Shengjing hubu (Board of the Revenue in Shengjing), the Shengjing libu (Board of Ceremonies in Shengjing) Boards (1670-1905), the Sanling Yamen(1670-1921).

<sup>5</sup> Sudo Yoshiyuki 周藤吉之, *Shindai Manchu tochi seisaku no kenkyu toku ni kichi seisaku o chushin to shite* 清代滿州土地政策の研究：特に旗地政策を中心として, Kawade Shobo 賀出書房, 1944.

<sup>6</sup> Xu Xingwu 徐興武, *Qingdai hanmin dui dongbei zhi tuozhi* 清代漢民對東北之拓殖(Pamier shudian 帕米爾書店, 1973). Xu Xingwu shows that the Qing government’s program of land reclamation and opening up started from North Manchuria in Heilongjiang as early as 1860, while the opening up of Fengtian’s hunting grounds started in 1901.

*yangshu guandi* 修邊養樹官地)” which was owned by the defense gate government office (*fangyu yamen* 防禦衙門).<sup>7</sup>

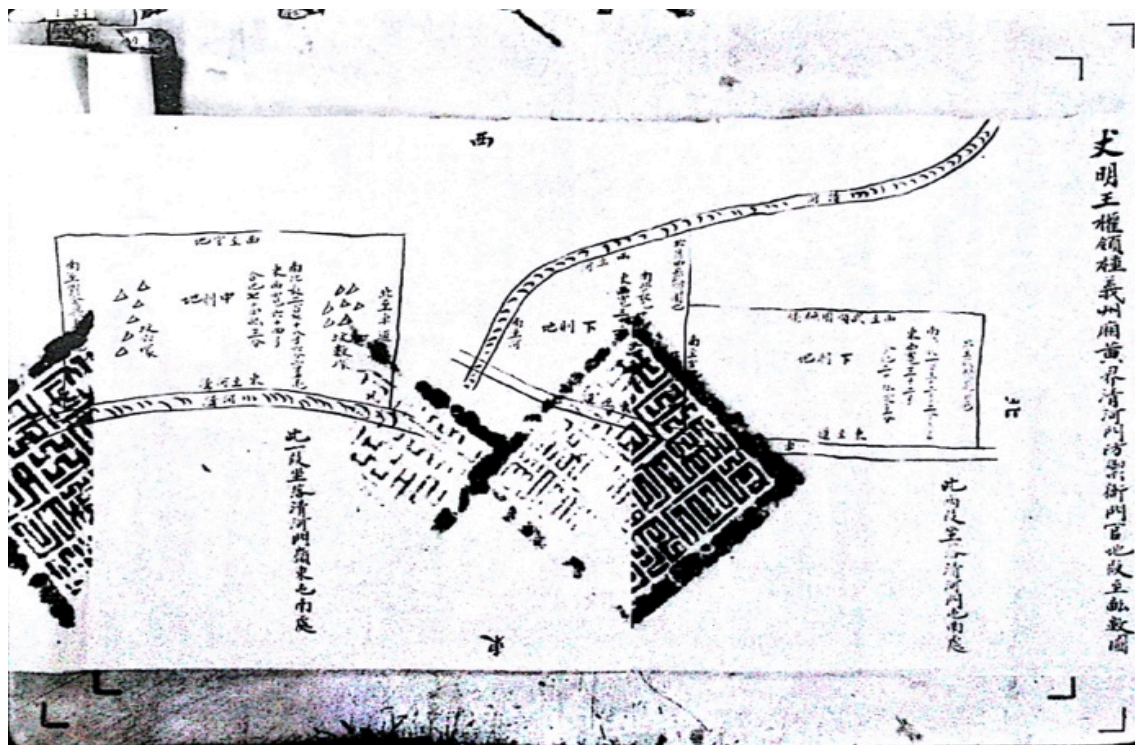
In 1676, the Qing he River Defense Gate (*qinghe bianmen* 清河邊門) was set up as one of the twenty gates of the Willow defense. It was named after the Qinghe River nearby. The Qinghe River Gate extended westwards to the *Jiuguantai* 九官臺 defense gate and eastwards to the *baituchang* 白土廠 gate, serving as the main entrance between Shengjing and Mongolia. In order to prepare enough construction materials, the Qing River Gate Government Office delimited a piece of the riverside desert (*linhe shahuang* 臨河沙荒) to plant young saplings, and the assistant clerks in the *yamen* (*lingcui* 領催) mainly worked as the tree cultivators. The garrison soldier and officers, including one Manchu bannerman and thirty Han bannermen, also joined the tree management (the garrison soldiers were demobilized until 1920). With the rise of population, the Emperor Guangxu set up Qinghe River Gate Town in 1885, adjacent to Yixian County.<sup>8</sup>

#### Map 7: Qing River Gate Official Land for Tree Cultivation

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<sup>7</sup> “Fengtian xingsheng gongshu wei yizhouwei chengqing hebian yangshu guandi kefou fagei zuzhao shi” 奉天行省公署為義州尉呈請河邊養樹官地可否發給租照事, 191205, LPA, JC010-01-006524.

<sup>8</sup> Fuxin shi renmin zhengfu defangzhi bangongshi ed., 阜新市人民政府地方志办公室, Fuxin shizhi 阜新市志, Vol.4, 1999, 282.



Source: Official Land for Tree Cultivation in the Yizhou Guard 義州尉養樹官地

*Grant for Tree Cultivation (yangshu zhizhao 养树执照)*

One of the richest forests in Manchuria was the Manchu rulers' imperial tombs, such as the imperial tomb of the Yongling Mausoleum 永陵. In order to sustain the soldiers and tenants who guarded the imperial tombs, the forestlands surrounding the core of the imperial tomb were distributed to the banner soldiers and tenants as sources for food and clothing. Trees on the bannerland were often erased for agriculture development. However, when the land was too barren to grow crops, the Banner Office allowed the tenant bannermen to plant and sell saplings instead, as shown in the bannerman Ji Xuecheng's 紀學成 case. Born as tomb tenant of the Bordered Blue Banner (*hanjun xianglan qi*), Ji Xuecheng and his family had served the Yongling Mausoleum for more than two centuries. As a tenant, he inherited from his ancestors 20 *fangli* of the *suique* 隨缺 forestland of Yongling, located at the Pear Trees Grassland (*lishu dianzi*) in the north of Fenghuangcheng County.

According to Ji Xuecheng, his ancestors received the mountainous land in the Qianlong period with a land license. In order to pay the land rents, his ancestors cultivated the fertile part of the land into the mature fields by growing rice; and cultivated the non-reclaimable part of the land into forestland by planting trees. Until the Guangxu period when the Qing government initiated a reform on the Manchurian land management, the Yongling banner office issued a separate license for tree cultivation and harvesting on the bannerland (*yangshu zhizhao* 養樹執照), along with the land license for permanent tenancy (*yongdian quan*). The new tree cultivation license enabled the Ji family to both plant and log forests into timbers instead of plowing lands (See the License below). Thus, timbers on the bannerland were officially recognized by the Qing government as an equivalent for the crop property. Ji Xuecheng's case showed us that bannerland management did not only contain crop harvesting, timber planting, and cutting was also a constituent. Later in the Republican era, when the Fengtian Forest Works Bureau was established, The Bannerman Ji's would engage in a dispute with the commoner Zhang on the ownership of bannerland forests (which will be discussed in Chapter Four).<sup>9</sup>

A License for Tree Cultivation License (*zaiyang shuzhu zhizhao* 栽養樹株執照) Issued by the Mausoleum Banner (*lingqi* 陵旗)

Yongling Mausoleum General Government Office Bordered Yellow Banner (*yongling zongguan yamen xianghuang qizi* 永陵總管衙門鑲黃旗子)

Ji Xuekong 紀學孔, tenant of the Pear Grassland Valley, North of the Fenghuangcheng City. There were hills and rocks within the four boundaries of the tenant's license. The land couldn't be reclaimed but was allowed to grow trees. The Yongling *Yamen* was willing to allow the tenant to manage the land at his convenience. There was no opinion in his cutting down or keeping the roots. Within the four boundaries, outsiders were not allowed to invade. If the tenant was to be disturbed by others in the future, he should file a complaint to us. The Yongling *Yamen* specially issued this felling license as evidence.

Four Boundaries (*sizhi* 四至)  
East to the Old Hill (*laogang* 老崗)

<sup>9</sup> “Fengtian shengzhang gongshu wei jixuecheng qingling linhchang shi konggao zhangyongbo”奉天省長公署為紀學成請領林場事控告張永波, 1919-1924, Liaoning Provincial Archives, JC010-01-007748.

West to the Rock (*lazi* 砬子)  
South to the Old Hill  
North to the Old Hill

Seal of the General Director of Yongling Mausoleum  
October 19, 1883, Issued to Ji Xuekong

Source: “Fengtian shengzhang gongshu wei jixuecheng qingling linhchang shi konggao zhangyongbo” 奉天省長公署為紀學成請領林場事控告張永波, 1919-1924, Liaoning Provincial Archives, JC010-01-007748.

### *Wood Certificate of the Shengjing Board of Works*

Aside from the imperial tomb government office, the Shengjing Board of Works (*gongbu* 工部) also issued a kind of permit for growing trees. Deng Xianglin’s 鄧祥麟 story such an example. From the Jiaqing period until 1875, the Shengjing Board of Works had issued a wood certificate that served as a means of reforestation and bannermen subsidy. The wood certificate was fee simple, with a requirement of enclosing mountains for forest nourishments. In October 1918, Deng Xianglin, who was entitled as the candidate to the imperial exam in the Qing (*yougongsheng*), reported to the Forest Works Bureau that his great grandfather Deng Peng 鄧鵬 had obtained a wood certificate (*mupiao* 木票) from the Shengjing Board of Works (*shengjing gongbu*). It turned out that he and his family had managed the forest farms at *Donglutang* valley 東路湯溝 for three generations until 1907 when the Qing government ended the Shengjing Ministry of Works and withdrew the wood certificates. Now that as the Forest Works Bureau was established, the Deng family considered themselves holding priority in claiming the forest in *Donglutang* 東路湯 valley.<sup>10</sup> As a result, the Forest Works Bureau rejected his petition, as the wood certificates and registration records of the Shengjing Ministry of Works had been destroyed during the Russo-

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<sup>10</sup> “Fengtian shengzhang gongshu wei linwuju hanqing jianfa zhuixiao gongbu mupiao juanshi,” 奉天省長公署為林務局函請檢發追銷工部木票卷事, 1918, Liaoning Provincial Archives, JC010-01-7787.

Japanese war and they couldn't testify the truth in his words. However, from this case, we could infer that the banner management of reforestation long existed in northeastern China

## 2 RUSSIA'S LOGGING PENETRATIONS

In 1860, under an agreement brokered by the Russian diplomat, China lost more than 400,000 square kilometers forested territory to Russia; and in 1904 Russia negotiated the timber sup with the Qing government over the auxiliary zone of the China-Eastern Railway. The dynamics that fueled Northeast China's forest extractions emerged after 1860 when the Qing government's signed the *Beijing Treaty* and the *Sino-Russo Treaty of Aigun* with Tsar Russia. Although the treaties explicitly stipulated the inviolability of the Chinese territory, the Russian armies penetrated Hunchun, a Chinese border town located at the territorial junctions of China, Russia, and Korea, in 1868, specifically to log trees for frontier house constructions.<sup>11</sup> The 1868 event thus represented Russia's purposeful tapping onto Northeast China's forests. Thereafter the Russia Tsar continued to send people to investigate forests in Jilin Province, under the excuse of trade and prepared the Russians for the future resource extractions.

The building of the China Eastern Railroad (CER) in 1896 immensely advanced Russia's penetrations onto Northeast China's forest. In order to have more access to timbers at a low cost, the Russian government successfully forced the Qing government to grant different privileges to the China Eastern Railway Company. For example, in 1896, Russia

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<sup>11</sup> Dong Wanlun 董万仑, *Shae dui woguo dongbu bianjiang de qinlue yu wudacheng yibabaliunian hunchun kanjie* 沙俄对我 国东部边疆的侵略与吴大澂一八八六年琿春勘界, see Diao Shuren eds, 刁书仁, *Dongjiang yanjiu lunji* 东疆研究论集 (Changchun: Jilin wenshi chubanshe, 1992), 201.

requested a “tax exemption privilege” to CER for its railroad sleeper supplies.<sup>12</sup> In the next year of 1897, Russia again forced the Qing government to approve of a “low price open for discussion” for all timbers logged along the railway.<sup>13</sup> Hereafter, the China Eastern Railroad Company had set up a series of timber concessions in Jilin and Heilongjiang provinces between 1904 and 1907 and started massive logging of the Northeast China’s forests.

As the Russian army took the military edge, the Chinese frontier officials had no better way to handle the penetration but to normalize Russia’s forest extractions by stipulating logging “not within the range of the forbidden imperial land” as a bottom line. In June 1900, the Vice-General Nong Ying’e 儂英阿 of Sanxing 三姓 (in today’s Yilan County of Heilongjiang Province) reported to the Jilin Bureau for Foreign Affairs (*Jilin jiaosheju*) that some Russians were caught at two mountains of Kemule 科勒穆 and Yi’erga 依爾噶, who were transporting stones and the surrounding trees to Khabarovsk, without any lawful license.<sup>14</sup> Based on the agreement between Russian and China, it was illegal for Russians to cross boundaries and to gain any natural resources without the legal license issued by the Qing government. Therefore, the Qing officials should have had a good reason to prevent

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<sup>12</sup> “Zhong e heban dongsheng tielu gongsi hetong” 中俄合辦東省鐵路公司合同, Jilinsheng danganguan 吉林省檔案館, Jilin shifan xueyuan guji yanjiusuo 吉林师范学院古籍研究 eds., *Qingdai minguo jilin dangan shiliao xuanbian shewai jingji maoyi* 清代民國吉林檔案史料選編·涉外經濟貿易 (Changchun, Jilin wenshi chubanshe, 1995), 65.

<sup>13</sup> “Zhong e xuding dongsheng tielu gongsi hetong zhangcheng” 中俄續訂東省鐵路公司合同章程, Jilinsheng danganguan 吉林省檔案館, Jilin shifan xueyuan guji yanjiusuo 吉林師範學院古籍研究 eds., *Qingdai minguo jilin danganshiliao xuanbian: shewai jingji maoyi* 清代民國吉林檔案史料選編·涉外經濟貿易, 40.

<sup>14</sup> Sanxing fudutong wei eren yupao kemule, yierge shanshi bing kanfa shuzhu yunfu boli xiugong de chengwen 三姓副都統為俄人欲創科勒穆、依爾噶山石並砍伐樹株運赴伯力修工的呈文 (Jilinsheng danganguan 吉林省檔案館, Jilin shifan xueyuan guji yanjiusuo 吉林師範學院古籍研究所, *Qingdai minguo jilin dangan shiliao xuanbian: shewai jingji maoyi* 清代民國吉林檔案史料選編·涉外經濟貿易 (Changchun, Jilin shifa daxue chubanshe, 1995), 160-161.

their unlawful actions and even punish the Russian border crossers. However, after confirming with the Vice-General that the two mountains being logged were outside the boundaries of Qing's imperial forbidden area, the Jilin Bureau for Foreign Affairs (*Jilin jiaosheju*) only asked for reasonable payment for the timbers and stones gathered by Russians. Moreover, they even allowed a price bargain between the Russians caught, and the Sanxing officials, if the Russians considered the timber price set by the frontier officials too high to be accepted. The handling of the Russian timber stealers by the Jilin Bureau for Foreign Affairs in 1900 set a precedent when it came to illegal timber extraction by foreigners.<sup>15</sup>

## THE NEW POLICIES IN JILIN PROVINCE

The forests of Jilin Province flourished in the mountain range of Changbai Mountains and Harbin. According to the "Records of the Jilin Old News" (*Jilin jiuwenlu* 雞林舊聞錄), the forested mountains in Jilin were divided into Mount Changbai chain and Little White Mountain chain (*xiaobai shanxi* 小白山系). The Changbai Mountains were located in the upper reaches of the Songhua River, where the old-growth forests stretched for thousands of miles. The Qing government posed a strict logging ban on them before the 1860s. The Small White Mountain chain situated on the upstream of the Lalin River, near Sihechuan 四合川, south to Zhangguangcai 張廣財 mountains and Laoye 老爺 mountains, east to Sanxing and Ningguta, West to Binzhou 賓州, Wuchang 五常, and Russia.<sup>16</sup> The forest resources in Jilin were

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<sup>15</sup> Jilin jiaosheju wei eren caishi nashui ke fangzhao muzhi piaofei banli de ziwen 吉林交涉局為俄人采石納稅可仿照木植票費辦理的咨文 Jilinsheng dangangan 吉林省档案馆, Jilin shifan xueyuan guji yanjiusuo 吉林师范学院古籍研究所, *Qingdai minguo jilin dangan shiliao xuanbian: shewai jingji maoyi* 清代民国吉林档案史料选编·涉外经济贸易, 162.

<sup>16</sup> Wei Shenghe 魏声和, *Jilin jiuwen lu* 鸡林旧闻录, Vol.2, in Li Shutian 李澍田 *Jilin dizhi*, *Jilin jiuwen lu*, *jilin xiangtuzhi*

abundant. As stated in the survey of Jilin Agricultural Association, “within the boundaries of Jilin Prefecture there were native woodlands. Eleven were in Wuchang Prefecture, and seventy-five were in Binzhou Prefecture, fourteen in Yilan *fu*, ten in Mishan *fu*, seventeen in Ningan *fu*, seven in E’mu county, twelve in Shulan county, eighteen in Zheng county.”<sup>17</sup>

With the rise of forestry knowledge in the 19th century, companies and farms of arboriculture extended from south to Northeast China, as an attempt response to Russia’s and Japan’s economic and military invasions. However, the Qing also faced with other severe challenges. First, the important military towns in northeastern China such as Sanxing 三姓, Ningguta 寧古塔, and Hunchun 琿春 were under attack of Russians while their distant locations were beyond the reach of the Jilin General, who undertook the responsibility to defend Northeast for the Beijing government.<sup>18</sup> Second, due to the fact that most of the banner soldiers had been sent to South China to oppress the Taiping Rebellion, large numbers of Koreans took advantage of the military vacuum and migrated to Northeast China. Many of the migrants allied and formed a powerful group controlling the southern part of the Changbai Mountains as *huifang* 會房.<sup>19</sup> Thus the late Qing government felt the urgent need to rectify the northeastern frontier ruling strategy. The issue of forestry entered the government’s vision.

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吉林地誌·雞林舊聞錄·吉林鄉土誌 (Changchun: Jilin wenshi chubanshe, 1996), 64.

<sup>17</sup> “Jilin nongwu zonghui weini zunzhang zhengdun linye shiyi de yiwen ji quanyedao de hanfu” 吉林農務總會為擬遵章整頓林業事宜的移文及勸業道的復函, Augst 1, 1912, Jilin Provincial Agricultural Works Archives: J018-03-0018.

<sup>18</sup> Zhongguo diyi lishi danganguan 中國第一歷史檔案館, Records of Qing 清實錄, 53 (Beijing: Zhonghua shuju, 1987), 854-855.

<sup>19</sup> Zhao Xingyuan 趙興元, *Tumen jiang beichaoxian yimin wenti yanjiu* 圖們江北朝鮮移民問題研究 (Jilin wenyi chubanshe, 2004), 23-37.

<sup>20</sup> Gao Qiang 高強, *Qingmo dongbei bianhuan yu yimin shibian wenti yanjiu* 清末東北邊患與移民實邊問題研究 (Shanxi

## *The Timber Tax System in Jilin*

The central government's regulations on logging in Jilin Province dated back to the early Qing when Ningguta first levied timber taxes in 1733. The tax income was only a few hundreds of *taels* then.<sup>21</sup> After the Ningguta General transferred to Jilin Prefecture (*Jilinting*), a special commissioner had been formally set up to collect timber tax.<sup>22</sup> In the fourth year of Guangxu (1878), the Jilin General Ming'an 銘安 petitioned to set up the General Bureau of Tobacco, Alcohol and Timber Tax (*yanjiu mushui zongju* 菸酒木稅總局) to replace the Jilin Prefecture to manage timber taxes. The General Bureau built four branches at the mouths of Yitong 伊通 River, Chalu 岔路 River, Shuangyang 雙陽 River, and Fateha 法特哈 border gate, and set a fixed tax rate for Jilin timbers as 3722 taels/year.<sup>23</sup> Since then, although the amount of tax rate on tobacco and alcohol had undergone changes, the tax amount on timber had remained roughly the same. This showed that the collection of timber tax did not constitute a major position in the tobacco, alcohol, and timber tax system of Jilin Province in the early nineteenth century. However, with the escalation of forest extractions in Northeast China, the proportion of timber tax in local finance and tax collection had greatly increased, thus highlighting the contradiction between the system and the reality.

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rennin jiaoyu chubanshe, 2009), 62-77.

<sup>21</sup> Li Naijie 李乃傑ed., compiled by Liu Zhifan 劉誌凡, *Jilin shengzhi* 吉林省誌, Vol.30, *Caizhengzhi* 財政志 (ChangchunL Jilin renmin chubanshe, 1993): p.106.

<sup>22</sup> Tang Erhe 湯爾和, *Jilin shengzhi linye* 吉林省之林業(Shanghai: shangwu yinshuguan, 1930): p.67.

<sup>23</sup> Li Shutian 李澍田ed., collated by Meng Dongfeng 孟東風, Pan Jinglong 潘景隆, *Jilin xinzhì jilin gongshu zhengshu* 吉林新誌 • 吉林公署政書(Changchun:jilin wenshi chubanshe, 1991), 87.

Xu Nailin 徐鼎霖, who served as an assistant to Cheng Dequan 程德全, vice-capital of Qiqihar, exclaimed over the chaotic levies and heavy taxes in Jilin. In a letter drafted on behalf of Cheng Dequan to Fushun 富順, the acting general of Jilin, he said:

“Before 1900, as tax bureaus were set up in Jilin and Heilongjiang separately, businessmen and local people suffered from double taxes and the re-levy was chaotic. Later, Heilongjiang Province ended them, while Ha’erbin, Xindian, and Sanxing in Jilin Province taxed even harder. As Binzhou and Changshou County started levying taxes on timbers along the rivers, the merchants were at loose ends. Even people outside Jilin gossiped about Jilin’s heavy tax, and it greatly hindered our political system.” [查庚子以前，吉江各設稅局，商民實苦，重征即亂。後江省停止，而哈局、新甸、三姓各局，各顧考成，盡力搜征。加以賓州廳、長壽縣又出而沿江查收，商民更無所適從，外人亦從而饒舌，於政體大有關礙]

Xu Nailin’s observation reflected the disorder of timber tax collection in Jilin and Heilongjiang after the Boxer Movement. The local governments increased the tax collection and apportionment in their own ways and resulted in untold suffering of merchants. Therefore, he suggested Fushun collect statistics on the amount of timber tax levied in Jilin and Heilongjiang provinces. “Except for the bureau fee, Jilin and Heilongjiang should cut the taxes to half. As for the taxes on mountain goods and leather pelts, the levies should also be standardized and be notified by the commissioners to both provinces.” In this way, Xu hoped to innovate the financial system of the provincial governments by means of simplified and standardized tax collections.<sup>24</sup>

However, Xu Nailin’s proposed reform to simplify the tax system mainly was aimed at the disorder of local timber tax collections. Its effect was only to temporarily relieve the financial pressures temporarily, but could not fundamentally solve the practical difficulties faced by the Qing government in managing Northeast China’s forest. As mentioned earlier, the new tax system only targeted Chinese merchants but had little to do to regulate the

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<sup>24</sup> Xu Nailin 徐鼎霖, *Zhi furunzhi liushou lun jiangguan shuiwu* 致富潤之留守論江關稅務, in Xia Runsheng 夏潤生 ed., *Xu Nailin ji* 徐鼎霖集 (Changchun: Jilin wenshi chubanshe, 1989), 172.

behaviors of foreign merchants and labors. Liu Daojun 刘道焮, the governor of Mohe 漠河 Gold Factory, complained about the foreign logging in his letter to Cheng Dequan. “The forests along the Guanyin Mountain (in today’s Jiamusi City) had been cut down by the Russians over the years from near to far. However, on Russia’s territory across the river, where forests were lush, and trees were clustered, they didn’t do any logging, but still went across the border and log on our side.”<sup>25</sup> In response to Liu Daojun’s suggestion to resist the Russians by allowing the Chinese to log on Russia’s soil, Cheng Dequan pointed out the difficulties in its implementation. In his letter to Xu Shichang 徐世昌, the then Governor of the Eastern Three Provinces, he wrote:

“It was especially difficult when it came to negotiating with Russia and allowing Chinese people to log on the Russian border. Border affairs were getting more and more difficult to handle, and the strong neighbors had reversed positions of the host and the guest. If we were able to have Chinese people cross the border and cut down Russia’s forests, why not just forbid the Russians from crossing the border to cut down our forests? It was easier said than done. Moreover, ... there were more than 2,000 miles along the Amur River with no trees on the left side. Liu Daojun had just arrived and was unfamiliar with the whole situation. His purpose was to protect our rights and interests, but it was not easy.”<sup>26</sup>

Instead, Cheng Dequan believed that to save the economic rights, the only way was to implement forest police and enhance inspections according to the tax rules, “until in the future when the local bureaucracy was established, and clear border boundaries were drawn, could we make a new agreement with Russia and save our interests.”<sup>27</sup> Obviously, Liu Daojun’s

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<sup>25</sup> About Huang Zongxi Law, see Huang Haitao 黃海濤, *Mingqing shixue jingji lunli sixiang yanjiu* 明清實學經濟倫理思想研究 (Kunming: Yunnan University Press, 2007), 135.

<sup>26</sup> This section deals with Cheng Dequan’s letters and letters, which were written by Xu Nailin, his assistant, but should also be approved by Cheng Dequan. In order to restore the context of the official reply at that time, this article mainly uses Cheng Dequan as the writer of the letters.

<sup>27</sup> “Zhi xujuren dubu lun yuejie famu dengshi” 致徐菊人督部論越界伐木等事, *Xudingnai ji* 徐鼎霖集 (Changchun: jilin wenshi chubanshe, 1989), .331.

and Cheng Dequan's respective propositions reflected two different solutions. The former relied on the agency of the merchants and labors, while the latter relied on the official supervision. Specifically, at that time, both solutions had their own functions. However, Cheng Dequan's refusal on mobilizing merchants and loggers indicated that it had become a real consideration for the local officials to establish a government agency to secure the forest rights.

### *The New Policies Reform*

With the practice of the New Policies reform, the central government's attention to the three eastern provinces also increased. In 1905, the Minister of the Ministry of Commerce (*Shangbu*), Zaizhen 載振, proposed to revitalize commerce in northeastern China. He and other officials found that the three eastern provinces had great potentials in developing agriculture, mining, salt, forestry, and fishery industries in his detailed reports. The only problem, as he stated, was people's un-enlightenment that led to the declining industry and languishing business. Therefore, he proposed to establish companies in the above industries and have local officials to supervise and manage them carefully, "it would not be difficult to prosper in several years."<sup>28</sup> The petition soon got approved. The Qing court then ordered the Ministry of Commerce and the Ministry of Foreign Affairs to coordinate with Yuan Shikai 袁世凱 (the Minister of Commerce of Beiyang) and Zhao Erxun 趙爾巽 (the General of Shengjing) to plan the regional industrial revitalization as whole, thus opening up a new situation of industrial development in the three eastern provinces.

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<sup>28</sup> "Shangbu shangshu zaizen deng zouwei zhenxing dongsansheng shangwu qingchi tuochou tuiguang tongshang banfashi" 商部尚書載振等奏為振興東三省商務請飭妥籌推廣通商辦法事, September 15<sup>th</sup>, 1905, No.1 China Historical Archives, 03-7132-016.

In this context, in November 1906, Wenlu 文祿 in Jilin Province first reported the importance of developing forestry to the Jilin General's Government Office. In his petition, he pointed out that under the circumstances of "being bullied by Japan and Russia," not only the timber merchants and the other entrepreneurs suffered but also the income of national revenues was reduced. "Since Jilin Province had opened commercial ports, and in the future, the international officials and merchants would gather here for timber trades," he proposed to set early restrictions on the Jilin forests, in case the unclear sources of interest would lead to the future financial loss.<sup>29</sup> [不第木商受害，實業者不可枚舉，即國課亦因之減收。且吉省已開商埠，將來各國官商雲集，木植銷路必旺，若非早立限制，恐利源不清，將來利益難保] Following Wenlu's advocacy, in September 1907, Song Chun'ao 宋春鰲, the head of Jilin Provincial General Bureau of Foreign Affairs (*Jilin jiaoshe zongju*), appealed to the Jilin General for the establishment of the Jilin Provincial General Forestry Bureau (*Jilin linye zongju*, referred as JFB). In his report, Song Chun'ao stated:

Jilin Province was located at the frontier, the uprising and tremendous atmosphere that came from the environment had generated giant forests everywhere, which was rare in the world. The forested Changbai Mountains at the southeastern Jilin Province stretched more than 2,000 miles upwards to Sanxing, with a sparse land and few people. At the turn of summer and autumn, the beard bandits gathered together, and it was difficult to arrest them. Although there were local logger teams who logged in the mountains, their operations were weak and fragile. They suffered from the rugged mountain roads, the exhaustion of rivers, and the disturbance of bandits. They often went into the mountains for years without returning. Therefore, few capitalists with strong financial resources would be willing to engage in this business. People who worked on forestry were those who had long served as logger heads and were familiar with the mountain paths. They gathered friends and partners, borrowing rice to enter the mountain for the benefit of ten percent surplus. This was why the Jilin forestry was not prosperous. In the past few years, the Russians in the northeast of the province along the railway area, gained profitable incomes by operating timber business. Now that the commercial ports had opened, and people from all over the world came in. Under the name of travel, they were actually investigating the forest's interests. Jilin's biggest industry was nothing but forests. Given that our timber merchants were weak, and the tough foreign powers were coveting our forests, if the government (*gongjia*) did not urgently seek good measures and resist them in time, we would not only lose the profits but also encounter endless border conflicts. Now, according to my investigation, I propose to set up two forestry bureaus at

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<sup>29</sup> "Minzhengbu wei fensheng shiyongdao wenlu deng bignqing nizai jilin sheli linye gongsi shigei jilin jiangjun de ziwen"

民政部為分省試用道文祿等稟請擬在吉林設立林業公司事給吉林將軍的咨文, November 27, 1906, Jilin Provincial Government Archives, J066-05-0050.

Tushan 土山 and Sihechuan 四合川. We should also recruit loggers to enter the mountain, build cabins, cut down trees, construct roads, and sell timbers so that forestry would be gradually popular. In this way, profits would be saved, and the bandits were hard to hide. If any outcropped mines were discovered on the land deprived of trees, we would establish the mining industry; if the land was flat and fertile, we would recruit tenants to reclaim the land. In the future, when people gathered, we could set up officials and divide management in a breath. Establishing a forestry bureau would be a good strategy to bring good and remove evil.<sup>30</sup>

From the above, the necessity of establishing a state-run forestry bureau in Jilin expounded by Song Chun'ao roughly included three aspects: first, the Jilin's forests were a rich source of profit, but the local timber merchants were weak in the capital. Therefore, it was difficult to fully develop them based on the restrictions of the natural and financial conditions; second, the foreign powers had long coveted Jilin's forests. If not resisted by the government through rational and good strategies, there would be endless foreign invasions. Third, the deep mountain forests of Jilin provided the beard bandits with places to hide, which increased the difficulty for officials to arrest them and thus seriously affected the local security. In addition, Song Chun'ao pointed out some potential benefits after the establishment of the General Forestry Bureau, which were, mining and land reclamation that the local government was equally concerned about. Song argued that both could be carried out on the basis of the work of the General Bureau of Forestry: logging.

#### THE JILIN FORESTRY BUREAU (*JILIN LINYE JU*)

Inspired by the promising vision, the Jilin Provincial Government approved Song's petition and appointed him as the general manager (*zongban* 總辦) of the General Forestry Bureau on October 6, 1907. At the same time, the Yongheng Official Money Bureau 永衡官帖局 was ordered to issue two million *zhongqian* 中錢, as requested by Song, to the forestry

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<sup>30</sup> “Zongli jilin jiaoshe zongju jianban jichang tielu shiyi hualing erpin xian jiming haiguandao song chun'ao jinbing” 總理吉林交涉總局兼辦吉長鐵路事宜花翎二品銜記名海關道宋春鰲謹稟, September 24<sup>th</sup>, 1907, Jilin General Government Archives, J001-33-3165.

bureau as a start-up fund. The Reply of the Jilin Provincial Government particularly stressed: “in the past, in every industry that developed in Jilin, and in every bureau organized in Jilin, the officials often practiced nepotism and allowed corruptions. They devoured a huge amount of money and made no accomplishment. At the time of the provincial reform when we seek truth from facts, Song Chun’ao must select employees properly, keep his own hands clean, serve the public, and strive to make practical results. The Minister of Department would reward every merit and punish every mistake.”<sup>31</sup> On October 18, the Jilin Forestry Bureau’s official seal was put in to service, and Zhang Peng 張鵬, a supplementary magistrate of Jilin Province, assumed the post of director (*juzhang* 局長) of the General Bureau of Forestry.<sup>32</sup> The Jilin Forestry Bureau had two sub-bureaus, Tushan and Sihechuan. The Sihechuan Branch was located in the Old East Mountain area of Wuchang 五常 Prefecture with eight check-posts to collect lumber shipments (*shanfen* 山分) and five lumber factories for timber sales. The Tushan Branch was located in Jiaohe 蛟河, with a Jiaohe Sawmill managed by Sun Huaqing 孙淮清. So far, various affairs of the Forestry Bureau have been carried out one after another.

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<sup>31</sup> “Jilin shengpi jiming haiguandao song chun’ao fengyi chuangan linye zhangcheng kaizhe qingshi” 吉林省批記名海關道宋春鰲奉議創辦林業章程開折請示, August 29<sup>th</sup>, 1907, Jilin General Government Archives, J001-33-3165.

<sup>32</sup> “A Reply to Song Chun’ao About Establishing the Jilin Forestry Bureau” 吉林省批記名海關道宋春鰲奉議創辦林業章程開折請示, August 29<sup>th</sup>, 1907, the Jilin Archives, J001-33-3165.

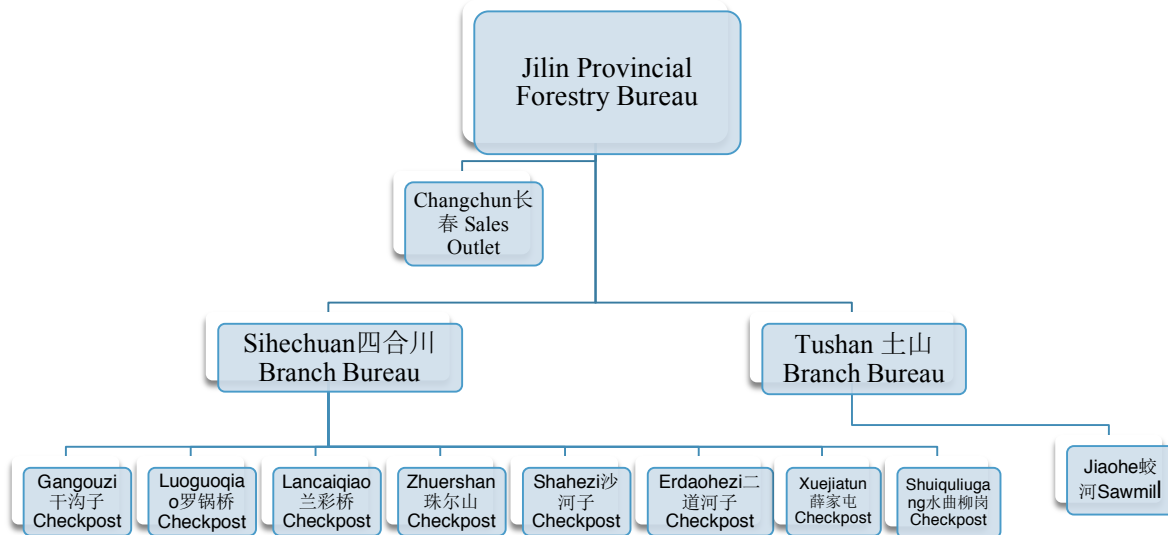


Figure 10: The Jilin Provincial Forestry Bureau Structure

Although the Jilin Forestry Bureau started rapidly with the support of the provincial government, its operation was not smooth and had encountered many difficulties at the beginning. The major difficulty encountered by the bureau was what Song Chun’ao mentioned in his previous report: the fund shortage. In the beginning, Song Chun’ao listed the personnel needed by the forestry bureau in the Brief Forestry Regulations submitted to the Jilin Provincial Government. According to him, in addition to the General Manager, there was a need for “a dispatcher (*tidiao* 提调), a copywriter (*wen’an* 文案), a general auditor (*zongjicha* 总稽查), an inspector (*jicha* 稽查), two accountants, a porter, a go-down keeper, a factory administrator, two mail clerks in the general timber storehouse and the general lumber factory, and there was no fixed quota for dispatchers. The rest of the secretaries, gatekeepers, and others would be re-appointed after a few months’ probations.”<sup>33</sup> However, the Jilin Provincial Government disagreed. Its reply read that “due to the economic difficulties of Jilin

<sup>33</sup> “Jinjiang fuyi chuangan quansheng linye jianming zhangcheng kaidan gogncheng xianjian” 謹將覆議創辦全省林業簡明章程開單恭呈憲鑒, August 23<sup>rd</sup>, 1907, Jilin General Government Office Archives, J001-33-3165.

Province, the inspector position should be cut down. As the initial business was relatively simple, hiring one accountant would be sufficient instead of hiring two.”<sup>34</sup> Song Chun’ao continued to argue that “the beard bandits in Jilin Province occupied the hills and formed in groups, without heavy force to suppress them, the situation of the bureau branches would be very dangerous. Now that as the two bureaus of Tushan and Sihechuan were established, it was proposed that three battalions of troops should be allocated to Zhangguangcai Mountain, Tushan, and Sihechuan, so as to frighten the bandits.”<sup>35</sup> However, the Provincial governor also responded negatively. They claimed that “the existing battalions had been stationed in other regions, whether they could be drawn out or not should wait for the Provincial Military Department (*yingwuchu* 營務處) for an appropriate and detailed discussion in another day.”<sup>36</sup>

Problems piled upon one another. Although originally approved by the Provincial Governor, the fund request of two million *diao* 吊 encountered difficulties when reviewed by the Yongheng Official Money Bureau. In an official statement to Jilin Forestry Bureau, the head of the Money Bureau claimed that it had been ordered to give financial support to the Railway Company, Jilin’s Trade Port Company, the Military Bureau, and the Society of Autonomy, and had spent more than 2644,000 *taels*. Therefore, now it could not afford so many projects taking place in Jilin.<sup>37</sup> It was a common phenomenon in the late Qing Dynasty

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<sup>34</sup> “Jilin shengpi jiming haiguandao song chun’ao fengyi chuangan linye zhangcheng kaizhe qingshi” 吉林省批記名海關道宋春鰲奉議創辦林業章程開折請示, August 29<sup>th</sup>, 1907, Jilin General Government Office Archives, J001-33-3165.

<sup>35</sup> “Jinjiang fuyi chuangan quansheng linye jianming zhangcheng kaidan gongcheng xianjian” 謹將覆議創辦全省林業簡明章程開單恭呈憲鑒, August 23<sup>rd</sup>, 1907, Jilin General Government Office Archives, J001-33-3165.

<sup>36</sup> “Jilin shengpi jiming haiguan dao song chun’ao fengyi chuangan linye zhangcheng kaizhe qingshi” 吉林省批記名海關道宋春鰲奉議創辦林業章程開折請示, August 29<sup>th</sup>, 1907, Jilin General Government Office Archives, J001-33-3165.

<sup>37</sup> “Yongheng guantie ju jinbing” 永衡官帖局謹稟, November 25, 1907, the Jilin Archives, J001-33-1413.

that the new policies were implemented with insufficient financial resources. The situation mentioned in Yongheng Money Bureau's official's letter was not only representative but enduring, which laid the hidden risks for the future new-style official organizations. After several negotiations, the Yongheng Official Money Bureau finally promised to allocate half a million *diao* as start-up capital that enabled the Jilin Forestry Bureau's function.<sup>38</sup>

In the same year, the General Bureau of Forestry promulgated the Provincial Concise Statute on Forestry (*Chuangban quansheng linYE jianming zhangcheng* 創辦全省林業簡明章程) and re-planned the forestry practice in Jilin Province, including logger management, lumber shipment, and license fees, forest districts and conservation methods. According to the statute, Jilin's loggers were divided into two categories: official loggers and commercial loggers. The official loggers were those directly hired by the bureau to work in the designated mountains. Loggers with experiences and solid guarantees from local lumber firms were able to apply for the Forestry Bureau. The officials would review their applications and selected those they thought fit. As official loggers, the Forestry Bureau would fund and organize them to log in the official lumbering yards. The management of the lumbering yards was hierarchical. A logger head (*batou* 把頭) was in charge of the official loggers and received instructions from a chief foreman (*zonggongtou* 總工頭). Another forestry official (*linYE weiyuan* 林業委員) would supervise both the logger head and the chief foreman and be responsible for inspecting the timber qualities of the timber logs. All the timbers felled by the official loggers were supposed to be owned by the Jilin Forestry Bureau, and only the qualified logs would be transported to the official timber yards by the Songhua River. The lumbering yards under the Forestry Bureau were also open for commercial lumbering but requested certain procedure fulfillment. If the

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<sup>38</sup> “Yongheng guantie juwei shenbao shi” 永衡官帖局為申報事, November 11, 1907, Jilin General Government Office Archives, J001-33-1413.

commercial loggers planned to log in the official lumber yards, they should first report to the Forestry Bureau about the number of loggers they planned to bring in and the four boundaries of their preferred logging area. Upon approval, they needed to pay for a special logging license issued by the Forestry Bureau with their commercial logging information. After completing these procedures, the commercial loggers could enter the mountains to log. The commercial loggers (who were not hired by the Forestry Bureau) were free to have timber transaction with any buyers. The Forestry Bureau was a big customer to them.<sup>39</sup>

The lumber shipment and license fee were complicated matters. Due to the overlapping function between Jilin Forestry Bureau and the Tobacco, Alcohol, and Timber Taxation Bureau, the Forestry Bureau had to renegotiate and clarify their respective functions and power limits. As the taxes collected by the Taxation Bureau of Tobacco, Alcohol, and Timber were used to fund the provincial government of Jilin Province (the total amount of tax on tobacco, alcohol, and timber was 31,700 *taels*, including the administrative expenses of 8000 *taels*, the Jilin General's silvers of 4000 *taels*, the Vice-General's salary of 2000 *taels*, the Jilin Magistrate's silvers of 1000 *taels*, Hunchun' Vice-General's silvers of 1000 *taels*), it would be impossible to cancel them. Therefore, the Forestry Bureau could only increase profits by imposing new taxes of lumber shipment (*shanfen* 山分) and road fee (*lufei* 路費).<sup>40</sup> The Jilin Forestry Bureau announced in the statute: "To merchants, civilians and logger heads in Jilin province when you log and transport timber in the mountains, it was requested to pay the lumber shipment (*shanfen*) and road fee (*lufei*) to the nearest Forestry Bureau. When the

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<sup>39</sup> "Wei chushi chuangan quansheng linye zhangcheng bing yiqie banfa yang shangmin rending qige bing zunyou" 為出示創辦全省林業章程並壹切辦法仰商民人等其各凜遵由, November, 18, 1907, Jilin General Government Office Archives, J015-02-0001.

<sup>40</sup> "Weijiang xianding linye zhangcheng chaolu yifu yanjiu mushui you" 為將現定林業章程抄錄移覆煙酒木稅由, November 18, 1907, Jilin Provincial Forestry Bureau Archives, J015-02-0001.

timbers were transported out, it was still required to pay other taxes requested by the Tobacco, Alcohol, and Timber Taxation Bureau. Both payments were not relevant. The merchant and others should not misunderstand the tax payments and cause inconvenience.”<sup>41</sup> As a result, the merchants and labors engaged in the lumbering industry in Jilin Province had to pay more taxes. In this way, whether the new forestry policy in Jilin Province would bring benefits to the general public was still unknown, but the pressure of new taxes had become an established fact.<sup>42</sup>

Until the late Qing Dynasty, the forests of Jilin Province had experienced multiple demarcations, such as the tribute mountain divisions set by the Imperial Household Department, the private land allocations by the Bureau of Land Disposal, and the forest concessions requested by the China-Eastern Railway Company. Upon establishment, the Jilin Forestry Bureau took over the originally disordered forest and divided them into three new categories, namely, (1) the official mountains (*guanshan* 官山), (2) the civil mountains (*minshan* 民山) and (3) the forbidden mountains (*jinshan* 禁山) and put them under the Forestry Bureau’s centralized management. Logging was prohibited in the forbidden mountain areas. The forbidden mountain referred to the unopened tribute-producing mountains, bounded by the *Lafa* 拉法站 Station and the *Yiqisong* 義氣松 Station in the northeast. They included a large area of forests, “from *Yanwei* 燕尾 Valley to Small White Mountain Mountain in the north, and to *Zhangguangcai* Mountain in the east” and had been

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<sup>41</sup> “Dongsansheng zongdu xushichang jilin xunfu zhujiaobao zoubo yanjiushui bing muzhi shuikuan dongcun shumu zhe” 東三省總督徐世昌吉林巡撫朱家寶奏劃撥煙酒稅並木植稅款動存數目摺, *Zoushe zhengzhi guanbao* 奏設政治官報, Vol. 13 (Taipei: wenhai chubanshe, 1965), 152.

<sup>42</sup> “Wei chushi chuangan quansheng linye zhangcheng bing yiqie banfa yang shangmin rending qige zunbing you” 為出示創辦全省林業章程並壹切辦法仰商民人等其各凜遵由, November 18, 1907, Jilin Provincial Forestry Bureau Archives, J015-02-0001.

closed off by a member of the Land Disposal Committee in the 1870s.<sup>43</sup> Due to the Russian penetrations and the new opening-up policy, illegal forest extractions were rampant despite the bans. The Forestry Bureau sent officials to survey and map the forbidden mountains again and established new boundaries. In the same year of 1907, the Eight Banner system was abolished in Northeast China's civil reform, and so were the military administration and the tribute-collection government offices. Considering a large amount of banner people living in Jilin, the Qing government set up a Banner Office (*qiwuchu* 旗務處) to take care of the bannermen's social and political livelihoods. The old banner post stations were also under the management of the Banner Office and one of the post stations— *Tuituan* 退搏站 station — was appointed to govern the forbidden mountain areas.<sup>44</sup>

Second, the official mountains were the untitled forest areas (extracted from the old tribute mountains in the 1870s) north of the enclosed forbidden mountains. The Jilin Forestry Bureau set up eight check-posts (*fenka* 分卡) to collect lumber shipments (*shanfen* 山分) and stipulated the payments according to the lumber categories. For example, one *diao* 吊 of *zhongqian* 中錢 for each big lintel and lumber (*gaimu* 改木), one hundred *zhongqian* for each rafter and purlin, fifty for each chopped wood (*banzi* 板子), and eighty for each inch of board. Moreover, considering the various kinds of lumber produced in this province with different designs and colors, the JFB redefined the details of the extraction of lumber shipments to the actual sizes of lumbers. The official mountains were close to the China-Eastern Railway

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<sup>43</sup> “Linye zongju wei chaming tuibozhan mubatou yuefengxiang zai jinshan sikan hongsong chaban de chengwen ji jilin xingsheng” 林業總局為查明退搏站木把頭嶽鳳祥在禁山私砍紅松查辦的呈文及吉林行省的批文, June 5<sup>th</sup>, 1907, Jilin General Government Office Archives, J001-33-3369.

<sup>44</sup> “Jilin quansheng linye zongju wei paiyuan dao sihechuan dengchu suoyou jinshan jiangjie cehui lijie de zhawen” 吉林全省林業總局為派員到四合川等處所有禁山疆界測繪立界的劄文, January 9<sup>th</sup>, 1908, Jilin Provincial Forestry Bureau Archives, J015-02-0004.

forest concessions. As half of the forests were consumed by the China-Eastern Railway, Zhang Peng, the director of the JFB aimed to limit Russia's logging rights by ending its allies with the local timber merchants. He characterized Russia's lumber procurement through the Chinese timber merchants as the "Russian invasion plot" and stipulated that "no logging license should be issued to local merchants for the forested areas 12.5 kilometers (25 *huali* 華里) away from the railway, regardless of the official mountain and civil mountains."<sup>45</sup>

Third, for logging in the civil mountains, the forestland owners were allowed to cut down trees by themselves, but they should pay timber taxes according to the new forestry regulation. Moreover, if the landowners were unable to log trees, they could report to the Forestry Bureau within the first six months of 1908. The Forestry Bureau would organize the official loggers to log and eventually return thirty percent of the timber profits to the landowners. Meanwhile, in both official and civil mountains, those who harvested more than ten saplings would be punished, "the poor would work as loggers in the mountains for three months, and the rich would be requested a fine that should cover the value of the full growth trees."<sup>46</sup>

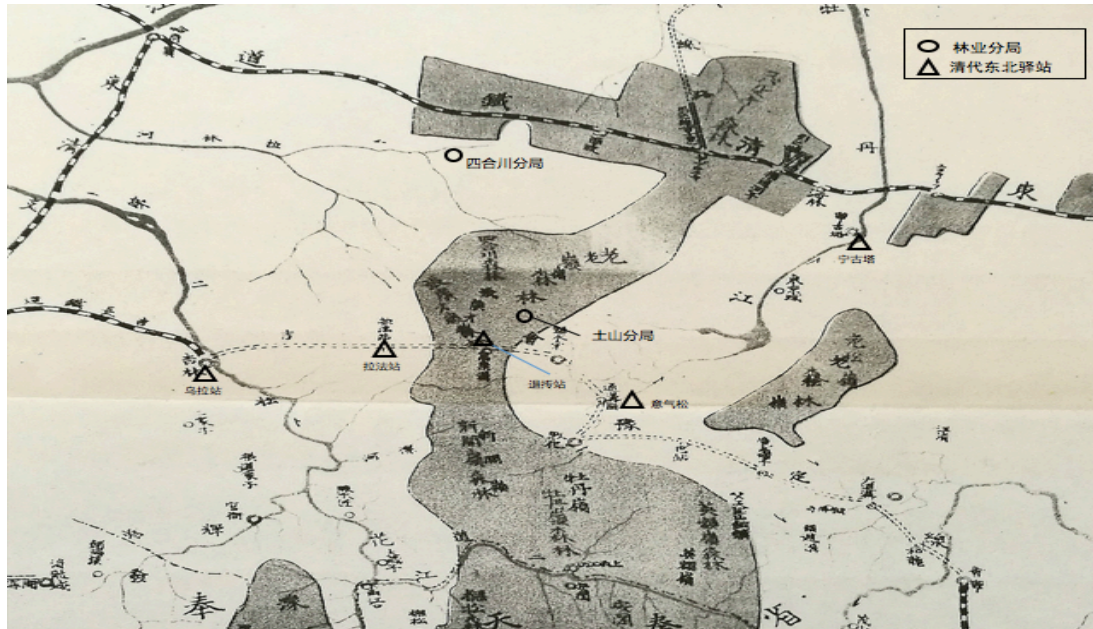
As far as forestry management was concerned, the JFB admitted and maintained the boundaries of the forbidden mountains. It not only aimed to increase the forest revenues but also tried to protect the livelihood source of the bannermen. At the same time, for the other mountains and forests, the Forestry Bureau divided them into two types and imposed a tax

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<sup>45</sup> "Jilin xingsheng wei linye zongju cheng jiang chongding choushou gexiang shanfen xishu de piwen" 吉林行省為林業總局呈將重訂抽收各項山分細數的批文, January 4<sup>th</sup>, 1908, Jilin General Government Office Archives, J001-33-4593.

<sup>46</sup> "Wei chushi chuangan quansheng linye zhangcheng bing yiqie banfa yang shangmin rending qige bing zunyou" 為出示創辦全省林業章程並壹切辦法仰商民人等其各凜遵由, October 18, 1907, Jilin Provincial Forestry Bureau Archives, J015-02-0001.

was on them. To a certain extent, the new forest practice prevented the abusive logging and secured the revenues, but the loggers and merchants would bear new burdens.<sup>47</sup>



Map 8: The Forests and the Forest Bureaus in Jilin Province

Source: *Manshū shinrin ryakuzu* 滿洲森林略圖 [A Sketch Map of the Manchurian Forests], [Ouyu Kkou Seizai mugen kōshi an'nai 鴨綠江製材無限公司案內 *A Guide to the Yalu River Wood Processing Company*], compiled by the Yalu River Wood Processing Unlimited Company 鴨綠江製材無限公司, 1926, Dandong Municipal Library, China.

The establishment of the official mountains (the official lumber yards) based on the tribute mountains had profound implications. Particularly, the seven-famous-mountains (*qijia mingshan* 七架名山) in the eastern part of Jilin City in Jilin Province were used to be subordinated to the Jilin Ula *Yamen* and produced tributes of honey, arrows, and pine nuts to the Manchu royal family. However, in 1907, they were turned into official lumber yards under the Forestry Bureau. Thus, the empowerment of the provincial forestry agencies in the domain of tribute mountains represented a reordering of the local space. Moreover, as only a

<sup>47</sup> “Jilin xingsheng wei linye juzhang zhangshoupeng qianfu ha’erbin, Tianjin diaocha linye sheju yunxiao de zhawen” 吉林省為林業局長張守鵬前赴哈爾濱、天津調查林業設局運銷的劄文, April 8, 1908, Jilin General Government Office Archives, J001-34-5479.

small portion of the forbidden mountains (located at the fourth and fifth valleys of the Changbai Mountains) were left to be managed by the bannermen, the banner people were deprived of old privileges, spaces, and interests revolving around the tribute mountains. Hence, the older worlds of the bannermen and new state agents overlapped, indicating a conflict of interests between the local bannermen and the forestry officials over the living space and timber resources.

### THE TIMBER BUSINESS OF JILIN FORESTRY BUREAU

In February 1908, the Forestry Bureau experienced an administrative adjustment that entailed a fund shortage. Song Chun'ao 宋春鰲, the founder, resigned from the Forestry Bureau for a new project of the Jilin-Changchun Railway constructions. He transferred his duties to the Jilin Quanye Official (*quanyedao* 勸業道, that supervised the provincial agriculture, industry, commerce, and transportation) and the director Zhang Peng. According to Song's design, the Jilin Quanye Official would supervise the bureau's operation, and Zhang Peng would handle the specific works. Subsequently, his request was approved by the Jilin Provincial governor, and the Jilin Quanye Official took over the JFB's official seal.<sup>48</sup> The internal adjustment was rather negative for the JFB. Although the JFB formulated formal rules at this time and its operation was gradually on the right track, it became more difficult for the JFB to obtain the exclusive funds through the official channels if it could not employ its seal freely. The Quanye Official supervised the whole Jilin province's commerce and industries while the Forestry Bureau was hardly its priority. Therefore, after a period of operation, the Forestry Bureau's weak capital problem exposed again.

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<sup>48</sup> “Jilin xingsheng wei linye zongjue zongli song chun'ao cheng jiang zongju guanfang yisong quanyedao jieguan de zhawen” 吉林行省為林業總局總理宋春鰲呈將總局關防移送勸業道接管的割批文, March 2<sup>nd</sup>, 1908, Jilin General Government Office Archives, J001-34-0201.

Because of the inaccurate market estimations, the limited provincial market, and the small-scale exports subjected to transportation conditions, the official logging of the Forestry Bureau encountered serious transportation and marketing problems. In North China, Tianjin was the main distribution center for timber transfers. Although the quality of the Jilin timber was well recognized by the Tianjin merchants, the market of Tianjin had long been dominated by the Yalu River timber. Moreover, the timber merchants in Shanghai, Jiangsu, and Zhejiang seldom noticed the Jilin timber. In June 1907, Mao Changsi 毛昌嗣, a member (*weiyuan* 委員) of the JFB, went to Shanghai to investigate the timber trade in Jiangsu and Zhejiang provinces. He said, “The forests of Jilin Province were dense, and the timbers produced were both plentiful and good. Limited by the local transporting conditions, no one in this province had ever shipped and sold timbers to the south, and no one in southern province had come to visit us because of the trade habits of the southern China’s timber merchants.”<sup>49</sup>

In order to expand the source of profits, Zhang Peng 張鵬, the director of the Forestry Bureau, who took office in April 1908, began to export timbers from Hunchun 琿春 in order to expand the market of the Jilin timber. His plan was to send people to purchase timbers in Hunchun and export them from Tumen River, through the Sea of Japan, to Tianjin, Jiangsu, Zhejiang, and Shanghai. However, this attempt suffered from multiple setbacks. At first, the ships employed arrived much later than the agreed date. Then when the ships were loaded with timbers, “rain poured, and the wind blew hard.” As a result, the Jilin timbers shipped out from Hunchun in June 1907 arrived in Tianjin a year later (in June 1908). The high freight cost led to a loss of business. Moreover, as the procedures in negotiating with Russia and Korea when entering the sea from the Tumen River were too complicated, the Jilin timber

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<sup>49</sup> “Jilin quansheng linye zongju wei paiyuan diaocha nanfang shengfne mushang shi de zhawen” 吉林全省林業總局為派員調查南方省份木商事的割文, November 13, 1907, Jilin Provincial Forestry Bureau Archives, J015-01-0002.

export plan came to a stop. According to Zhang Peng's observation, ever since the Boxer Incident, most of the timber imported from Tianjin Port had been purchased from Japan and the United States, and the timber transported to Tianjin from Northeast China was decreasing. Therefore, the Jilin timber's market could only be expanded within the three northeastern provinces.<sup>50</sup> Zhang Peng's focus then shifted to the internal market in Northeast China.

At that time, the Jilin timber's consumption market was mainly distributed in Harbin, Hulan 呼蘭 and Changchun 長春. Therefore, the Sihechuan Branch set up a lumber factory in Harbin, while the Tushan Branch transported timbers to Changchun for sale. Some of the timbers were also sent out through the Hongqi 紅旗 River mouth. In March 1909, Zhang Peng petitioned to the Quanye Official to make the Forestry Bureau as the sole supplier of timber for the official construction projects in Jilin Province. He said that "if all timbers produced by the Jilin province were sold by the Forestry Bureau, then the civilian's timber trades would be impacted."<sup>51</sup> In this way, the Forestry Bureau only supplied the government constructions and left room for the private timber transactions in the civil and commercial construction markets. The petition received approval by the industry.

The Jilin Forestry Bureau managed a variety of timbers. In terms of species, there were fruit pine (also known as Korean pine), Chinese fir pine (*shansong* 杉松), yellow pine, and miscellaneous wood (*zamu* 雜木); in terms of the uses, there were building materials (including rafters, purlins, beams, altered lumber, woodblocks, pillar feet), poles and sawed

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<sup>50</sup> "Jilin xingsheng wei linye zongju xiangbao zi kaiban qi shouzhi dicun gekuan ji xiancun muliao qianshu kenqing zouxiao de pi" 吉林行省為林業總局詳報自開辦起收支存抵各款及現存木料錢數懇請奏銷的批, December 7<sup>th</sup>, 1909, Jilin General Government Office Archives, J001-35-1714.

<sup>51</sup> "Linye zongju wei shougou shangmu bingsong jiazhi shumu qingce de xiangshen ji jilin xingsheng de pi" 林業總局為收購商木並送價值數目清冊的詳申及吉林行省的批, December 17, 1908, Jilin General Government Office Archives: J001-34-2644.

timbers. According to the “Inventory of Purchased Timbers” (*Shougou muzhi xishu qingce* 收購木植悉數清冊) in 1908, the timbers that the Forestry Bureau mainly supplied were the local official construction projects in Jilin and Fengtian Provinces. The buyers included Huaxing Company, the Confucius Temple Engineering Department (*Wenmiao gongchengchu* 文廟工程處), the Fengtian Silver Bureau, the Provincial Assembly, the Changchun Ground Force, the Official Kiln, the Electric Lamp Company, and the official artisans such as Craftsman Zhang, Liu Jingming, Kuisheng, and Yan Songchun, etc. In 1908, Jilin Forestry Bureau sold 3,645 electric poles, 6,696 sawed timbers 1,445 building logs.<sup>52</sup>

Moreover, as shown in Table 12, the category of each lumber product produced by the Jilin Forestry Bureau contrasted sharply with that of the Japan-produced manufacture wood goods, and thus revealed a fact of China’s very primary mechanization level in the forestry industry. For example, when Japan’s lumber exports of railroad ties, pulps, and matchsticks dominated China’s timber market in the early twentieth century, China’s first government-run forestry enterprise could only make primarily-processed timber products such as “crossbeam,” “lintel,” “altered lumber” that served the traditional housing constructions.

<b>Time</b>	<b>Buyers</b>	<b>Timber Varieties Sold</b>	<b>Unit: Log Numbers</b>
<b>1908</b>	Huaxing Company 华兴公司	Old crossbeam of Korean pine 果松旧大梁	448
		Old lintel of Korean Pine 果松旧二过梁	448
		Big altered lumber of Korean pine 果松旧大改木	7
		Small altered lumber of Korean pine 果松旧小改木	4
		Long strip of Korean pine 果松长条	164
		Big lintel of Chinese fir 杉松大过梁	2
		Second lintel of Chinese fir 杉松二过梁	16
		New crossbeam of Korean pine 果松新大梁	15

<sup>52</sup> “Jilin quanyedao wei yihou yiqie guangong suoxu muliao you linyeju guyong shiyi de xiangwen ji xingsheng zhawen” 吉林勸業道為以後壹切官工所需木料由林業總局購用事宜的詳文及行省劄文, March 19, 1909, Jilin Provincial Quanyedao Archives, J010-2-213.

Artisan Zhang 张工匠	New second lintel of Korean pine 果松顶上新二过梁	47
	New second lintel of Korean pine 果松新二过梁	3
	Three <i>zhang</i> lintel of Korean pine 三丈果松二过梁	18
Liu Jingming 刘景明	New and small altered lumber of Korean pine 果松新小改木	1
Kui Sheng 奎升	Second lintel of Korean pine 果松二过梁	1
	Long strip of Korean pine 果松长条	4
Jiangnan Sawmill 江南 锯木厂	Long strip of Korean pine 果松长条	25
Yan Songchun 颜松春	Old crossbeam of Korean pine 果松旧大梁	1
The Engineering Department of the Confucius Temple 文庙 工程处	Five <i>zhang</i> two <i>chi</i> square log of Korean pine 五丈二尺果松大木	11
	Four <i>zhang</i> three <i>chi</i> square log of Korean pine 四丈三尺果松大木	21
	New crossbeam of Korean pine 果松新大梁	17
	New second lintel of Korean pine 果松新二过梁	192
Fengtian Silver Bureau 奉天银元局	Two <i>zhang</i> nine <i>chi</i> electric poles of yellow pine 二丈九尺长黄花松电杆	900
Provincial Assembly 谘 议局	Two <i>zhang</i> nine <i>chi</i> electric poles of yellow pine 二丈九尺长黄花松电杆	12
Changchun Ground Army No. Three Camp 长春陆军第 三镇	Two <i>zhang</i> nine <i>chi</i> electric poles of yellow pine 二丈九尺长黄花松电杆	4
	Two <i>zhang</i> two <i>chi</i> electric poles of yellow pine 二丈二尺长黄花松电杆	1618
Official Kiln 官窑	Two <i>zhang</i> two <i>chi</i> electric poles of yellow pine 二丈二尺长黄花松电杆	6
The Electric Lamp Company 电 灯公司	Two <i>zhang</i> nine <i>chi</i> electric poles of yellow pine 二丈九尺长黄花松电杆	1105

Source: “Linye zongju wei shougou shangmu bingsong jiazhi shumu qingce de xiangshen ji jilin xingsheng depi” 林業總局為收購商木並送價值數目清冊的詳申及吉林行省的批, December 17, 1908, Jilin General Government Office Archives, J001-34-2644.

The Forestry Bureau procured timbers in two ways. The first was to employ the official loggers to cut, transport, and sell timbers directly in the official mountains. The second was to purchase the commercial timbers logged by commercial loggers. In the process of acquiring timbers, contradictions between the loggers and the bureau clerks occurred from time to time. Around January 1908, the JFB received a complaint of bribery. It was said that Zhao Ren 赵仁, the clerk that worked for the Tushan 土山 Branch Bureau official Deng Hongjun 邓鸿钧, had hinted the local logger heads to offer him money gifts when inspecting the mountain farm.

Instead of stopping Zhao, the official Deng Hongjun ordered each logger head to bear Deng's and Zhao's cost of food and beverage during their work. Deng refuted the complaint. According to Deng Hongjun's statement in the Administration of Justice of Jilin Province (*Jilin tifa*), his dietary expenses during the investigation of the mountain farm had been prepared by Sun Huaiqing 孙淮清 and as Sun had told him, that the money only covered his expenses and the rest of the clerks would be supplied by the logger heads. Later, when Deng Hongjun confronted Sun Huaiqing on this issue in a report, Deng did not receive any feedback. As for the specific expenditure listed by the logger heads, Deng Hongjun thought it was exaggerating and not true, and he had no idea about Zhao Ren's request for a money gift. Zhao Ren also refused to admit that he had asked the logger heads for money.<sup>53</sup>

Jurisprudentially speaking, when plaintiffs and defendants had different opinions and lacked specific personal and material evidence, the case should not be randomly decided. However, in consideration of its reputation, the Forestry Bureau petitioned to the Administration of Justice that they would not tolerate such behaviors and requested Sun Huaiqing to be jointly punished for his negligence of his supervisory duties.<sup>54</sup> This petition completely turned the case to the direction of punishing Deng Hongjun and others. In May 1908, the Jilin Administration of Justice made the final verdict. They expelled Deng Hongjun to his birthplace for his ignorance of Zhao Ren's private extortions and prohibited him from staying in Jilin. Although Zhao Ren was deemed not to have hinted logger heads for preparing

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<sup>53</sup> “Shu jilin tifa shisi tifa shi xiangming tushan fenju cha changyuan denghongjun deng xiexiang saorao yan duyuan xunming fenbie nijie shuce” 署吉林提法使司提法使詳明土山分局查廠員鄧鴻鈞等下鄉騷擾壹案督員訊明分別擬結書冊, Lunar January 14<sup>th</sup>, 1908, Jilin General Government Office Archives, J001-33-0281.

<sup>54</sup> “Jilin quansheng linye zongju wei tushan fenju cha changyuan zaixiang saorao zhuicha chewei shide yiwen” 吉林全省林業總局為土山分局查廠員在鄉騷擾追查撤委事的移文, February 25<sup>th</sup>, 1908, Jilin General Government Office Archives, J015-01-0023.

public funds, he was still punished the crime of flaunting (*zhaoyao* 招搖).<sup>55</sup> The Administration of Justice deprived Zhao's original duty of patrol that no longer could be restored. Later, as Zhao Ren was willing to pay a fine of ten *taels* of silver according to the regulations, the Administration of Justice canceled his original punishment and allocated the silvers to the Workhouse (*xiyisuo* 習藝所).<sup>56</sup>

In the above case, the JFB admitting the responsibility of the clerks reflected the particularity of this case. In fact, the key to the dispute was the contradiction between the loggers, logger heads, and the bureau clerks. In order to show the bureau's innocence, the Forestry Bureau instead became the opponent of its own clerks, which was thought-provoking. On the basis of the fact that the forestry bureau was short of funds, the statement provided by Deng hongjun that Sun Huaiqing told him that the clerks would be accommodated by logger heads was probably not untrue. In January of that year, the JFB borrowed one million *yuan* from the Official Money Bureau again on the grounds that “the budget was tight for winter logging in Sihechuan and Tushan.” This showed that the Forestry Bureau did have a shortage of money. However, after the judgment of this case, the relevant “responsible person” (that was Sun Huaiqing) was punished, and the economic contradiction between the loggers and the Forestry Bureau was temporarily concealed. Since then, with the support of the lumber shipments, the operation of the JFB had been quite successful, and even some profits could be allocated to other industries in the province.

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<sup>55</sup> “Shu jilin tifa shisi tifashi xiangming tushan fenju cha changyuan denghongjun deng xiaxiaing saorao yian duyuan xunming fenbie nijie shuce” 署吉林提法使司提法使詳明土山分局查廠員鄧鴻鈞等下鄉騷擾壹案督員訊明分別擬結書冊, Lunar January 14<sup>th</sup>, Jilin General Government Office Archives, J001-33-0281.

<sup>56</sup> “Shu jilin tifa shisi tifashi wei shenfu shi” 署吉林提法使司提法使為申覆事, February 25<sup>th</sup>, 1908, Jilin Provincial Forestry Bureau Archives, J015-01-0023.

## THE FLOODS AND DISPUTES

With the JFB operating on the right track, a series of problems also arose. One of the biggest problems facing the Forestry Bureau remained the difficulty of timber transportation and marketing. In addition to the poor transport conditions, there was a reason for the unsalability of timber harvested. That was the inexperience in hiring official loggers. Due to the bureau's initial establishment, the hired official loggers were mostly sparse in logging and transporting, which led to an increase of the cost of official logging. The market price of the official timber (timbers logged by bureau's official loggers) was not only higher than that of foreign timbers but also higher than that of commercial timbers (timbers logged by civilians or commercial loggers) in Jilin, which deepened the crisis of its sales.

However, under the circumstances, in order to save the official capital and relieve the pressure of civilian loggers' timber storages, the JFB bought a large number of commercial timbers. The number of timbers purchased by the bureau in 1908 reached 19,745 logs of various sizes, including beams, altered lumbers, long strips, rafters, purlins, and electric poles. In addition, there were more than 200 pieces of boards—all of the above cost 284,568 *wen* 文 of Jilin coins. The bureau official wrote: “considering the overall timber sizes and material qualities, compared with self-cutting and transportation, the timbers purchased were still to our profit. To the loggers, it did not do harm to them but relieve their financial shortages. Nothing was as good as commercial timber purchase that benefited both the government and the people. If the timber price could rise slightly next spring, the remaining profits could be gained for sure.”<sup>57</sup> However, the timber market would not necessarily develop towards the

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<sup>57</sup> “Linye zongju wei zunchi shougou shangmu bing yongguo jiazhi shumu yuanyou” 林業總局詳為遵飭收購商木並用過價值數目緣由, December 23, 1908, Jilin General Government Office Archives, J001-34-2644.

official expectations. It was inevitable for the JFB to lose money without considering the market conditions.

In May 1908 a violent storm blew down a large stand of logs reserved along the Songhua River. The logs were scattering on the stream. This scene reflected a second difficulty facing the Forestry Bureau, and the logs washed away by summer floods and the entailed disputes over the redemption of floating logs. Inland waterway transportation was the main mode of timber transportation in Jilin Province, while flood and freezing of rivers were the main obstacles to timber transportation. From 1908 to 1911 in every summer, floods carried away the timber rafts, resulting in disputes and negotiations between loggers and banner people. Since the beginning of the New Policies, banner people had been forced to earn their own livelihoods, so unemployed bannermen were seen everywhere. Many of them occupied the floating rafts of the Forestry Bureau and sawed them into boards as their own. According to the Forestry Bureau's report, "villagers who sawed, hid, controlled, and refused to return the timber logs could not be enumerated." Even after the Forestry Bureau's military guards tracked down the lost timbers, the banner people would fight against the guards violently for keeping the timbers. Given their banner status, the Forestry Bureau had no choice in most cases. In June 1908, the Forestry Bureau encountered the first Songhua River flood since its establishment. The floods washed away 55,900 logs and 21,000 boards stored along the river. A large number of logs drifted down the river and ended up in the farmlands, which were taken away by the banner people as their own. In the process of seeking and redeeming the floating logs, officials of the Forestry Bureau had repeatedly clashed with the banner and civil people. For example, Wang Shuangxi 王双喜, a man of Bordered-Blue-Banner, beat up the military guards of the Forestry Bureau with wooden sticks for the floating logs he stored in June 1908.<sup>58</sup> The fight shocked the

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<sup>58</sup> "Jilin quansheng linye zongju wei qimin bazhan muzhi, kanshang batou dengqing de xiangwen" 吉林全省林業總局為旗

bureau officials, and they sent Wang to the court. However, judicial trial changed when it came to banner people. For example, when the civil people occupied the official timbers and got caught, they must pay the price of the logs when sent to the court; whereas bannermen could only be judged by the local banner office or Ula Military Government Office (*wula jiling yamen* 烏拉冀領衙門) that tended to favor them because of their banner identity. As a result, Wang was relieved without any payment requests to the bureau. Finally, although the Forestry Bureau retrieved 28,700 logs and 6,400 boards through redemption, at the expense of more than 171,400 *yuan*, the total loss reached 997,607 *diao* and 884 *yuan*.<sup>59</sup>

In July 1909, the Songhua River Basin was hit by another rainstorm, and the river water rose sharply, the logs and boards accumulated by the Forestry Bureau along the river were again carried away by the floods. Moreover, houses and appliances of the sawmill and the Official Kiln under the Forestry Bureau were also damaged. According to the official statistics after the floods, the General Forestry Bureau, together with the two Branch Bureaus had lost more than 27,200 large-sized timber logs, including the losses of the prime cost of timbers and the sawmill houses and appliances, the total loss reached as many as 707,045,004 *yuan* (in Jilin coins).” The Official Kiln established by the bureau also collapsed due to overflow of the floods, which cost a total of 743,007,221 *yuan*.<sup>60</sup> The General Forestry Bureau’s capital was greatly undermined. Shortly thereafter, the price of timber roared. However, the Forestry Bureau was in a situation where it had no timbers to sell. When the Forestry Bureau sent

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民霸占木植、砍傷把頭等情的詳文， June 30<sup>th</sup>, 1909, Jilin Provincial Forestry Bureau Archives, J015-02-0028.

<sup>59</sup> “Jilin xingsheng wei linye zongju xiangbao zi kaiban qi shouzhi cundi gekuan ji xiancun muzhi qianshu kenqing zouxiao de pi” 吉林省為林業總局詳報自開辦起收支存抵各款及現存木植錢數懇請奏銷的批, December 7<sup>th</sup>, 1909, Jilin General Government Office Archives, J001-35-1714.

<sup>60</sup> Qingchao xu wenxian tongkao 清朝續文獻通考, Vol. 382, “shiye wu,” Zheng Yi 鄭毅ed., Dongbei nongye jingji shiliao jicheng 東北農業經濟史料集成, Vol.2 (Changchun: jilin wenshi chubanshe,2005), 307.

people to retrieve the logs, the staffs found that most of them the large size and good materials were selected, sawn, and sold by the residents and powerful families along the river.<sup>61</sup> As a result, most of the logs retrieved by the Bureau were second-class logs. At the same time, the banner leader of the area where the lost timbers were found, filed a lawsuit with the Provincial Banner Office against the Forestry Bureau, claiming that the “victims” displaced by floods along the way were in great need of borrowing and selling logs to “help their clothes and food,” and that if the timber logs were allowed to be recovered by the Forestry Bureau, the people would “cry for hunger and suffer from cold.” Therefore, the Banner Office asked for a good package for the log occupiers.<sup>62</sup> Under the special circumstance, the Forestry Bureau had to redeem the timbers at a high price, but after the redemption of the timbers, the timber price dropped again due to the cold weather and the construction shutdown. The Forestry Bureau experienced severe financial shortages.

In September 1911, on the eve of the upheaval of the Qing Dynasty, the Jilin Forestry Bureau applied to the Jilin Provincial government for a closedown. Cai Zunian 蔡祖年, the then director of the bureau, submitted the final report and returned the seal to Quanye Official.<sup>63</sup> So far, this Jilin Forestry Bureau, with high expectations at the beginning of its business, finally ended its journey.

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<sup>61</sup> “Linye zongju wei cebao zi guangxu sanshi sannian jiuyue kaiban qizhi bennian shiyue dizhi shouzhi cundi gekuan bing guji xiancun muliao qianshu kenqing zouxiao shiyou” 林業總局為冊報自光緒三十三年九月開辦起至本年十月底止收支存抵各款並估計現存木料錢數懇請奏銷事由, January 13<sup>th</sup>, 1910, Jilin General Government Office Archives, J001-35-1714.

<sup>62</sup> “Quanye daoyi wula suoxiang linyeju chazhao muzhi jiduan raomin qing chushi miancha yi’an fengei piying wuyong yiyou” 勸業道移烏拉所詳林業局查找木植藉端擾民請出示免查壹案奉此批應毋庸議由, February 3<sup>th</sup>, 1910, Jilin Provincial Banner Institution Archives, J049-05-0226

<sup>63</sup> “Jilin linye zongju weibao cheju tingwen riqi de chengwen ji jilin xingsheng piwen” 吉林林業總局為報撤局停文日期的呈文及吉林行省批文, September 13<sup>th</sup>, 1911, Jilin General Government Office Archives, J001-37-0174.

From the case of Jilin Provincial Forestry Administration, we can easily find that the transformation from forestry knowledge to institutions was an irreversible process. As a subsidiary of agriculture from the perspective of traditional knowledge, forests began to become a major economic and political issue in modern times. Especially in Northeast China, in a space where nearly half of the land was woodland, the institutional heritage left by the Qing Dynasty, such as tribute mountains, was taken over by a new state institution, such as the Forestry Bureau. In the process of handover, there were contention and dispute between different dependent groups for living space and material resources under the new and old systems. The development process of the General Bureau of Forestry of Jilin Province in the late Qing Dynasty fully showed the convergence of various contradictions and the complex encountering of the New Policies in the local areas in the late Qing Dynasty.

#### CONCLUDING REMARKS

In joining the Russian and Japanese powers in establishing control over forests resources around the world, the Qing government widened their roles in the transformation of forest management. Before and after the 1895 Sino-Japanese war, due to the transition of the current political situation and the incoming of Western forestry knowledge, the Chinese elites' concepts of forestry experienced significant transition. The new ideas of forestry, together with the indigenous forest practices, contributed to the transition from banner forestry to civil forestry.

The establishment of the Jilin Provincial Forestry Bureau in 1907 was a milestone in the history of Northeast China's forests exploitation and utilization. It marked that the Qing government began to consciously build a modern management mechanism of natural resources and resist the economic invasions of Japan and Russia. However, the Jilin Forestry Bureau coincided with the Qing's toughest financial crisis and had to face the problems of a

funding shortage. What was worse, in order to increase the timber revenues, the Jilin Provincial Forestry Bureau could do nothing but to scramble the profits with the local communities, thus exacerbating the conflicts and contradictions of ethnicity and resources. It ended up in closure even before the revolution of 1911.

The forestry practice in Northeast China in the Late Qing did not disappear after 1911. Many of the ideas and practices in the Qing formed had a profound impact on the development of forestry in China since then. During the late nineteenth century and the early twentieth century, the exploitation and utilization of forests in Northeast China were also one of the intersections of many social contradictions. The relationship between China and the foreign powers, central and local governments, society and environment, Manchu and Han people, ultimately affected the development trajectory of forestry in Northeast China. Although the operation of Jilin Forestry Bureau ended in 1911, from the perspective of the New Policies, it was not complete failure. The rules it set and the business it started continued to affect the development of forestry in the Republic of China and became a new beginning.

## Chapter 4. Securing the Borderland: State Forestry Bureaucracy in Republican Northeast China

### INTRODUCTION

This chapter examines the formation and the implication of the Chinese state forestry, established by the Beiyang government from 1912-1930. The origins of China's state forest system can be traced to China's first regional forest code, the "State Forest Allocation regulations in Three Eastern Provinces" (*Dongsansheng guoyoulin fafang guize* 東三省國有林發放規則), which took effect in 1912, the same year when the new Beiyang government replaced the Qing court and underpinned management policies for the next decades. A new generation of government technocrats proposed to control the frontier forests by enacting new state forest regulations and by destabilizing the private property legacies in the land. By exerting territorial sovereignty over the ancient woodlands in Northeast China, the state forest tenure and the derivative "provincial forest zone" (*shengyoulin* 省有林) served as a means of border defense strategy but also invoked a series of inter-bureaucratic conflicts. This chapter examines not only the practice of state forest allocations but also the impact financial/legal tussles for the forests had upon local governance structures. The negotiations, both collaborative and antagonistic, between the Beijing government, provincial forestry agencies, and local households, contributed to a state forest property regime that created new systems of meanings and space.

### THREE EASTERN PROVINCE'S FORESTRY BUREAU

In 1912, the Beiyang government established the Ministry of Agriculture and Forestry (*nonglinbu* 農林部, referred to as MAF) to assess and manage the forests in China. Zhou Ziqi 周自齊, the MAF chief, explained his grave concerns about the massive deforestation

triggered by uncontrolled logging and the international disputes entailed by local forest transactions in northeastern China. In a letter to Yuan Shikai, he attributed both the damages and conflicts to the central government's long-term neglect over China's most considerable proportions of the untitled forest wilderness. "The state had no time to take the region's forests into consideration, while the local officials only levied taxes without proper regulations." He wrote, "as a result, both the domestic and foreign merchants butchered trees and abandoned the forest ruins freely, until the wildfires devoured hundreds of miles of forests and turned them into ashes. Not to mention those in collusion with foreigners illegally purchased forestland and thereby engendered international conflicts... Considering the number of local timbers used for Russia's China Eastern Railway and other Siberia railway constructions, for Japan's South Manchuria Railway and the Andong-Fengtian railway buildings, as well as those had fueled the steamships sailing on the Songhua River and the Amur River... we would soon be treeless!"<sup>1</sup> [而天然森林應歸國有者實以東三省為最多，蓋三省地廣人稀居民大半客籍遷徙無常，山林所在向無業主，國家既未暇兼顧，地方官但知征稅款，不加取締以致華洋各商任意濫伐，毀棄滋多，野火延燒，動逾百裏，甚至勾串外人影占盜賣，往往以箇人交涉釀成國際問題，種種弊端...加以日之南滿、安奉鐵路，俄之西貝利亞中東海濱省各鐵路及松花黑龍兩江輪舶之用材燃料取給於我者，歲又不知凡幾，愈砍愈少，濯濯立待] In order to solve the crisis, Zhou proposed to centralize the forest management in northeastern China by establishing a highly organized model of administration, a Northeastern China's Forestry Bureau under the Ministry of Agriculture and Commerce (*bushe linwuju* 部設林務局) that oversaw the regional forests.

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<sup>1</sup> "Zhou Ziqing geida zongtong yuancheng" 周自齊給大總統原呈, in "Fengtian xingsheng gongshu wei nonglin bu zishe dongsansheng linzheng jushi" 奉天行省公署為農林部咨設東三省林政局事, December 1913, Liaoning Provincial Archives, JC010-01-004548.

In the same year, the concept of “state forest” (*guoyoulin* 國有林) was put into practice as a way to regulate the colonial penetrations into the northeastern forests. The Ministry of Agriculture and Forestry (MAF) issued “the Rules for the Allocation of State Forests in Three Eastern Provinces” (*dongsansheng guoyoulin fafang guize* 東三省國有林發放規則), authorizing the forestry agency to designate the untitled wilderness and native woodlands in the northeastern frontier into what was called “state forests.” As defined by the rules, “state forests” (*guoyoulin*) were native woodlands and untitled wilderness that could only be owned by the state defined as the central, provincial or prefectural governments. Meanwhile, the rules limited the ownership, management, and allocation of state forest to timber harvesting only.<sup>2</sup> Two things were noteworthy about this 1912 state forest clause. First, the creation of “state forest” had a Northeast China origin. In other words, the concept of “state forest” primarily was compatible with the natural and political landscapes of northeastern China. Second, the perception of *lin* (林 forest) was explained in a narrow sense, as the rules confined the “state forest” to mere timbers (*mu*). Nothing had been said about the land that the forest grew on, the non-timber products that the forest produced, and the coals that lay beneath the forestland. This ambiguity left room for the later disputes and contestations. Thus until 1912, forest management was mostly considered as land harvest, and the interest in the forest was constructed around the rights and ownership associated with the land. However, with the emergence of the concept of the state forest and its endorsement by the Forest Works Bureau and the provincial government, the focus of forest management shifted from land harvesting to the management of timbers.

Empowered by the state forest code, the Republican Jilin Forest Works Bureau (*Jilin linwuju* 吉林林務局) and its branch in Harbin (*Harbin linwu fenju* 哈爾濱林務分局) directly

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<sup>2</sup> Chenrong 陈嵘, *Lidai senlin shilue ji minguo linzheng shiliao* 歷代森林史略及民国林政史料, pp.114-115.

under the MAF were soon established. Rebranded as the “Forest Works Bureau of Three Eastern Provinces” (*Dongsansheng linwu zongju* 東三省林務總局) in the last month of 1912, it was expected to exert a unified control and management over the forests in Fengtian, Jilin, and Heilongjiang provinces, on behalf of Beijing. Hu Zongying 胡宗瀛 was appointed by the MAF to serve as the bureau director. In 1913, the MAF was reorganized as the Ministry of Agriculture and Commerce (*nongshangbu*, MAC). The name change where “commerce” replaced “forestry” indicated the growing role of business and industry and reflected what the officials and elites truly valued in forest management: revenue extraction through state forest tenure registration.

#### CENTRAL-LOCAL CONFLICT: STATE FOREST INCOME

Forest tenures were “property right arrangements related to forest resources.”<sup>3</sup> The reporting-and-contracting of state forest regions (*baoling linqu* 報領林區) by individuals, entrepreneurs, and villages was a novel phenomenon to the local people in Northeast China. As a forestry official from the Fengtian Forest Works Bureau noted, “Only after the Forest Law and the Rules For the Allocation of State Forests in the Three Eastern Provinces had been promulgated successively, the local folks had, for the first time, known about state forest registration.”<sup>4</sup> (自森林法及东三省国有林发放规则先后颁布，迭经宣示，民间始知有报领林区之说)As shown in the data, the Fengtian residents were not as active in claiming state

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<sup>3</sup> Shashi Kant, “Global Trends in Ownership and Tenure of Forest Resources and Timber Pricing,” *Forestry Chronicle* (3) 2009, 5.

<sup>4</sup> Fengtian shengzhang gongshu wei shiye ting cheng qingli guoyou lin jianzhang zhanxian sangeyue shi 奉天省長公署為實業廳呈清理國有林簡章展現三個月事, 1919, Liaoning Provincial Archives, JC010-01-7789.

forests as those in Jilin and Heilongjiang. While Fengtian had only nine records of state forest registrations from 1912 to 1915, the number was 155 in Jilin and 72 in Heilongjiang.<sup>5</sup>

Several forestry policies implemented from 1912 to 1919 established the statutory framework for the state forest tenure arrangement. In the first stage from 1912 to 1916, the critical statute governing forest tenures in Fengtian was the “Rules for the Allocation of State Forests in Three Eastern Provinces.” The rules recognized previous foreign investments in the northeastern forest, such as the Chinese Eastern Railway project and the Sino-Japanese logging concession along the Yalu River. However, it limited foreign concessions to previous treaties and designated the remaining forested area as the “state forest region.” This rule framed the agreement terms under which state forests could be issued to Chinese citizens interested in logging. The rule also brought about new fees. For instance, it introduced a survey fee, a license fee for harvesting timber, a yearly license examination fee, a deposit, and transfer fee. In 1914 and 1915, the MAC enacted China’s first Forest Law and its complementary provision. Both clauses recognized the state forest tenure and entitled the local government to nationalize either private or public forests that were significant to state forest management into “state forest” with reasonable compensations.<sup>6</sup>

State forest tenure took the form of forest license (*linzhao* 林照) that provided the contract holder with specific rights to use a specific stand (word choice) of state forests over a specific period of time in exchange for meeting government requirements such as afforestation obligations, the payment of mountain rent (*shanfen* 山分), registration fees, (*zhaofei* 照費) and a timber tax. The procedure of state forest tenure registration contained four steps. First, the claimant reported to the forest works bureau and requested a professional forestry survey. Second, at the request, a forestry specialist would be sent to do a field

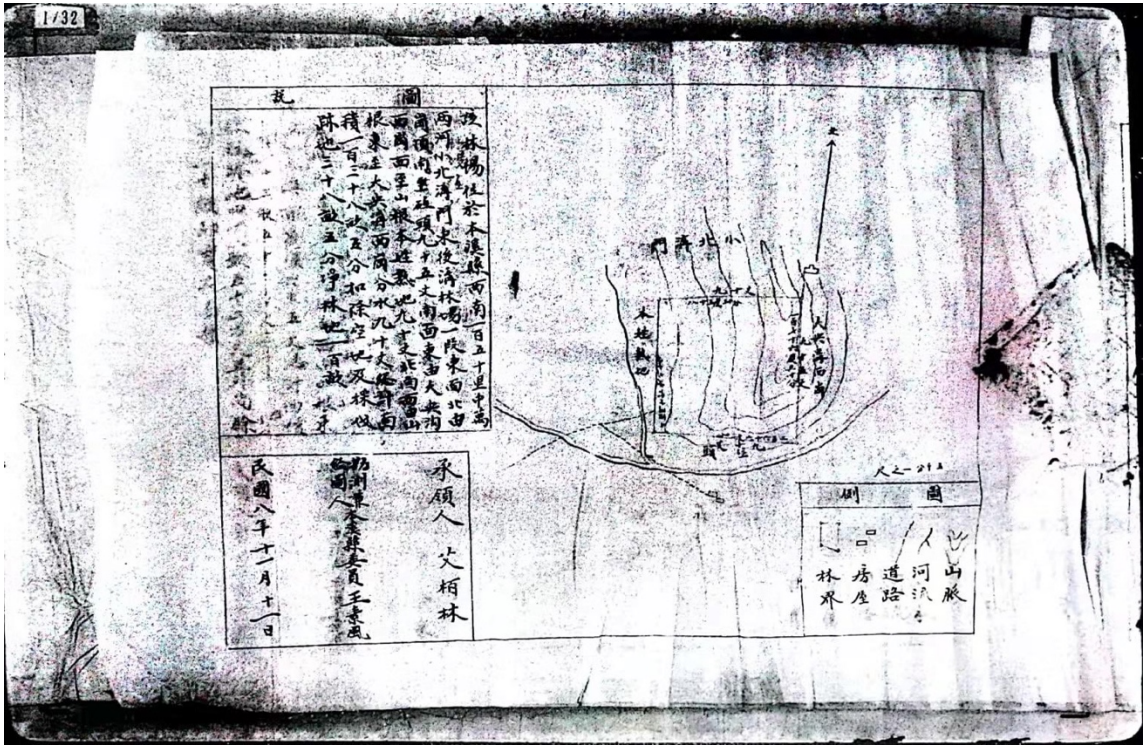
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<sup>5</sup> Chenrong 陈嵘, *Lidai senlin shilue ji minguo linzheng shiliao* 歷代森林史略及民国林政史料, 116-117.

<sup>6</sup> *Ibid.*, 120.

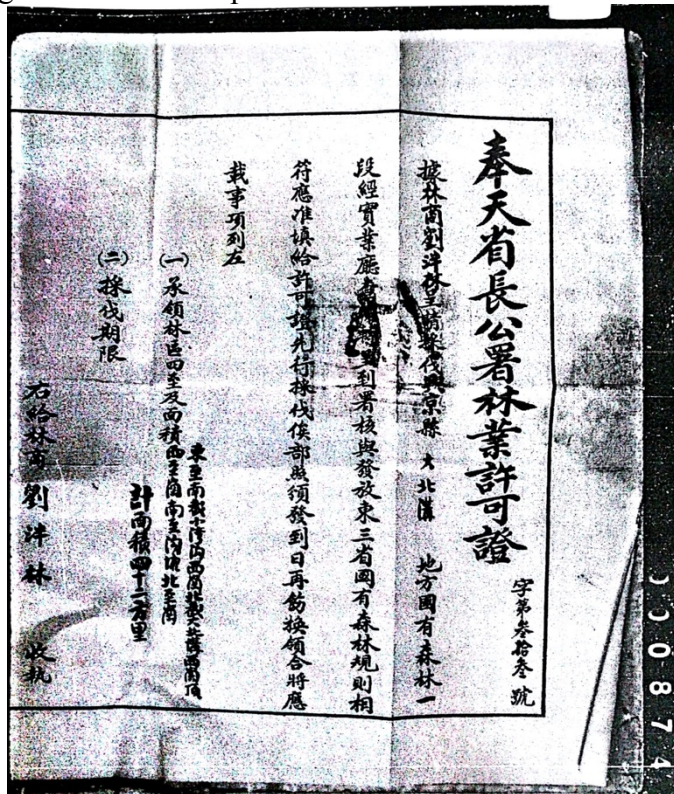
investigation on the forestland that the claimant appointed, with respect to the previous land disputes revolving around this particular forest region, and the natural features, such as tree species, land size, and timber storage. Further, the claimant was required to prepare three documents: a testimony (*ganjie* 甘結) of full land ownership from either the *bao* leader, *jia* leader (*jiazhang* 甲長), hundred-family leader (*baijiazhang* 百家長) or ten-family leader (*shijiazhang* 什家長), a joint-name guarantee (*baojie* 保結) from three reliable local firms, and a capital warrant (*ziben pingdan* 資本憑單), whose quantity varied regarding the size of the state forestland one claimed. Fourth, after the field forestry investigation, the forestry specialist would submit a full report to the forest works bureau (and the industry department) with ten kinds of information and a clear map (see map 1), delimiting the four boundaries of the forestland. Finally, there was a two-week-to-one-month review period for the state forest lease. Once the Industry Department approved the report and application, the claimant would receive a five-year state forest license (*linzhao*) (See Image 1). The license included a 5-year minimum lease; (2) four boundaries of the forestland; (3) only timber harvesting activities to timber, and (4) an un-transferable license to third parties. The license term could be extended twice. During the lease period, the claimant had to undertake five kinds of fees: mountain rents; the registration fee; the license renewal fee; and state forest management fee which charged every year for timber harvesting, and timber tax.

#### Map 9: An Example of the State Forest Map in a Forest Survey Report



Sources: "Liaoningsheng zhengfu wei nongkuangting chengbao donglu gexian senlin qingxing shi," 遼寧省政府為農礦廳呈報東路各縣森林情形事, 1929, Liaoning Provincial Archives, JC010-01-004560..

Figure 11: An Example of the State Forest License



Sources: “Fengtian shengzhang gongshu wei liupanlin baoling xingjing dabeigou senlinshi,” 奉天省長公署為劉泮林報領興京大北溝森林事, 1923, Liaoning Provincial Archives, JC0101-01-4596.

State forest allocation and logging proved to be a profitable business. In northeastern China, forests generated three kinds of revenues, namely: timber tax (*mushui* 木稅), lumber shipment (*shanfen* 山分), and logging license fee (*zhaofei* 照費). The timber tax collection dated back to the year of 1878 in the late Qing, while lumber shipment and logging license fee were new charges requested from those who contracted state forests. As Zhou Ziqi has stated, “charges on lumber shipment and license went hand in hand with state forest allocation projects.” A respective eight percent of the timber market price was charged on every log the merchants contracted. Thus, the net revenues by contracting out the state stumpage reached high. Since the forests were state-owned, the income generated by state forest allocation and tree logging on state lands were supposed to go to the state’s coffer, which meant, the MAF, led by Zhou Ziqi.

With more revenues made by state forest allocations, how to share the new income turned to be a pointed issue. The forest income distribution scheme generated several rounds of negotiations between the central government, represented by the MAC (Ministry of Agriculture and Commerce) chief Zhou Ziqi and the local governments, represented by tough heads of the provincial finance departments, especially Wang Yongjiang 王永江 from Fengtian. Both Zhou Ziqi and Wang Yongjiang insisted on the principle of “sustaining forest management by forest income in northeastern China” [三省森林之收入酌充林政之支絀].<sup>7</sup> However, their ways of interpreting the “forest income for forest management” principle bifurcated. For instance, Zhou Ziqi’s distribution plan for forest income was to have the lumber shipment and logging license fee supplement the ministry’s coffer, while the

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<sup>7</sup> “Fengtian xingsheng gongshu wei nonglin bu zishe dongsansheng linzheng jushi” 奉天行省公署為农林部咨设东三省林政局事, December 1913, Liaoning Provincial Archives, JC010-01-004548.

provincial governments enjoy the timber tax. Moreover, he argued that the three provinces should pay for the operation cost of the forestry bureau by quotas. His reason lied in that “although the bureau was specially set up by the central government, it served the local interests.” [且該局雖由中央特設，而實際則仍為地方辦事] Therefore, according to his budget, the Forest Works Bureau of Three Eastern Provinces should receive a yearly-payment of 12,000 *yuan* from Heilongjiang province and 20,000 *yuan* respectively from Jilin and Fengtian provinces, which added up to 52,000 *yuan*/year, as the forestry management funds. In other words, despite that the Forest Works Bureau was a top-down administrative organ directly under the central government, it was financially supported by the bottom-up fund from provincial coffers.

The provincial governments were indeed unsatisfied with the apportioned charges and questioned the status of the forestry bureau. The head of Jilin Financial Department agreed to compensate the forestry fund on condition that the Forestry Bureau changed into a joint enterprise run by the Ministry and the provinces (*busheng heban* 部省合辦), rather than an attached institution to the central government; The more intense query came from Wang Yongjiang 王永江, the head of Fengtian’s provincial financial department. He complained about the opacity in the actual amount of the forest income received by the MAC and proposed to replace the yearly-payment mode with a reimburse mode if the apportioned charges were to continue. Further, he warned the MAC in his petition that “Fengtian’s finance was on its bones and was not likely to last long,” a “fundamental remedy” that he introduced was to push the ministry to use the forest income generated by state forest allocations [山林票費項下按年酌撥] to fund the China’s forest management, instead of assigning apportioned charges to the local governments, a different explanation of “forest income for forest management” principle.

Although in the end, the three provinces still paid for the operation of the Forest Works Bureau of Three Eastern Provinces in smaller quotas, they challenged the ministry, from time to time, by opposing the forestry bureau's expansion through strategies of inclusion and abolition. The Three Eastern Province Forestry Bureau headquartered in Jilin. In order to better control the vast forestland and opened more revenue source, the branch bureaus soon found their ways into Fengtian and Heilongjiang. In March and October in 1914, three branch bureaus were built in Heilongjiang, respectively, the northeastern branch (*dongbei fenju* 東北分局) in Tieli 鐵驪 County, the southeastern branch (*dongnan fenju* 東南分局) in Tonghe 通河 County, and the northern branch (*beilu fenju* 北路分局) in Huma 呼瑪 County. Wang Shushen 王樹聲 and Tao Bingran 陶炳然 served as the superintendents. The expansion of the three new branches were both beneficial and strategic, in terms of obtaining timber resources and establishing local control. However, the branch bureaus survived no more than two years. As the forest management fees turned out to be a heavy burden to the provincial governor of Heilongjiang, who recurrently faced the issue of financial strains, the governor initiated a reform by abolishing the forestry branch bureaus in September 1915. On top of that, he invoked the third principle of the Forestry Law, the so-called delegation-ism (*weituo zhuyi* 委託主義) and delegated the forestry management duties to other existing bureaus. According to the principle, under certain circumstances, with the central government authorization, the Heilongjiang provincial governor (*xun'anshi* 巡按使) was able to take over the duties of the forestry bureau and improve as well as rectify the provincial forestry management. Therefore, the governor designated the responsibility of forest reservation and allocation to the Administrative Bureau (*shezhiju* 設治局) of each county and have the Collection Bureaus (*zhengshouju* 征收局) take care of lumber shipment (*shanfen*) and individual tax (*juan* 捐)

collections that supplemented the provincial military and administrative spending.<sup>8</sup> The head of each Prefecture was also requested to participate in supervising the overall forestry management in each county.

Same abolition story happened in Fengtian, where Wang Yongjiang proposed to abolish the Andong branch office (*Andong banshichu* 安東辦事處) and the Benxi branch office (*Benxi banshichu* 本溪辦事處), in order to save more provincial funding. Both branch offices were extensions of the Fengtian Forest Works Bureau, established in July 1914. Lijun 力鈞, who served the MAC as a counselor, was appointed as the first director. Wang gave compelling reasons for the abolitions, such as the un-necessity to have a branch within a short distance towards the Fengtian capital and the uselessness of an Andong branch due to the very independent system dealing with the Yalu River Logging Company's taxes. Finally, according to his calculation, the dissolving of the two branches would save up to 10,000 silver dollars (*dayang*) a year. Consequently, the second director, Wu Weixun 吳維勳, abolished the two branches. The dramatic abolition of the forestry branch bureaus reflected the deep-rooted conflicts between the Beijing view and local view regarding forest management. On the one hand, both the provincial and central governments quested for revenues, especially the big cake from the forest extractions; on the other hand, since the larger share of the forest income were requested by the central government, the local government experienced more funding constraints. When the expenses to sustain the administrative operations outweighed the shared of the forest revenues the local government had gained, the local governors had to resort to the strategies of both inclusion (as in Heilongjiang) and abolition (as in Fengtian) for payment balances.

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<sup>8</sup> “Guanyu caiche linwuju jiaoge xianju banli shixiang” 關於裁撤林務局交各縣局辦理事項, Heilongjiang Provincial Archives, 62-3-1413

## CENTRAL FORESTRY DEPARTMENT

Changes occurred in 1916 when Yuan Shikai initiated his restoration of monarchy program. In the first year of Hongxian under Yuan's realm, the Minister Zhou Ziqi of MAC (Ministry of Agriculture and Commerce) started a new program to bring forestry back to the Ministry's attention, which was, establishing forestry districts (*linqu* 林區) all over China.<sup>9</sup> On January 22, 1916, Minister Zhou filed a petition to Yuan Shikai, proposing to found a Central Forestry Department (*linwuchu* 林務處) attached to the Ministry of Agriculture and Commerce. He stressed on the concept of "forest administration" (*linzheng* 林政), managing forests under a specialized administrative organ, that he thought it would revolutionize China's forestry and make achievement. He wrote:

“As early as in ancient times, the management of mountain forests requested specialized officials. They logged trees according to appropriate times and paid attention to the use of timbers. (Nowadays) both the eastern countries and western countries competed in establishing the so-called forestry administration (*linzheng*) that unified and guided forest management and produced a notable effect in trees. [衡麓之守，古有專官，斧斤以時，尤重材用。東西各國競言林政，皆有管理機關，整齊利導，樹木之計收效甚宏]

Despite that China had rich forest resources, according to Zhou, China still lacked “proper means of cultivation and nurturing.” He continued: “China had vast land and rich resource. The frontier provinces were rich in forests, and the interior of China had a forest recovery. However, neither the method of forest cultivation and nurturing has been researched, nor the state had any government orders to maintain it. Until the forests went out of cultivation, people took for granted to abandon them.” Admittedly, China had made progress in forestry development, such as the recent inclusion of forestry in the agronomic sciences in Chinese

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<sup>9</sup> “Guanyu nongshang bushe linwuchu yiqie shiyou,” 關於農商部附設林務處一切事項, Heilongjiang Provincial Archives, 62-3-1415

schools and the growing power of Chinese timber merchants. Yet, Zhou relentlessly pointed out China's major weakness in forestry: "the strength was not fully reached, and it would inevitably fail." [中國地大物博，邊省富有森林，內地產木之區亦復不少。只以培植護養之法既未研求，國家又無政令維持，遂至荒曠，委棄視為固然，坐失利源，事非旦夕。比年，林學列入農科學知漸知講習；商人采運木植、設立公司亦有合群競勝之思。然實力未充，勢終渙散。]<sup>10</sup>

The key to China's forestry innovation, as stated in Zhou's petition, lied in the intervention of state power. He particularly emphasized the state's role in developing a centralized and specialized forestry bureaucracy system. "China's forestry urgently depended on state's (*gongjia* 公家) initiative, to divide forest districts and select cadres, to set up police and conduct investigation, to make forest maps and etc. Carefully plan, and proceed one by one, as people's forerunner." [亟賴公家提倡，於分區遴員，設警調查，繪造林圖諸端，悉心規劃，逐壹進行，以為人民先導] Moreover, Zhou confessed that the combination of agriculture and commerce in one ministry limited and hindered the state's investment in forestry; therefore, a professional and specialized central forestry department should be set up. In his detailed plan, Zhou envisioned the Central Forestry Department as the only administrative organ that specialized in national forest affairs, ran by one chief inspector (*duban* 督辦). Under them were forest districts (*linqu*) divided based on the existing administrative districts. For each forest district, a forestry commissioner (*linwu zhuanyuan* 林務專員) would be appointed by the central government, and he would report to both the Forestry Department and the local administrations.

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<sup>10</sup> "Guanyu nongshang bushe linwuchu yiqie shiyou," 關於農商部附設林務處一切事項, Heilongjiang Provincial Archives, 62-3-1415.

Aside from the specialized institutions, Zhou also sought for specialized expertise in forestry personnel. He claimed only to appoint those who had real experience in forestry or graduated from forestry schools to fill in the positions of forestry commissioners and technical staff.<sup>11</sup> Further, he criticized the customary practice of including forest management in the department of industry (*shiyeting* 實業廳) in each province, as this kind of management “lacked either spirit of concentration or thorough knowledge.”[各省森林事业概由实业科员经理，既无专注之精神，亦乏淹通之才识] Although Zhou believed that the industry department was incapable of taking care of forestry, when it came to forestry funds, he proposed to use the “industrial funds” under the department of industry (*shiye jingfei xiangxia kaizhi* 實業經費項下開支) to pay for their provincial forest commissioners and their respective projects, while the central government only fund the Central Forestry Department.

## DECENTRALIZATION OF FORESTRY MANAGEMENT

One thing that distinguished the forestry practice in northeastern China from those in China proper was that: forest management was a comprehensive practice because of the unique natural and political landscape in the northeastern frontier. In other words, forest management in this region requested cooperation between the forestry bureau and other departments, such as police, instead of being solitary and specialized, as what Zhou Ziqi had claimed. For instance, in Heilongjiang where the vast forest areas were sparsely populated and bandit groups were robust, a police force or a military backup was the premise for proper forest management. The need for public security was evidenced in two petitions from the magistrate of Mulan 木蘭 County and the head of Heihe 黑河 Prefecture. Both of them asked

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<sup>11</sup> “Chenwei chenbu nische linwuchu zhuanguan quanguo snelin shiwu jinni zhangcheng gai gongzhe yangqi” 臣為臣部擬設林務處專管全國森林事務謹擬章程概恭折仰祈, Heilongjiang Provincial Archives, 62-3-1415

for the aid of police in managing frontier province forests. As the state forests were usually located hundreds of miles beyond their administrative supervisions, they were at the risk of being attacked by local bandits, when it came to taking field trips to review the short-term logging-camps in Mulan, or surveying the state forests in the untraversed region in Aihui 璦琿. <sup>12</sup> Northeast China's particular circumstance was also confirmed by the central government as a "special case." In March 1916, in the process of establishing the nationwide forest district system, the provincial governor of Heilongjiang memorized to Zhou Ziqi, questioning the overlapping role of the forest district office and northeastern China's forestry bureau. <sup>13</sup> In response, Zhou confessed the incompatibility of the forest district system to conditions in Heilongjiang, as it was a general practice throughout the country. He ensured the local government that the forest management in Heilongjiang should remain unchanged with the Three Eastern Province's Forestry Bureau.

The operation of the Three Eastern Province's Forestry Bureau directly under the MAC came to an end in 1917. Gu Zhongxiu 穀鐘秀 replaced Zhou Ziqi and served as the new minister of MAC in October 1916. Half a year later, on April 1917, Gu announced the official abolition of the Three Eastern Province's Forestry Bureau and demanded complete transfers of the forestry management duties to the respective provincial forestry bureaus. He admitted the extreme difficulty and complication to manage three provinces' forests under one bureau and promoted decentralization in northeastern China's forest management. According to his reform scheme, the Ha'erbin branch of old general forestry bureau was reconstructed as

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<sup>12</sup> "Guanyu caiche linwuju jiaoban xianju banli shixiang," 关于裁撤林业局交县局办理事项, 1915, Heilongjiang Provincial Archives, 62-3-1413.

<sup>13</sup> "Chenwei chenbu nische linwuchu zhuanguan quanguo snelin shiwu jinni zhangcheng gai gongzhe yangqi" 臣為臣部擬設林務處專管全國森林事務謹擬章程概恭折仰祈, Heilongjiang Provincial Archives, 62-3-1415

Heilongjiang Provincial Forestry Bureau, led by Mi Fengtai 米逢泰; while the old headquarters in Jilin was remade into the Jilin Provincial Forestry Bureau, charged by Hu Zongying. In regard to the newly-established Fengtian Forestry Bureau, the Fengtian provincial government replaced the central-government-appointed director Wu Weixun with its local official Huang Liyou 黃立猷.[取消三省總局名義，省各設壹林務局，除奉天林務局照舊辦理外，哈爾濱為吉黑間著名商埠，交通便利，對於黑省林務亦易管理，即將哈局改為黑龍江林務局，吉垣林務辦事處改為吉林林務局] In particular, the previous apportioned charges of forestry funds would only be used for its own provincial forestry bureau, without being concentrated in the general bureau and the ministry. With Gu's efforts in promoting his decentralization plan, Zhou Ziqi's centralized forestry management pattern (1912-1917) finally broke down. Since then, the provincial forestry bureau had more independence and gradually integrated into the provincial administrations.

Table 13: Fengtian's Forestry Bureaus in the Beiyang Period

Names	Time	Bureau Heads
Three Eastern Province's Forestry Bureau Under the Ministry of Agriculture and Forestry ( <i>Dongsansheng linwju</i> 東三省林務局)	1912-1917	Hu Zongying 胡宗瀛
Fengtian Forest Works Bureau (Fengtian linwuju 奉天林務局)	1915-	Li Jun 力鈞
	1917/5	Wu Weixun 吳維勳
	1917/10	Huang Liyou 黃立猷
	1917/12	Wu Enpei 吳恩培
Fengtian Industry Department ( <i>Fengtian shiyeting</i> 奉天實業廳)	1919	Tan Guohuan 談國桓
	1925	Zhang Zhihan 張之漢
	1927	Liu Heling 劉鶴齡

Table 14: Heilongjiang's Forestry Bureaus in the Beiyang Period

Names	Time	Bureau Heads
Heilongjiang Forest Bureau ( <i>Heilongjiang senlinju</i> 黑龍江森林局)	1918	Mi Fengtai 米逢泰
	1921	Yu Sixing 于駟行
	1922	Ding Mengwu 丁夢武
	1923	Zhao Zhongren 趙仲仁

Source: Liaoning Provincial Archives.

The following year of 1918 witnessed the divergence in northeastern China's forest management: the localization of forestry in Fengtian and the partitioning of forests in Jilin and Heilongjiang. Since the Qing Dynasty, Sahaliyan Ula and Ningguta were not considered as the imperial family's sacred homeland, but rather, the buffer zone between Tsar Russia and Mukden. The forests in Jilin and Heilongjiang provinces also used to serve as the defense forests (such as the "forest wall") for the Qing government. In the Republican period, they witnessed the collaborations between the Japanese and Chinese politicians in several Sino-Japanese forest loan programs that changed the representations the forests had. The first one was the Mengjiang Forest Loan project (*mengjiang linye daikuan* 濛江林业贷款) between the Japanese politician Mori Tsutomu 森恪 and the Military Governor of Jilin Meng Enyuan 孟恩远. Aiming for Jilin's separation from Beijing's control, the Military Governor Meng Enyuan borrowed a loan of 10,000,000 Japanese *yen* from Mori Tsutomu as military funding. In order to pay for the debt, he founded the Mengjiang Forestry Bureau (referred to as MFB) on May 1918 and used the Mengjiang forestland as the material guarantee. Different from the previous forestry bureaus, the MFB was only set up as the payment guarantee, without any real function, such as tax collection. Based on the MFB, a Huasen 華森 Sawmill was established in 1919. Both Mori Tsutomu and Meng served as nominal sawmill managers. The combination of the forestry bureau and the sawmill created new meanings in northeastern China's forests: national security for loans.

The second case was the Nishihara Loan between China and Japan on the state level. Yuan Shikai's death in 1916 triggered a series of political realignment that resulted in the rise of the Anhui-clique warlord Duan Qirui 段祺瑞 in Beijing. On August 2, 1918, the new Prime Minister Duan signed the "Loans of the Gold Mines and Forest in Jilin and Heilongjiang" with the Japanese Prime Minister Terauchi Masatake, borrowing a total of 30 million yen from Japan, known as the "Nishihara Loan." Both sides agreed to use the incomes

generated from the gold mines and the state forests in Jilin and Heilongjiang, as China's government guarantee. By that means, Duan Qirui mortgaged the interests of railways, minerals and forests in northeastern China to Japan for the government funding. Labelled by the Nishihara Loan, the Forest Works Bureaus (*linwuju* 林務局) in Jilin and Heilongjiang were renamed as "Forest Bureaus" (*senlinju* 森林局) which distinguished them from the "Fengtian Works Bureau" that was fully under sovereign administration's control. Although Duan's plan to pay the Nishihara loan by the Jilin's and Heilongjiang's forest income ended in bad debts, the restructuring of the Jilin-Heilongjiang forest bureaus gave more independence to both local governments.

State forest management in both provinces increased local revenues. In Jilin, the new Jilin Forest Bureau (*Jilin senlinju* 吉林森林局) established four branches in Ning'an 寧安, Hunchun 琿春, Yanji 延吉, and Fangzheng 方正, greatly expanding its revenue controls in this forested province. By contracting out the forests to local households and forbidding state forest stealing and logging, the Jilin Forest Bureau doubled its forest income compared with the Jilin Forestry Bureau of the Qing. In Heilongjiang, forests along the Songhua River have largely contracted out various forestry and logging companies, such as the state-sponsored logging companies: Tongyuan 通原 company and Tie'nen 鐵嫩 company in the Republican period.

Gu Zhongxiu had also advocated on the establishment of the forestry associations in villages since 1917. Forestry associations (*linye gonghui* 林業公會) were gradually developing and became powerful, especially in Heilongjiang. The years between 1928-1930 witnessed the constructions of several prominent forestry associations in Tonghe 通河, Suileng 綏楞, Tangyuan 湯原, Nenjiang 嫩江, and Yuanmao 源茂, where timber merchants and logger groups united and sought for shelter under the forestry association. Following the

example of the first forestry association in Tonghe, the Suileng association (*suileng mushang tongye gonghui* 綏楞木商同業公會) was the largest association in Heilongjiang then. It was tentatively formed in 1926 and got official recognition by the Suileng county government in 1929. The guild consisted of 61 merchants who ran the mountains and lumbering factories independently. It had a board of seven committee members and three standing committee members. Li Shaotang 李紹棠, at the age of sixty, was elected as the General Director, and Han Zhenkui 韓振奎 served as the Associate Director. In Suileng, the lumbering factories were named after the managers or the owners. For example, Li Zhenhai's lumber factory was named Zhenhai factory; and a Yufeng factory had an owner by the name Yufeng (Table 15).<sup>14</sup>

Table 15: The Suileng County Timber Merchant Association, Heilongjiang, 1929

Lumbering factory	Managers	Lumbering factory	Managers
Tiande 天德木厂	Li Shaotang 李绍棠	Sanjiang 三江木厂	Yu Jiang 于江
Zhenxing 振兴木厂	Han Zhenkui 韩振奎	Chunsheng 春升木厂	Xing Wanchun 邢万春
Sanhe 三合木厂	Bi Wenyuan 毕文元	Wanju 万巨木厂	Hou Wanli 侯万里
Fucheng 福成木厂	Wang Yincheng 王银成	Fulong 福隆木厂	Zhang Jie 张杰
Zhenhai 振海木厂	Li Zhenhai 李振海	Wanfu 万福木厂	Sun Wanfu 孙万福
Deji 德记木厂	Sun Deli 孙德利	Fusheng 福升木厂	Qiao Fulin 乔福林
Yongyuan 永远木厂	Wei Mingyuan 卫明远	Yude 玉德木厂	Fu Yugui 傅玉贵
Jingji 景记木厂	Liu Jingkuan 刘景宽	Kuixing 魁兴木厂	Wang Changzhen 王长珍
Yufeng 玉丰木厂	Jia Yufeng 贾玉丰	Deyou 德有木厂	He Deyou 何德有
Shunsheng 顺升木厂	Yan Shun 阎顺	Liji 礼记木厂	Wang Deli 王德礼
Jinsheng 金升木厂	Zhang Jingui 张金贵	Kuiye 魁业木厂	Lin Guangkui 林广奎
Fuxing 福兴木厂	Zhao Fu 赵福	Kuiyuan 魁元木厂	Zhang Zhanyuan 张占元
Desheng 德盛木厂	Song Desheng 宋德盛	Hexing 和兴木厂	Xie Chengju 谢橙举
Youyu 有余木厂	Fan Deyou 范德有	Wanju 万巨木厂	Li Zuoshan 李作善
Taishan 太山木厂	Chai Changshan 柴长山	Yonghou 永厚木厂	Wang Kui 王奎
Ruiji 瑞记木厂	Yu Luorui 于洛瑞	Zhongyi 忠义木厂	Tian Zhongyi 田忠义
Changhe 长和木厂	Guo Changhe 郭长和	Shengji 胜记木厂	Li Shenghuan 李胜焕
Yihe 义合木厂	Song Boyi 宋伯义	Caiji 才记木厂	Zhao Caishan 赵才山
Yongfa 永发木厂	Wang Fu 王富	Xinglong 兴隆木厂	Guo Xingwang 郭星旺
Liansheng 连升木厂	Ding Liangui 丁连贵	Dongfang 东方木厂	Ai Lianfang 艾连芳
Yuji 玉记木厂	Qiao Yucheng 乔玉成	Tongmao 同茂木厂	Jiang Maofa 姜茂发

<sup>14</sup> “Guanyu suiling mushang tongye hui shixiang” 關於綏楞木商同業會事項，HPA，73-3-171

Yongsheng 永升木厂	Zhou Fengshan 周凤山	Tongsheng 同升木厂	Sun Zitong 孙子同
Junji 俊记木厂	Lu Le 吕勒	Mingji 明记木厂	Sun Ju 孙举
Fuhe 福和木厂	Yu Fuyou 于福有	Yongcheng 永成木厂	Liu Xizhen 刘锡珍
Huanji 焕记木厂	Jia Huanzhang 贾焕章	Shilai 世来木厂	Wang Shilai 王世来
Tongyuan 通远木厂	Liu Qinglian 刘青莲	Houji 后记木厂	Lv Qin 吕勤
Zhenwu 振武木厂	Tang Zhenwu 唐振武	Zhengda 正大木厂	Gao Fu 高福
Yongsheng 永盛木厂	Liu Dianju 刘殿举	Dechang 德长木厂	Yu Decai 于德才
Ruixing 瑞兴木厂	Li Ruilin 李瑞林	Fuhai 福海木厂	Zhao Fuhai 赵福海
Dafa 大发木厂	Tong Wanjin 佟万金	Changshou 长寿木厂	Teng Shoushan 滕寿山

## SPECIAL FOREST ZONES IN NORTHEAST CHINA

In the process of formalizing the forest management in Northeast China, each province developed their own provincial monopoly zones of forests, such as the “provincial forest zone” in Fengtian, and the “gold mines forest” as well as “road protection forest” in Heilongjiang. The designs of these special forest zones were the local government’s flexible response to and local empowerment by the state forestry system. The provincial forest monopoly zones expanded the local institutional capacity and in some sense, also challenged the Beiyang government’s central authority.

In Fengtian, secured by the substantial financial base, the local ruler Zhang Zuolin had a keen interest in developing forestry. Zhang designed his grand plan of the “Provincial Forest Region” (*shengyoulin* 省有林) around the Mount Changbai in 1919. The provincial forest zone contained three counties of Antu 安圖, Fusong 扶松 and Liuhe 柳河 at the upper reaches of the Yalu River, a forested area of 40,000 *fangli*. In a letter to the then MAC Chief Zhou Ziqi, Zhang Zuolin proposed to contract the state forests from the above areas, on behalf of the Fengtian Provincial government, and put them directly under the management of the Fengtian provincial government. He claimed, “as the areas that the Provincial Forest Region covered was close to the Japanese logging concession along the Yalu River, setting up a state forest zone directly under by the provincial government would better prevent Japan’s

expansion in the forest.”<sup>15</sup> Zhou Ziqi soon approved the idea. Again, the financial department head Wang Yongjiang strongly opposed it. According to Wang’s calculation, the total cost for contracting such a large area of forests would reach as high as 68,000 *yuan* in *dayang*. As a result, the program got suspended by Wang Yongjiang.<sup>16</sup> Yet, the Fengtian provincial government still enclosed the forests in the three counties of Antu, Fusong, and Liuhe, and didn’t open them for allocation and logging until 1928.

In Heilongjiang, the special forest zones established along the Sino-Russo borderland in Aihui 愛輝, Mohe 漠河, Luobei 蘿北, and Huma 呼瑪, were the results of an inter-bureaucratic conflict between the Forest Bureau and the Gold Mine Bureau (*jinkuangju* 金礦局). State forests in Great Khingan along the Amur River had long been controlled by the government-run Gold Mine Bureau. Before the establishment of the Heilongjiang Forest Bureau in 1918, the branches of the old Three Eastern Province Forestry Bureau had no tapping of those forests whereas the Gold Mine Bureaus had long enjoyed a dominant control and free access to the abundant mine forests. The gold Mine Bureau was in charge of the two most timber-consuming projects: the gold mine digging and the post road maintenance. However, the new rules of paying to contract the state forests then posed challenges to the mining business. In response, the head of Kuma’er River Gold Mine Bureau (*huma’er he jinkuangju* 庫瑪爾河金礦局), He Zongren 何宗仁, joining Sun Lansheng 孫蘭昇, the head of Yuqing Valley Gold Mine Bureau (*yuqinggou jinkuangju* 余慶溝金礦局), petitioned to the provincial industrial department to establish a “special forest zone” (*tebie linqu* 特別林區) in the borderland state forests. In their petitions, they listed three reasons for keeping the forests

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<sup>15</sup> “Fengtian shengzhang gognshu wei nongshangbu ziqing fa antu fusong linqu zhizhao shi” 奉天省長公署為農商部咨請發安圖撫松林區執照事, March 1919, Liao Provincial Archives, JC010-01-7763

<sup>16</sup> Ibid.

from being allocated: first, cost savings for the gold mine development; second, the Sino-Russo border defense; and third, Oronoco' (an ethnic group living in the Great Hsingans) social welfare.

Timbers were in great needs in the gold mining projects. From exploration, filtration, transportation, and the final selection, almost every step of mining consumed large quantities of timbers. According to He Zongren, in the beginning, when labors prospected for the gold mine seeds, they need to fabricate the old pines into scaffolds, where they hung baskets with strings to remove the pit sand. In the second step of filtration and the third step of transportation, waterways constructed by giant pines and mountain roads built by logs also exhausted an enormous amount of wood. Moreover, in order to accommodate the labors, wooden cabins were extensively built in the forests. Due to the cold weather in Great Khingan, labors had to burn abundant timber logs as firewood. As He Zongren wrote in the petition, "if the free logging rights of the native woodlands were canceled and we must pay for logging, then the province's gold mines would not be worth the loss. There would be no value in developing the gold mines." [倘一旦將礦區內天然之森林砍伐權消滅之，是伐木必繳山本，則全省金礦得不償失，直無一處可做也] Moreover, he warned, "Heilongjiang was a poor province whose fiscal income was far smaller than those in Jilin and Fengtian. What we were able to compete with Feng-Ji were nothing but gold mine revenues. At this critical moment, supposing that forests were not reserved for gold mines, our fiscal future would be inconceivable!" Meanwhile, he also mentioned the Oronqen people's dependence on free-access forests. As Oronco's survival completely depended on the Great Khingan forests. If opened for allocations, He Zongren feared that the state forest tenures would create access limits that might push the Oronco to the Russians.

Sun Lansheng, on the other hand, raised the issue of border defense by the post road. Military Chief Zhu originally built the two-hundred-mile-long post road between Nenjiang 嫩

江 and Mohe 漠河 in 1916, aimed at defending the territory against the Russians. Since the road maintenance fee was high, the gold mine bureaus and mining companies along the post road started sharing the fees stop-by-stop (sector-by-sector) in 1917. Among the thirty-four post stands, the fourteen post stands along the Nen-Mo post road was maintained by the Yuqing Valley Goldmine Bureau. Since the maintenance charges were already costly, adding another expense to contract state forests would be more than what they could handle. Therefore, Sun Lansheng proposed to separate an area of forests along the post road as a special “road protection forest” (*hulu senlin* 護路森林), reserved for road maintenance only and free of charge.<sup>17</sup> Both proposals of “mine area forests” and “road protection forests” got backed up by Shi Shaochang 施紹常, the head of Heihe Prefecture, and Sun Liechen 孫烈臣, the Heilongjiang Provincial governor. They invoked the third clause of “the Rules for the State Forest Allocations in Northeast China,” that forests regarding the territorial security or public use could be regained by the state and received the Industry Department’s final approval.

## NEW VOCABULARIES OF FORESTRY

In the Republican era, officials and literati concerned with Northeast China forest and other problems occasioned by the Japanese presences, including Zhou Ziqi 周自齊, had been actively seeking a new vocabulary to meet their needs. There were three new terms associated with forestry constantly being used by the officials and the elites, which were: *linzheng* 林政 (forest administration or forest governance), *linwu* 林務 (forest works), and *linye* 林業 (forestry). As was shown in the sources, the forestry bureau (*linyeju*) was often associated

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<sup>17</sup> “guanyu kuyu liangju wei fangang senlin you’ ai kuangwu jinxing yiqie shixiang” 关于库余两局为发放森林有碍矿务进行一切事项, 1919, Heilongjiang Provincial Archives, 73-1-295.

with the timber tax, while the department of forest works (*linwuju*) was about state forest allocation. When the word “forest administration” (*linzheng*) showed up in the materials, it was usually in the petitions where the loggers or forestland holders felt insecure about property rights and asked for justice and protection from the provincial or prefectural governors. Therefore, with the rich implications behind each category, we could not generally translate them into one single term “forestry,” without investigating the specific contexts.

Zhou Ziqi 周自齐 was the first Prime Minister of the Ministry of Agriculture and Forestry (which later became the Ministry of Agriculture and Commerce) in the Beiyang government that replaced the Qing Dynasty. He had always been concerned about the forest situation in Northeast China and had a grand plan to revitalize China’s forestry. The terms of *Linzheng* and *linye* were often mobilized in his speeches and reports to express his new ideas of forestry management. For example, he considered the existence of *linzheng* (forest administration) as what distinguished the collapsed Qing government and the promising and new Beiyang government. In one of his reports, he denied the Qing government’s trial on the Jilin Forestry Bureau (1907-1911) and claimed that the Qing government had never done anything about the *linzheng* (forest administration). It was under the Beiyang government that *linzheng* (forest administration) had been initiated for the first time. In addition, his conception of *linzheng* (forest administration) was directly associated with the state-sponsored reforestation technology, represented by the national forestry experiment station (*guojia linshi shiyan* 国家林事试验) established in 1912 in Beijing. Although it was something new to China, according to him, the way in which he explained the idea his forestry plan was traditional. For example, he promoted a “Forestry Calendar” (*linye jili* 林業紀歷) as a national guide for each province to conduct their forestry practice. In the calendar, he divided

the *linye* into two parts: inner works (*neiye* 內業) and outer works (*waiye* 外業). In each month, the inner works included budget planning, tool repairs, saplings purchase, and weather recording. The outer works had four fixed steps: seedbed maintenance (*qingmiao* 青苗), afforestation, prevention of fire, insects, and frostbite, and utilization that contained both logging and honey harvesting.<sup>18</sup> The division between “inner” and “outer” dated back to China’s traditional agriculture management in the Zhou Dynasty and therefore created an interesting mixture of the old and new knowledge.

In the Republican Era, forestry (*linke* 林科) as a specialized knowledge has been regularized as the specialized schools of forestry and agriculture were widely established. The idea of “specialized talents (*zhuanmen rencai* 專門人才)” was also rooted in the minds of most of the forestry graduate. For Example, a Forest graduate Sun Shijun 孫世俊 wrote on behalf of their colleagues in his application that “China’s prosperity depended on the development of the industry (*shiyeye* 實業), and to develop China’s industry, you should value the people with specialized talents. Agriculture and forestry were the most important components of the industry. Although Fengtian’s industry was not well developed yet, it should be advocated by these talents with this specialized knowledge... The state was not to set up special schools to train specialized personnel so as not to use them specially.” Moreover, Fang Yongzhi 方泳之 wrote: “At the beginning of the founding of our country, agriculture and forestry industries were awaiting prosperity, and they depended on the artificial arrangement of industrial expertise.” As indicated above, the forestry students

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<sup>18</sup> “Fengtian xuan’anshi gongshu wei nongshangbu zisong nongshangbu linye shiyanchang yaolanshi,” 奉天巡按使公署為農商部咨送農商部林業試驗場要覽事, 1915, LPA, JC010-01-0004550.

regarded forestry as specialized learning (*zhuanmen zhixue* 專門之學) and were proud of their expertise. The discourse of “serving the industry” then soon be replaced by the “serving the forestry.”

“Serving the *linzheng* (forest administration)” as a slogan was often mobilized by the forestry-major graduates in their job applications. The popularity of the discourse showed the extensive influence of forestry propaganda but simultaneously displayed the gap between the grand national plan and the real small demand of the forestry job market. In 1915, the Fengtian Provincial Government received more than thirty applications from the students of the Forestry Department, Fengtian Provincial School of Agriculture (*Fengtian shengli nongye xuexiao* 奉天省立農業學校, which grew out of the *Fengtian senlin xuetao* 奉天森林學堂), for the positions of trainee technicians in either the Forest Works Bureau (including the Industrial Department), or the Sino-Japan Yalu River Logging Company. However, only one-third of them got accepted. Among them, many have mentioned their willingness to devote to the Fengtian’s forestry administration (*linzheng*). For example, Xia Bingheng 夏秉衡, a Forestry graduate, claimed that he wished to serve the country by advocating forestry and promoting the forestry industry; Yan Hengrong 閻恆榮, another forestry graduate from the B-Class (*yideng* 乙等) said, “My ambition of learning was always in the forestry administration (*linzheng*). However, after graduation, though the New Policies prospered, the business of forestry has not been established so that I had no jobs. Now that my former learning of forestry was in line with *linwu* (forestry works). I am willing to work hard for the *linwu*!”<sup>19</sup>

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<sup>19</sup> “Fengtian xunanshi gongshu wei linke biyesheng xiabingheng deng bingqing chijiao caimu gongsi zhuoliang renyong shi” 奉天巡按使公署為林科畢業生夏秉衡等稟請飭交採木公司酌量任用事, 191503, Liaoning Provincial Archives, JC010-01-0022573.

As the demand was small, many of the Forestry students ended up in teaching in the local primary schools, but still hoped to return to the occupation that they were trained for. For instance, Hu Yuanzhen 胡元禎, who was the headmaster of the Yushu 榆樹 Primary School in Shenyang, applied for the position of a technician in the Yalu River Logging Company. He explained his motivation as “working in a primary school was having no choice but to give up my preference.” His colleague Zhao Heling 趙鶴齡 argued that “being trained by the state (in forestry), he should serve the state his own life.” However, what was paradoxical was that the establishment of the state forestry bureaucracy did not necessarily create new jobs for the forestry students. Rather, it “narrowed down the scope” of the industrial talents. At least four applicants among them (Liu Fulin 劉復林, Yan Zhizhong 閻致中, Li Chengshun 李承舜, and Jin Zhiying 金之籟) mentioned the “scope being narrowed down” by Fengtian’s establishing the industrial bureaucracy in the Republican Era. Thus they could not devote to what they had learned. [民国成立各实业机关，缩小范围，致未得事其所学，未免有负国家育才之旨] Indeed, the four Forestry students had all engaged in the forestry or boundary surveys led by the previous Quanye Official and local magistrates in the late Qing Dynasty, but new people filled in their positions when the formal forestry bureaus were established. Nevertheless, the very best student would still be appreciated. For example, Peng Zhaolin 彭兆麟, who graduated from the Fengtian Agricultural School and was selected to continue to study in the Agricultural Teacher Training Institute attached to National Beijing Specialized School, was strongly recommended by the Fengtian Provincial Government. The officials noted that “though the Yalu River Logging Company has asked for the suspension of sending graduates...but this kind of practitioner should be chosen and accepted.”

The monthly salary for technician trainee in the Sino-Japan Yalu River Logging Company was about 45 *dayang*/month, which was an attractive package for most forestry starters. However, as an enterprise jointly-run by China and Japan, it requested the Chinese employers be able to speak Japanese in order to communicate with the Japanese staffs. The language requirement thus became a barrier for many Chinese forestry graduates.<sup>20</sup> Students graduated from the Japanese forestry schools should have had a natural advantage. Nevertheless, due to the funding shortages of the government bureaus, even the student of the Kyoto Agricultural School get rejected as well.<sup>21</sup>

Table 16: Forestry Graduate Applicant Information

Applicants	Motivations to apply	Schools and Experiences	Job Position Preferences
#Xia Bingheng 夏秉衡	Serve the country by promoting forestry (愿及时自效借以提倡林业发达实业报国)	1909 entered the Forestry School (森林学堂) and studied for five years	Technician trainee, Yalu River Logging Company Decision: accepted
#Sun Xianqing 孙献卿 #Di Jixun 邸集勋	Hope to do what one was trained for (欲侧身普通教职又觉非用所学)	Entered school as an A-Class student in Forestry and graduated in December 1912 as a B-Class ranking No. 30, with an average score of 75 <i>fen 4 li 2 hao</i> ; 邸集勋 Entered school as a B-Class student in Forestry and graduated in February 1913 as A-Class student ranking No.9, with an average score of 84 <i>fen 8 li</i>	Technician trainee, Yalu River Logging Company  Decision: accepted
#Hu Yuanzhen 胡元祯 #Chen Baogui 车葆桂	Having no choice but to teach (不得已改就沈阳现榆树林子处小学校长之职, 及奉集堡小学校教员之职)	Graduated as a B-Class student in Forestry	Technician trainee, Yalu River Logging Company  Decision: accepted
#*Gao Rulin 高儒林		1908-1912 studied in the school and graduated as an A-Class student, ranking	Technician trainee, Yalu River Logging Company

<sup>20</sup> “fengtian xingzheng gongshu wei donglu guancahshi chengfu caimu gongsi niqing pai linke biyesheng lianxi shi,” 奉天行政公署為東路觀察使呈覆採木公司擬縣請派林科畢業生練習事, 191303, Liaoning Provincial Archives, JC010-01-007889.

<sup>21</sup> Ibid.

		No.14, with an average score of 82 <i>fen 1 li 5 hao</i>	Decision: accepted
#Sun Xianqing 孙献卿		Entered as A-Class student in Forestry and graduated in December 1912, as a B-Class student, ranking 30, with an average score of 75 <i>fen 4 li 2 hao</i>	Technician trainee, Yalu River Logging Company Decision: accepted
#Li Chengshun 李承舜 #Jin Zhiying 金之簏	The scope being narrowed down by Fengtian's establishing the industrial bureaucracy in the Republican Era	Graduated as an Honor Student from the Fengtian Forest School and was sent to investigate the forests in Zhangwu 彰武 County and Linjiang County in 1911. Entered Nanjing Railway University in 1912	Technician trainee, Yalu River Logging Company Decision: accepted
#*Zhao Heling 赵鹤龄	(Hope to promote industry) 望国际振兴实业,既受国家培养自应以身效命	In 1908 entered the Fengtian Forest School A Class and graduated in 1910. Entered the Provincial A-Class Agricultural School and graduated in 1912, with a score of 69 <i>fen 8 li 7 hao</i>	Lumbering Office, Yalu River Logging Company Decision: accepted
#Guo Mingke 郭鸣科		In 1908 entered the Fengtian Forest School A Class and graduated in 1910, with a score of 70 <i>fen 8 li 7 hao</i> . Entered the Provincial A-Class Agricultural School and graduated in 1912, with a score of 68 <i>fen 6 li 5 hao</i>	Lumbering Office, Yalu River Logging Company Decision: accepted
Yan Hengrong 阎恒荣	<i>Linzheng</i> was the dream career (所学之志恒以林政为怀,奈何毕业后因新政繁兴,独林务之事未曾创立,虽有所学者,只得赋闲)	B-Class graduate from the Fengtian School of Agriculture and Forestry	Technician trainee, Yalu River Logging Company Decision: rejected
*Yan Mokai 阎模楷	Coming from a poor family and had to support the family by teaching in the primary school which was flooded	A-Class graduate from the Fengtian School of Agriculture and Forestry	Technician trainee, Yalu River Logging Company Decision: rejected
Liu Fuyan 刘复炎	Had to take care of the sick mother and therefore missed the entry time	Graduated from the Fengtian School of Agriculture and Forestry	Technician trainee, Yalu River Logging Company Decision: rejected
Zhao Zhenzhou 赵镇洲	Taught in primary school	A-Class graduate from the Agriculture and Forestry School	Technician trainee, Yalu River Logging Company Decision: rejected
Su Hanzhong 苏汉忠		Before graduation, was sent to Songzi Official Mountain by the Quanye Official. And later devoted to primary school teaching.	Technician trainee, Yalu River Logging Company or Fengtian Forest Works Bureau

			Decision: rejected
Peng Zhaolin 彭兆麟		Fengtian Provincial A-Class Agricultural School, and was selected to Agricultural Teacher Training Institute attached to National Beijing Specialized School	Technician trainee, Yalu River Logging Company or Fengtian Forest Works Bureau  Decision: rejected
Liu Fulin 刘复林	The scope being narrowed down by Fengtian's establishing the industrial bureaucracy in the Republican Era	1911 entered school as a transferred student, 1913 graduated as a B-Class student with an average score of 74分7厘	Technician trainee, Yalu River Logging Company  Decision: rejected
Yan Zhizhong 阎致中	The scope being narrowed down by Fengtian's establishing the industrial bureaucracy in the Republican Era	Graduated from Fengtian Forest School in 1910, was sent to Xingjing to investigate the forests by the Quanye Official	Technician trainee, Yalu River Logging Company  Decision: rejected
Bi Zhonglin 毕钟麟	Because of family poverty and was unable to continue school, the industrial department lacked capital. For several years, I made a living by teaching.	In 1916 graduated from the Forestry Department, Fengtian Provincial A-Class Agricultural School	Technician trainee, Yalu River Logging Company or Fengtian Forest Works Bureau  Decision: rejected
#Guan Shuping 关叔平 #Guo Yanshuo 郭彦硕			Technician trainee, Yalu River Logging Company Decision: accepted
Zhao Zhenzhou 赵镇洲	Serve the birthplace with specialized knowledge	Graduated from the Fengtian School of Agriculture and Forestry	Fengtian Industry department Decision: rejected
Sun Shijun 孙世俊 Liu Guofan 刘国藩 Zhao Heling 赵鹤龄 Yan Mokai 阎模楷 Guo Min 郭敏 Zhang Peilin 张沛霖 Song Tianfang 宋天芳 Ze Shen 泽深 Mi Huizhang 秘辉彰	Specialized knowledge of forestry	Specialized knowledge of forestry	Fengtian Industry department Decision: waiting list

Li Rengang 李任刚			
Zhang Shiming 张世明 Liu Shaobai 刘绍白 Xia Zaixing 夏再兴 Liu Fuli 刘复礼 Song Dexiang 宋德香 Zhu Huaizhi 朱怀智	Specialized knowledge of forestry	Graduated from the Fengtian School of Agriculture and Forestry. Was sent to investigate the forests by the previous Quanye Official	Fengtian Industry department Decision: rejected
Lu Shizeng 鲁式曾	Specialized knowledge of forestry	Graduated from the Fengtian School of Agriculture and Forestry	Fengtian Industry department Decision: rejected
Fang Yongzhi 方泳之	Have specialized knowledge in forestry and mining	Graduated from the Fengtian School of Agriculture and Forestry	Fengtian Industry department Decision: rejected
#Zuo Junming 左骏名 #Su Hanzhong 苏汉忠	Specialized knowledge of forestry	Graduated from the Fengtian School of Agriculture and Forestry	The Logging company attached to the Xingjing Official Land Measurement Bureau(兴京官山丈地局所属采木公司服务) Decision: accepted
Zhang Mingshao 张鸣韶 Gong Bunan 宫步南		Graduated from the Fengtian School of Agriculture and Forestry	Yalu River Logging Company Decision: rejected
Gao Rulin 高儒林 Wang Bingquan 王秉权 Cui Fengshan 崔凤山 Fu Jinshan 傅金声		Graduated from the Fengtian School of Agriculture and Forestry	Yalu River Logging Company Decision: rejected
Li Guolin 李国霖		Graduated from the Sericulture major.	Ministry of Industry Decision: rejected
Li Jiqing 李吉庆		Graduated from Accelerated Classes in Agricultural and Forestry Schools	Yalu River Logging Company Decision: rejected

Zhang Yundong 张云栋		Forestry graduate	Guangning 广宁 County Government Decision: Waiting for employment
Guo Min 郭敏		Fengtian Agricultural and Forestry School	Yalu River Logging Company Decision: rejected
Yao Wensheng 姚文陞		Graduated from the Fengtian School of Agriculture and Forestry	Yalu River Logging Company Decision: rejected
Liu Junchen 刘俊臣	Hope to promote sericulture in Fengtian	Graduated from the Sericulture major.	Guangning County Government Decision: rejected
Sui Hongju 隋鸿举	Devote to industry development	Graduated from the Kyoto Agricultural School with a recommendation letter from the Ministry of Agriculture and Forestry	Fengtian Provincial Government Decision: rejected

Note: \* represents those who have applied twice.

# refers to those who were accepted by the Yalu River Logging Company.

Source: “fengtian xingzheng gongshu wei donglu guancahshi chengfu caimu gongsi niqing pai linke biyesheng lianxi shi,” 奉天行政公署為東路觀察使呈覆採木公司擬縣請派林科畢業生練習事, 191303, Liaoning Provincial Archives, JC010-01-007889; “Fengtian xunanshi gongshu wei linke biyesheng xiabingheng deng bingqing chijiao caimu gongsi zhuoliang renyong shi” 奉天巡按使公署為林科畢業生夏秉衡等稟請飭交採木公司酌量任用事, 191503, Liaoning Provincial Archives, JC010-01-0022573.

The term *linzheng* was also used to cover a wide range of things related to forests in a more localized way. For example, in Zhang Zuolin’s *Fengtian Regulation of State Forests* issued in 1919, he used *linzheng* to refer to the state forest allocation, in particular, state forest logging under his leadership instead of the Beiyang government in Beijing. While in Benxi magistrate Bai ShangChun’s notice, forest administration represents a logging ban. For example, in his notice to the local people, he wrote: “We strictly prohibit cutting down young timber to burning charcoal, in order to lay stress on *linzheng* and enrich people's livelihood.”<sup>22</sup> Here *Linzheng* represented the people’s welfare under his management.

*Linwu* (林務 forest affairs) was the term that had its special role in northeastern China’s forestry as it became an equivalent to the notion of “frontier affairs” (邊務 *bianwu*), and was

<sup>22</sup> “Fengtian shengzhang gongshu wei benxi xiancheng mianshou tanshui yanjin sishao yizi yanglin shi,” 奉天省長公署為本溪縣呈免收炭稅嚴禁私燒以資養林事, August 1924, Liaoning Provincial Archives, JC01-000-7795.

being used to address the issue of forest conflicts and disputes at the northeastern frontier associated with the Japanese, Russian, and Koreans in the early twentieth century. Since the 1860s, the Qing government had adopted the policy of “strengthening the borderland with immigrants.” Northeast China’s issue was therefore defined as “frontier affairs” managed by the local Bureaus of Foreign Affairs (*jiaosheju*). However, as the conflicts over raft stealing and floating logs on the Yalu River escalated, “forest affairs” (*linwu*) became a new category for negotiations and resolutions over the timber disputes (floating log disputes will be discussed in Chapter Two).

## CONCLUSION

Japan’s successful mobilization of Hokkaido’s forest resources had benefited from direct management by the Ministry of Agriculture and Commerce and the state forest system (*kokuyurin* 國有林). However, when Zhou Ziqi tried to apply the model to China by initiating the centralized and direct control over the northeastern forests, unexpected conflicts arose. The inter-bureaucratic conflicts about forest ownership as well as the central-local disputes over the forest income distribution led to the decentralization of state forest management. From Zhou Ziqi to Gu Zhongxiu, the state forestry bureaucracy shifted from centralized control to a more decentralized and localized forest practice.

The practice of state forestry created new meanings and space in forest categories. In the Republican Era, the notion of *Linzheng* (forest administration) offered legitimacy to justify both the Beiyang government’s and the local warlord government’s tapping into the frontier forests. However, the discourse of *Linzheng* could not win the forestry graduate a proper job opportunity in their expertise. The quest for specialized training in forestry did not

create a large forestry job market as northeastern China's forestry was always a complicated matter that could not be solved only by specialized training. *Linwu* (林務 forest affairs) was another term that had its unique role in northeastern China's forestry as it became an equivalent for the notion of "frontier affairs" (邊務 *bianwu*), and was being used to address the issue of forest conflicts and disputes at the northeastern frontier associated with the Japanese, Russian, and Koreans in the early twentieth century. The new vocabularies of forestry that encompassed state power, western forestry, anti-imperialism, and traditional Chinese agriculture transformed into a new form of governance in China's state-making process.

## Chapter 5. Mountain, Land, and Forest: Forest Rights and the Forestland Disputes in Fengtian Province in the Republican Era

### INTRODUCTION

The multiplicity of property forms in Manchuria has been studied with respect to peasants and cultivated land, but little attention has been paid to local variation and negotiation over property rights in forest. The different taxonomies of the Manchurian forests linked multiple forms of tenure and property. In the Qing period, three categories were used to indicate forests in Northeast China—“*di*” (land), *shan* (mountain), and *lin* (forest)—which were used in a mixed and equal way. However, after 1912, the character of “forest” alone replaced the other two categories and gradually became a fixed term for characterizing the forested space. The change in the forest terms in the Republican period reflected a fundamental and institutional change in Northeast China’s land and forest management.

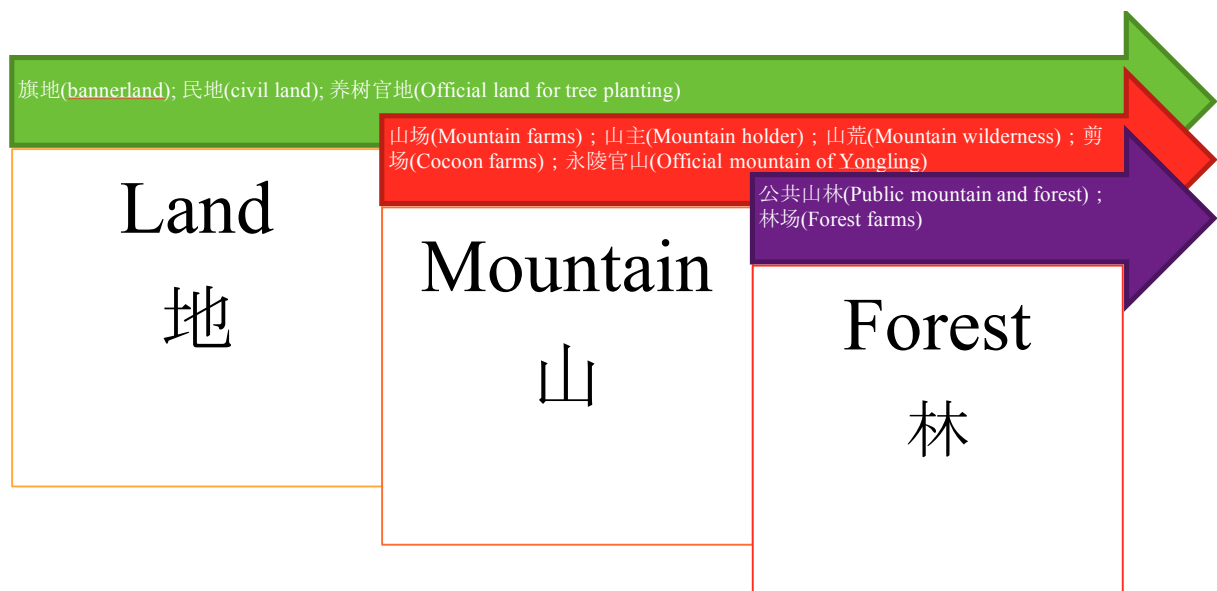


Figure 12: Forest Categories

Sources: the forest names collected from the state forest registration and forestland conflicts in the Liaoning Provincial Archives.

Reardon-Anderson’s and Isett’s explorations on the transplantation of the Chinese customary land system into Manchuria in the middle Qing Dynasty had given us a basic

picture of the land tenure arrangement in Northeast China.<sup>1</sup> Enatsu Yoshiki's study on the Fengtian bannermen at the end of Qing further stressed the vital role that land had played in the period of rapid change. By purchasing the official property initially owned by the Manchu princes and nobles, the Chinese bannermen in Fengtian accumulated both wealth and social capital, thus rising to power.<sup>2</sup> Chenshuang's book on the state migration project in Shuangcheng in the 1860s further explained the close relationship between the land allocation and the social construction of bannermen status boundaries.<sup>3</sup> In the late Qing and early Republican period, what changed correspondingly with the land property transfers were the entire state ideology and institutions behind land management, and the nature of Northeast China's woodlands constituted an essential component in this transition.

This paper examines the property disputes of forestland caused by the establishment of the Chinese state forestry from 1912 to 1930 and explores the ways in which the Qing legacies of land being both recognized and challenged under the new vision of the state forest tenures in Fengtian. Under the state-issued land certificate system, villages in Northeast China had developed rules and management systems under the rubric of *land tenure* that defined forest property rights primarily in terms of land and cocoon rather than trees. However, after the fall of the Qing Dynasty, the customary land system came into conflict with a Beiyang government's newly established state forest system. This conflict is at the heart of this chapter. In 1912, The Beiyang government (1912-1928) created the Ministry of Agriculture

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<sup>1</sup> James, Reardon-Anderson, "Land Use and Society in Manchuria and Inner Mongolia during the Qing Dynasty."

*Environmental History* 5 (2000): pp.503-530.; Isett, Christopher Mills, "Village Regulation of Property and the Social Basis for the Transformation of Qing Manchuria." *Late Imperial China* 25:1(2004): pp.124-186.

<sup>2</sup> Enatsu Yoshiki, *Banner Legacy: The Rise of the Fengtian Local Elite at the End of the Qing* (Michigan: University of Michigan Ann Arbor, 2004).

<sup>3</sup> Chenshuang, *State-sponsored Inequality: The Banner System and Social Stratification in Northeast China* (Stanford, California: Stanford University Press, 2017).

and Forestry to assess and manage the forests in China. By promulgating the “Rules for the Allocation of State Forests in the Three Eastern Provinces” (*Dongsansheng guoyoulin fafang guize* 東三省國有林發放規則) and the first national Forest Law (*Senlinfa* 森林法), state forest tenure became an independent category and institution practiced by a self-consciously modern bureaucracy.

Moreover, the state forest tenure system served as a novel institution specially designed for securing Northeast China’s borderland sovereignty. By exerting state ownership control on the natural forests in Northeast China, the Beiyang state forestry program was as an effort of recentralization in the northeastern frontier as well as an attempt to combat Japanese imperialism. However, in a forested space like Northeast China, the extension of state forest tenure into the land tenure system had led to a differentiation between land tenure and forest tenure on the same piece of land, made the status of private forestland ambiguous, and thus invoking a series of land property disputes. In other words, the customary land tenure that had long undergird Fengtian society was challenged by the practice of state forest tenure.

The source materials for this chapter come mainly from archives of Fengtian Forest Works Bureau’s (*fengtian linwuju* 奉天林務局) and the Fengtian Provincial Governor’s Office’s (*fengtian shengzhang gongshu* 奉天省長公署) from 1915 to 1930, stored in the Liaoning Provincial Archives (LPA). They include both the state forest registration records, a total of 123 cases; and the forestland disputes, a total of 53 cases. Based on the full records of them, this paper tries to answer the following questions: (1) How did the state forest system interact with the warlord rule in Fengtian?<sup>4</sup> (2) And under what conditions was state forest

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<sup>4</sup> For studies on warlord rule in Northeast China, see Gavan, McCormack, *Chang Tso-Lin in Northeast China: China, Japan, and the Manchurian Idea, 1911-1928* (Stanford, California: Stanford University Press, 1977); Edward, McCord, *Military Force and Elite Power in the Formation of Modern China* (London and New York: Routledge, 2014); Ronald Suleski, Zhang Zuolin and Wang Yongjiang: Beiyang zhengfu shidai de Fengtian zhengfu 張作霖和王永江: 北洋軍閥時代的奉天政府 [Zhang

tenure a threat to local land tenure rights? Inspired by Du Zhengzhen 杜正貞's research on the legal recognition of forest rights in Republican south China,<sup>5</sup> I examine the establishment and implications of the state forestry in the forested space of Northeast China, delve into the newly emerging conflict with respect to the forest tenure right and the land tenure right, and discuss the unintentional consequences of state forest tenure turning into a local empowerment of the banner institution of the Qing mausoleum government office as well as the local warlord Zhang Zuolin's regime.

### WOODLANDS OF FENGTIAN (LIAONING)<sup>6</sup>

“I visited this imperial tomb in a solemn mood, and I contemplate the hardships that my ancestors had overcome for this great and successful career. Verdant pines and rich cypresses cover the ground, and the auspicious birds fill in the forests.” [瞻敗園陵肅，凝思大業艱。龍蔥松柏茂，瑞鳥滿林間]<sup>7</sup> The poem by the Kangxi emperor, sacrificing at the Yongling Mausoleum (the tombs of Nurhachi's ancestors) in 1682, presented a picture of Manchuria as Manchu's sacred homeland, but also, in his poetic vision, a land clothed in

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Zuolin and Wang Yongjiang: *The Fengtian Government During the Beiyang Warlord Period*. Translated by Xi Youwei 徐有威. Beijing: Zhongyang bianyi chubanshe 中央編譯出版社 Central Compilation and Translation Bureau, 2012.

<sup>5</sup> Du Zhengzhen 杜正貞, Wanqing minguo shanlin suoyouquan huode yu zhengming—Zhejiang longquanxian yu jiandexian de bijiao yanjiu 晚清民國山林所有權獲得與證明——浙江龍泉縣與建德縣的比較研究, *Journal of Modern History* 近代史研究, 4 (2017): 78-91.

<sup>6</sup> Fengtian province was officially established in 1907, covering three prefectures and six towns. It was renamed “Liaoning” in 1907 but changed to “Fengtian” in 1914. It kept the name of “Fengtian” from 1914 to 1929 when Zhang Xueliang renamed it as “Liaoning” again in 1929. This paper uses Fengtian to indicate the area that included both Shengjing and Fengtian in the late Qing and the Republican period.

<sup>7</sup> Aisin Gioro Hiowan Yei 愛新覺羅·玄燁, Xingjing 興京, see Zhang Jiasheng 張佳生, *Duru jiajing: manzu zongshi wenxue* 獨入佳境: 滿族宗室文學 (Shenyang: Liaohai chubanshe, 1997), 52.

wildwood. Natural forests constituted about half of the Manchurian territory, extending from the mouth of the Yalu River northward to the Heilongjiang (Amur) Valley in a green belt over 1500 kilometers long.<sup>8</sup> According to the *Mantetsu* forestry survey in the 1910-1920s, the total area of NE China's forests reached 861,080,000 *mu* and forest stock in the region and was as large as 15,135,481,000 *shi*. For many centuries, natural forests had provided shelter for man and beast, and cover for game and timber. They spread naturally in eight districts, along the Yalu River, Sungari (Songhua River), Tumen River, Mudan River, Lalin River, Chinese Eastern Railways, Greater Khingan Mountains and Lesser Khingan Mountains. There were as many as 300 tree species, and they varied in climate, landform, and altitude. Korean pines, vestiges of the ancient forest, survived in the woodland from Mount Changbai to the Lesser Khingan Mountains. Conifers grew on mountain lands beyond 900 meters, including Chinese pine (*yousong* 油松), larch, yeddo spruce (*yulinsong* 魚鱗松) and yew (*zishan* 紫衫), which accounted for 40% of the forest. Below 900 meters, broadleaves fringed the valleys and the lowering hills, accounting for 60% of the woods. They contained ash (*shuiquliu* 水曲柳), juniper (*shan'gui* 山檜), liden (*duan* 椴), Manchurian walnut (*hutaogiu* 胡桃楸), kalopanax (*ciqu* 刺楸), oak, white birch, white poplar, Chinese maple (*semu* 色木) and willow.<sup>9</sup> Swathes of woodland spread north and south and from the valley to valley, as recorded by the Kangxi Emperor, a green mantle "that blotted out the sky, covered the sun, and whose fallen leaves even blocked the springs flowing on the ground."<sup>10</sup>

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<sup>8</sup> Wang Chi-Wu, *Forests of China*, (Cambridge: Harvard University, 1961), 34.

<sup>9</sup> Chenrong 陈嵘, *Lidai senlin shilue ji minguo linzheng shiliao* 歷代森林史略及民国林政史料, (Nanjing: Jinling University, 1934), 114-115.

<sup>10</sup> Aisin Gioro Hiowan Yei 爱新觉罗·玄烨, *Kangxi jixia gewu bianyi zhu* 康熙几暇格物编译注, annotated by Li Diyi 李迪译 (Shanghai: Shanghai guji chubanshe, 2008), 80.

Fengtian Province was located in the lower reaches of the Liao River, adjacent to Jilin in the northeast, overlooking North Korea across the Yalu River. It connected to Inner Mongolia in the southwest and bordered on the Yellow Sea and the Bohai Sea in the south. In the late Qing period, Fengtian governed three circuits of *Yixundao* 驿巡道, *Haiguandao* 海关道, and *Dongbiandao* 东边道; six sub-circuits of Fengtian 奉天, Jinzhou 锦州, Xinmin 新民, Changtu 昌图, Hailong 海龙 and Taonan 洮南, and a population of 10 million and 690 thousand.<sup>11</sup> In 1912, the Beiyang government abolished the Qing administrative divisions and established a new three-tier province-circuit-county system in China. The new Fengtian province contained three circuits in 1914: *Liaoshendao* 辽沈道 governing 30 counties in the south, *dongbiandao* 东边道 administering twenty counties in the east, and *taochangdao* 洮昌道 overseeing twenty counties in the north.<sup>12</sup>

The forests in Fengtian were in the transitional zone of the Mount Changbai forests and the North China flora. They stretched across three central districts in the eastern Fengtian: the Songhua River valley, the Tumen River valley, and the Yalu River right bank. The Yalu River forests occupied an area of 9,030,000 *mu*, almost half of Fengtian's territory, constituting Fengtian's most forested region. In this area, the primary zonal forest were broad-leaved Korean pines in the east, and in the west were pine and oak forests.<sup>13</sup> In the high Qing period, both the Yalu River forests and the Tumen River forests were in good condition. Under the dual principles of Qing's Willow Palisade division and the Qing-Chosŏn tributary relationship, the extended wood areas along the Yalu River were enclosed as the "Sino-

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<sup>11</sup> "Dili'er," 地理二, *Dilizhi* 地理志, *Qingshigao* 清史稿, Vol. 55, No. 30.

<sup>12</sup> Gao Decai 高德才, *Qiantan liaoningsheng xingzheng quhua de lishi yange* 淺談遼寧省行政區劃的歷史沿革, *The Journal of Shenyang Normal University* 沈陽師範學院學報, 1(1996), 28..

<sup>13</sup> "Linye 林業" in *Dandong shizhi 1876-1985* 丹東市志 1876-1985 (Shenyang: Liaoning kexue jishu chubanshe, 1991), 121.

Chosŏn buffer zone.” Land cultivation was limited to space inside of the Willow Palisade, and any activities of logging or ginseng collection were strictly forbidden outside of the *Fenghuangcheng* 鳳凰城 garrison gate.<sup>14</sup> After the 1870s, with rising foreign tensions and famine, the Qing state was forced to legitimize the common access to the “buffer zone” and encouraged migrant settlement, thus mobilizing a large influx of migrant population that constituted the later mainstream of loggers. The arrival of Chinese and Korean peasants and loggers in Manchuria helped revive the region’s agriculture, trade, and economy. Since then, the Yalu River forests had been a mainstay of Fengtian commercial forestry.

After the Russo-Japanese War, Fengtian has divided into 1) the Kwantung Leasehold Territory and 2) the South Manchurian Railway Zone, colonized by Japan’s “four-headed governance.”<sup>15</sup> For the un-colonized territories of Middle and North Manchuria, the Qing banner garrison system gradually dissolved and gave way to the China-proper-style civilian administration after the 1907 New Policies reform. In 1907, the Qing government established a foreign forest concession in Fengtian, by starting a Sino-Japanese-joint corporation –Yalu River Logging Company (YRLG) in Andong. At the demand of the Japanese council, the Qing government granted the logging right to trees, but no ownership right to land, to 30 kilometers along the Yalu River right riverbank, as the company’s special timber concession (See Map 1). By deploying the exclusive logging rights to the woodland in *Dongbiandao*, the YRLG under Japan’s control thus monopolized the harvesting, hauling, and transportation of timber in Fengtian’s most forested area.

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<sup>14</sup> Kim Seonmin, *Ginseng and Borderland: Territorial Boundaries and Political Relations Between Qing China and Choson Korea, 1636-1912* (Oakland: University of California Press, 2017).

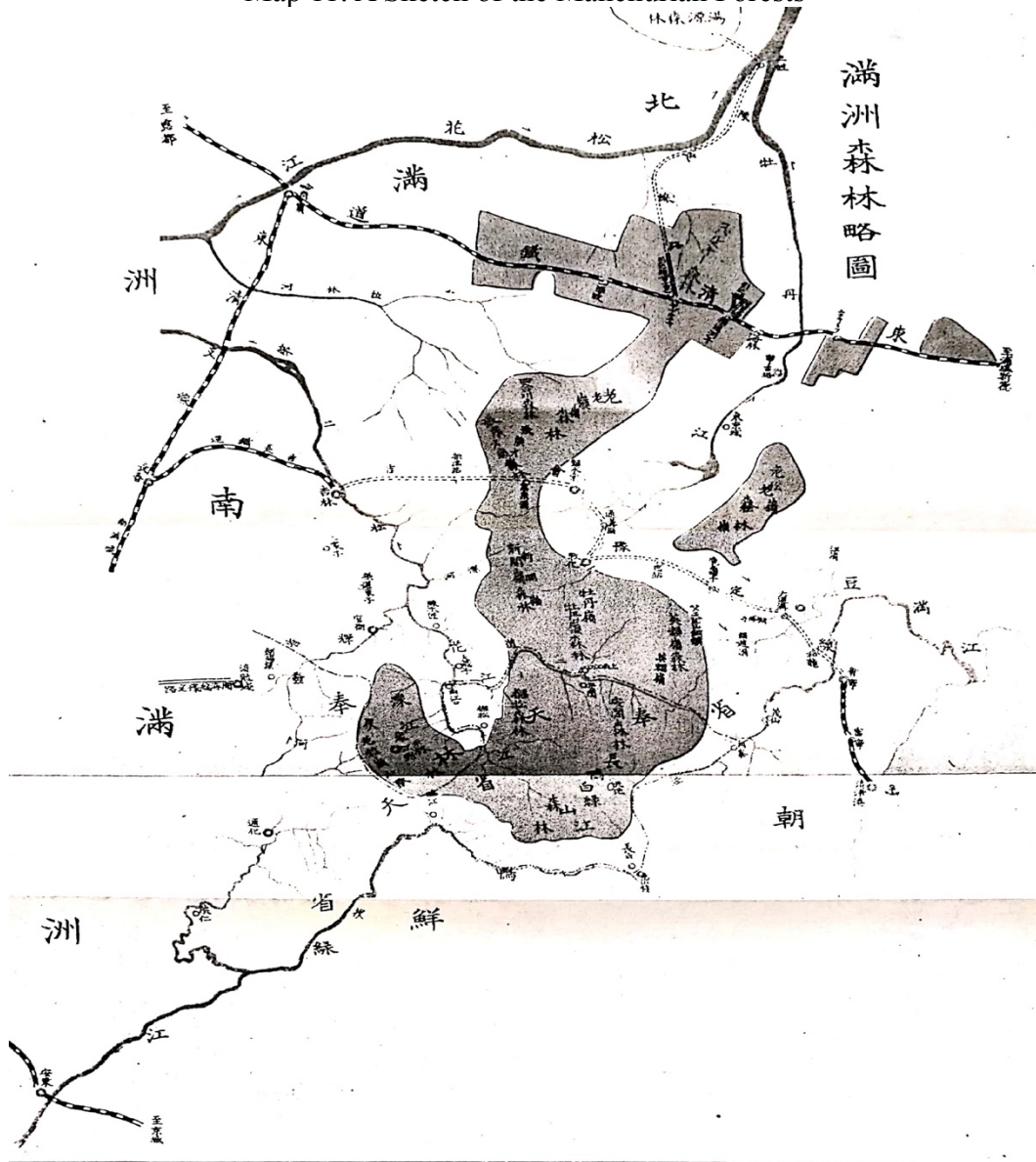
<sup>15</sup> The four-headed governance includes SMR, the Japanese Diplomatic Department, the Kwantung Government-general, and the Kwantung Army. Esselstrom, Erik, *Crossing Empire's Edge: Foreign Ministry Police and Japanese Expansion in Northeast Asia* (the University of Hawai'i Press, 2009); O'dwyer, Emer, *Significant Soil: Settler Colonialism and Japan's Urban Empire in Manchuria* (Harvard University Asia Center, 2015).

Map 10: Japan-Controlled Areas in the Republican Fengtian (marked in green)



\*Notes: Japan-controlled areas in Fengtian were composed of three parts: (1) the auxiliary zone of the South Manchurian Railway; (2) The Kuantung-leased territory in Dalian; (3) The forest concessions of the Yalu River Logging Company  
The Fengtian Government governed the rest of the areas under Zhang Zuolin.

Map 11: A Sketch of the Manchurian Forests



Source: *Manshū shinrin ryakuzu* 滿洲森林略圖 [A Sketch Map of the Manchurian Forests], [*Ou Ryo Kkou Seizai mugen kōshi an'nai* 鴨綠江製材無限公司案內 *A Guide to the Yalu River Wood Processing Company*], compiled by the Yalu River Wood Processing Unlimited Company 鴨綠江製材無限公司, 1926, Dandong Municipal Library, China.

## LAND RELATIONSHIP IN THE MANCHURIAN FORESTS

### *“Guandi qingzhang:” The State Land Privatization Project*

Until the early twentieth century, northeast China experienced several waves of land reforms. In 1907, the New Policies reform transplanted the province system into Manchuria and transformed the old military government into three new civil governments of Fengtian, Jilin, and Heilongjiang. Simultaneously, the civil governor-official Xu Shichang reorganized former manor lands and other properties into civil areas (*mindì* 民地) by selling them to private citizens. According to Enatsu Yoshiki, through the 1907 state privatization project, the bannerland registered under the nobilities, three mausoleums (*sanling* 三陵) and other imperial government agencies were largely passed into the hands of the Chinese bannermen, such as Zhang Zuolin, Zhang Rong, and Yuanjinkai, who served as bannerland managers (*zhuangtou* 莊頭) in Qing Dynasty and became powerful local elites during Qing's decentralization.<sup>16</sup>

In 1912, the new Beiyang government took over the Manchurian territory and rearranged a new wave of state land disposal program (*guandi qingzhang* 官地清丈). The imperial mountains and bannerland that had not been privatized were now called the Imperial Estates (*huangchan* 皇產). Both the Beiyang government and the Zhang Zuolin regime continued to dispose of them to the civilian commoners in order to extract more revenues. In 1915, the Fengtian provincial government established the Fengtian Official Land Disposal Bureau (*Fengtian guandi qingzhangju* 奉天官地清丈局). It served as a particular organ for investigating and allocating official land in Fengtian Province. The bureau had four branches

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<sup>16</sup> Enatsu Yoshiki, *Banner Legacy: The Rise of the Fengtian Local Elite at the End of the Qing* (Michigan: University of Michigan Ann Arbor, 2004).

offices in north, south, east and west, and was responsible for distributing the uncultivated land (*xianhuang* 閑荒), surplus land (*yuhuang* 余荒) and Mongol land (*menghuang* 蒙荒) within the province.<sup>17</sup> The main principle for disposing of the official land was to give priority to those who cultivated the earth, and it was called the “priority possession right” (*youxianquan* 優先權). For example, the imperial tombs and the surrounding land were imperial properties, but the emperor or the royal family did not have direct control over the land. Instead, the officials of the Imperial Household Department and the *Sanling yamen* had the actual command. In particular, the managers, as well as the tenant farmers, of the official manors and the *Sanling* Tomb had high power over the land. Therefore, during the land disposal process, the former officials and the tenant farmers were often given priority to purchase properties from the Official Land Disposal Bureau. By selling the official land to those who actually controlled them, the Fengtian government not only reorganized the former official land into civil land but also preserved the existing order of local society.<sup>18</sup> According to a report from the Land Bureau of Manchukuo, between 1913 to 1924, the local government sold 11,775,000 *mu* of both timberland and cultivated land (categorized by official land/bannerland) to the civilian commoners, including the imperial tribute mountains and the Mongol noble manors, which were not much affected in the late Qing land reclamation program. Moreover, it generated about 18,000,000 *yuan* for the Fengtian provincial government.<sup>19</sup>

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<sup>17</sup> Zhongguo kexueyuan minzu yanjiusuo Liaoning shaoshu minzu lishi diaochazu 中國科學院民族研究所遼寧少數民族社會歷史調查組, *Manzu lishi dang'an xuanji* 滿族歷史檔案選輯 (Beijing: Zhongguo kexueyuan chubanshe, 1963), 201-202.

<sup>18</sup> Enatsu Yoshiki, Establishment of the Modern Land System in Fengtian at the Beginning of the Twentieth Century: Development of Land Market in Manchuria, *The Memoirs of the Toyo Bunko* (2001):101-102.

<sup>19</sup> Manshukoku Tochikyoku, *Manshu ni okeru tochi seido gaiyo*, 1935, pp.42-53. Sonoda Kazuki, *Hotensho zaisei no kenkyu* (Hotenjijohsha, 1927): Appendix p.1.

## *Land Tenure and Forest Management*

The property rights and ownership forms governing forest management in Northeast China were directly associated with land. I divide forest management and ownership patterns in four categories: (1) private mountain; (2) mountain farm (*shanchang* 山场), household plots of economic forest (mostly cocoon-producing forest), and (3) public forest (*gonggong shanlin*), the collectively-owned public forest supplying firewood.

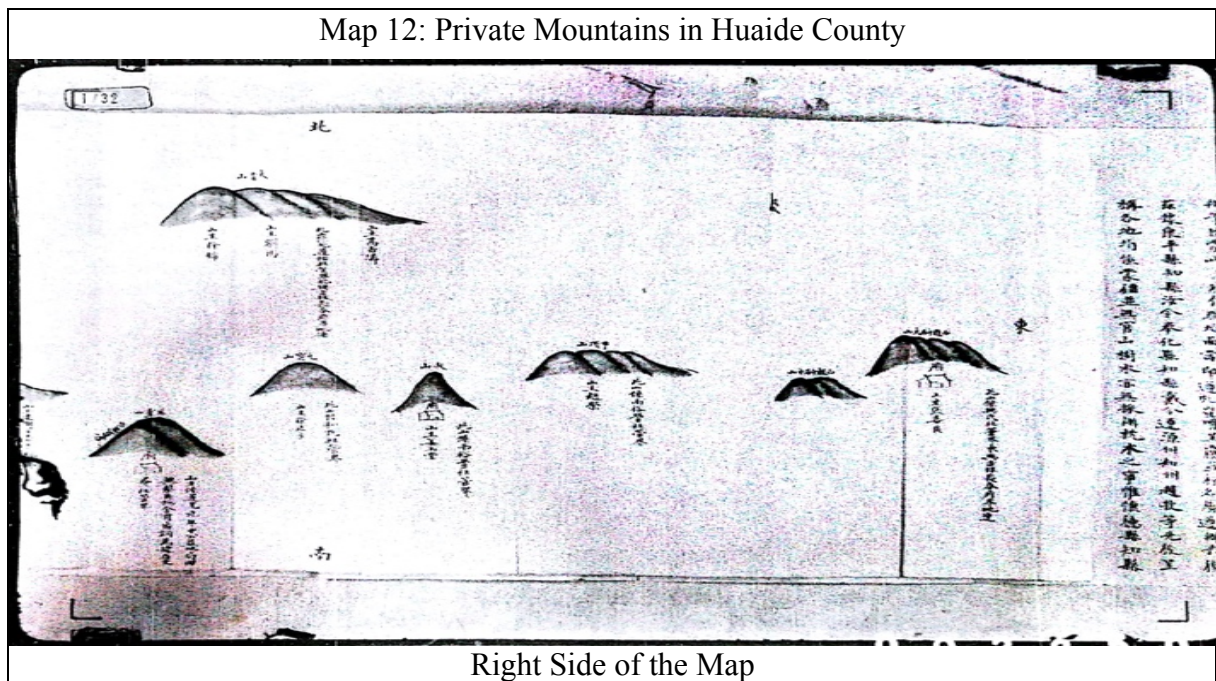
### *(1) Private Mountain*

Under the land tenure system, forested and non-crop-producing land were all characterized as “mountains.” Dating back to the late Qing period, the 1907 Jilin Forestry Bureau regulations had divided the Jilin forests into three categories: the forbidden mountain (*jinshan*), the official mountain (*guanshan*), and the civil mountain (*minshan*).<sup>20</sup> The title of the “official mountain” in the late Qing period was similar to that of the “state forest” in the Republican context, indicating the state ownership rights to certain pieces (word choice) of forests. The custom of “naming [the] forest after mountain” continued in the Republican Fengtian. As revealed in a forest survey conducted by the local magistrate in Changtu 昌图, the “private forest” was described in terms of “civil mountain,” and the forest owner was named as “mountain owner” (*shanzhu*) instead of “forest owner.” In 1913, the Changtu magistrate reported to the Fengtian provincial government that “Changtu held no government-owned forests. The White Dragon mountain and other nine mountains in Xingmin under investigation belonged to the civil household Zhang Xiliang and others. They were privately-owned and were with respective ownership evidence.” (昌圖府知府呈：無官山樹木，查興

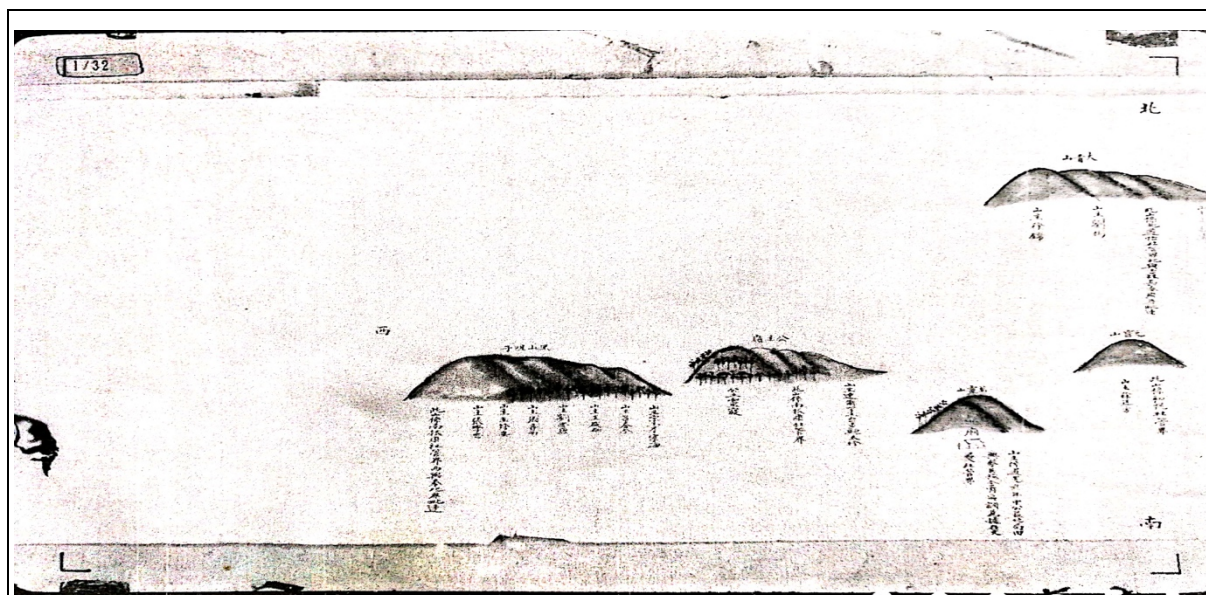
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<sup>20</sup> “Wei chushi chuanganban quansheng linye zhangcheng bingyiqie banfa yang shangmin rending qi gelin zunyou,” 為出示創辦全省林業章程並壹切辦法仰商民人等其各凜遵由, Oct 18, 1907, Jilin Provincial Archives, J015-02-0001.

民等設大白龍駒等山 9 處，系民戶張喜良等之產。均各有執業憑據，繪具圖說) The magistrate then presented the nine privately-owned forests in “a Mountain Map in Huaide County”(Huaide xian shantu 懷德縣山圖), and characterized the nine mountain forests as “the privately owned and taxed properties” (*minjian youzhu youke zhi chan* 民间有主有课之产).<sup>21</sup> The fact that forest was described in terms of the mountain and that the magistrate used full tax payment records as the key evidence for the household ownership over trees, indicated the very fundamental mindset of forest ownership defined and included in the land tenure system in the early Republican period.



<sup>21</sup> “Fengtian xingsheng gognshu wei xingjing fudutong zi xinminfu, changtufu, hailongfu chengbao riren zai shirengou dengchu lanfa daomu qingxing shi,” 奉天行省公署為興京副都統咨新民府、昌圖府、海龍府呈報日人在石人沟等处濫伐道木情形事, 1909, Liaoning Provincial Archives, JC010-01-2276.



Left Side of the Map

Source: “Mountain Map in Huaide County” (*Huaide xian shantu*), LPA 2276.

Mountain names	Mountain owners ( <i>shanzhu</i> )
From the east	
White Dragon Mountain ( <i>Bailongju dashan</i> 白龙驹大山)	Zhang Xiliang 张喜良
Flat-topped Mountain ( <i>Pingdingshan</i> 平顶山)	Zhao Rong 赵荣
Sharp Peak Mountain ( <i>Jianshan</i> 尖山)	Jiang Yutang 姜玉堂
Shoe-shaped Silver Ingot Mountain ( <i>Yuanbaoshan</i> 元宝山)	Xu Tingfang 徐廷方
Big Green Mountain ( <i>Daqingshan</i> 大青山)	Gao Xiangtao 高香涛, Liu Yu 刘雨, Xu Jin 徐锦
All Soul Mountain ( <i>Wanlingshan</i> 万灵山)	owned by Tianxing 田兴 and Cai Lianglu 蔡良旅 from the Charity Land Bureau ( <i>Gongyi diju</i> 公益地局) in the Daoguang period, as evinced by the horizontal inscribed board ( <i>bian'e</i> 匾额)
The Princess's Mansion ( <i>Gongzhufu</i> 公主府)	Da'erhan tutaiji 达尔罕土台吉, Bao Taizhen 鲍太珍
Black Mountain ( <i>Heishan juzi</i> 黑山咀子)	Cai Zonghai 才宗海, Lu Chunjin 吕春金, Liu Zongtang 刘宗唐, Zhang Xiyu 张喜雨, Wang Zhenan 王珍安, Zhang Xuezhong 张学忠

## (2) Mountain Farm

In the late Qing period, the trend in government policy in Northeast China was to open land to settlement and to permanent agriculture. In order to encourage migrant settlements, the local government issued two kinds of certificates to migrant farmers who were willing to settle down and pay rents and taxes as proof of permanent tenancy. One was the land certificate (*dizhao* 地照, also named *dazhao*). This was issued to people who cultivated arable

land and paid land rents (*nake* 納課). The other was the cocoon certificate (*jianzhao* 繭照). It covered forested mountain farms (*shanchang*) where oak trees were planted to raise silkworms. People were required to taxes in cocoons. In the early twentieth century, most forests in Dongbian were managed as mountain farms (*shanchang*), as productive units of cocoon or ginseng under individual or collective control. The state privatization projects further transformed permanent tenancy to permanent ownership. Thus, both certificates not only recognized the land and mountain farms designated to the residents as private properties but also guaranteed the Qing government revenue.

Under the state-issued land certificate system, villages developed rules and management systems under the *land tenure* rubric. They defined forest property rights primarily in terms of land and cocoon rather than trees. As long as the households paid land rents or cocoon taxes within the recorded land certificate boundaries, private residents solely owned and managed their individual properties. The idea and practice of forest ownership in terms of land tenure was also deeply rooted in local residents' mind. As stated in a 1919 petition submitted to Forest Works Bureau, the local peasant Zhao Yutian 赵余田 explained his understanding of the relationship between land, mountain, and forest. He said:

*As far as I understand it, I have land, and then I should have a mountain. Forest originally grew on the mountain (so that forest should belong to me). China recognized private ownership, which was different from state ownership. However, from a different angle, private land was also state property. For example, taxes and rents were targeted on nothing but private land; land registration and rent increase came from nothing but private land. Ever since the New Policies, the wealth of our local people's was used out, and our sufferings increased.*<sup>22</sup>

伏思民等有地，即應有山，森林本生於山。中國有民有，例應由別。然以通理論之，民地亦系國產，如課賦餉糈，無不對於民間；加地升科，無不出於民地；況新政繁興以來，小民之膏腴殆竭苦累倍增等情形 (LPA 1313).

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<sup>22</sup> “Fengtian shengzhang gongshu wei huanren xianmin chengkong chengshenyuan gaosuotang zhangshi jingtun quanjing senlin bing baosong diaocha jingguo shi,” 奉天省長公署為桓仁縣民呈控承審員高索堂仗勢鯨吞全境森林并报送调查经过事, 1919, Liaoning Provincial Archives, JC010-01-001313.

In Zhao's eyes, forests were attached to mountains and mountains derived from one's land property. Therefore, forests were private properties. When other land tenure disputes arose, people stressed that forest ownership naturally and legally included in land ownership. For example, the representative of *Dabeigou* village council Wu Wenqi 吳文琪 stated in his complaint:

*We were natives living in dabeigou for generations, and we have land, respectively. Mountain farms were included within the four boundaries (of the written land certificate). Timbers were just used for charcoal and grazing.*<sup>23</sup>

身等均系大北溝世居土著，各有土地，四至內附有山場，樹株不過僅作柴薪牧養 (LPA 7771).

Another peasant Huang Delu 黃德祿 from *Changle bao* stated that:

*We were residents living in Changle bao for generations...All the local mountain wildernesses and forest farms were inherited from our ancestors, as proved by the four boundaries on the land certificate.*<sup>24</sup>

民等祖居桓仁縣屬昌樂保等...地方所有山荒林場均系祖遺，有地照四至為據 (LPA 1313).

Another petitioner from Huinan county argued:

*I am the first farming household from Huinan. I claimed this piece of land in 1876 and received my land certificate in 1880. Within the four boundaries of my written land certificate, I had cultivated crops on the flat grounds and grown forests on the mountains. I depended (forests) for a living, paid taxes to the state and had lived in peace with it for almost forty years. In my understanding, since (the trees) were within the boundary of my land property, I naturally had ownership rights to them.*

民等均系湖南原墾之戶。光緒 2 年報荒，6 年領照，四至以內平地開墾成熟，山嶺培養林木。40 余年藉此以謀生活而納國課，相安日久。民等以為，既在管業界內，自然應歸所有權 (LPA 27952)。<sup>25</sup>

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<sup>23</sup> “Fengtian shengzhang gongshu wei tianzhiye baogao gaopifu deng sifa xingjing linchang mucai shi,” 奉天省長公署為田治野報告高皮甫等私伐興京林場木材事，1920, JC-010-01-7771.

<sup>24</sup> “Fengtian shengzhang gongshu wei huanren xianmin chengkong chengshenyuan gaosuotang zhangshi jingtun quanjing senlin bing baosong diaocha jingguo shi,” 奉天省長公署為桓仁縣民呈控承審員高索堂仗勢鯨吞全境森林并报送調查經過事，1919, Liaoning Provincial Archives, JC010-01-001313.

<sup>25</sup> “Fengtian shengzhang gongshu wei sunhuanzhang deng chengkong donggeng taoling minyou senlin shi,” 奉天省長公署為孫煥章等呈控董庚套領民有森林事，1921, Liaoning Provincial Archives, JC-010-01-27952.

### (3) *Public Forest*

Mountain farms in Fengtian usually functioned in two ways, depending on the tree species. First, mountain farm generally forested with economic forests, such as oak trees, was distributed to households for management and was put to the purpose of sericulture. The local government requested a proper amount of cocoon taxes from domestic families. Second, mountain farm forested with timber forest, such as poplars, were to provide firewood, pasture, and a moist shelter for ginseng production. Villagers, within one village, had the right to harvest from any part of the farm at any time. The latter type was often recorded as a “public forest” in the historical records. Resident Li Degui’s 李德贵 petition underscored how the term public forest became the legal lexicon through which public farms were referred to. Li Degui wrote:

“We held one public forest in our village, which was situated in the third river valley (*sandao hezi* 三道河子). First, it functioned as a logging area; second, it was used as pasture land. This mountain farm was by no means the same as the un-owned wilderness. (We) had the land certificate... This mountain farm was essential for our livelihood in this region.”

民等壹鄉有公共山林壹處，坐落本縣三道河子。壹系樵采之區，二系牧養之地，歷有多年。。。此山場不同無主閑荒，現有大照可證。。。此山場實有壹方之生命關係 (LPA 1313).

All of these petitioners understood forest areas managed under customary tenure as land property and that the land certificate served as their ownership proof. Therefore, as landholders, the residents expected the state to protect their forest ownership rights. Moreover, local government and villagers also developed another land convention associated with land tenure: the land boundary expansion and the priority given to the old controllers over the ownership right to the surrounding land. As the years went by, land boundaries designated to local households continued to expand gradually. In the late Qing and early Republican periods, officials of Tax Check (or officials of Official Land Disposal Bureau) often got involved in adjusting the four boundaries of the land (*sizhi* 四至) allocated to

residents. In a routine investigation of land boundaries, an official would check the recorded four edges of the property written in the land certificates, and then look into each household's real landholdings. If any household held extra land beyond what their certificates had delimited, the official would then order the household to revise their previous written boundaries in the certificates. Thus, they would be required to pay more land rents. In this way, both the household's private properties and the government's revenue sources expanded.

The transition of Northeast China's forest resources from the emperor's coffer to the state's treasury in the late Qing period had an impact on the perception of the northeastern forests. This made the question of whether forests belonged to the country as germane. As the forests on the northeastern borderland were constantly involved in the territorial and sovereign disputes between China and Japan, they were often considered as China's state property when diplomatic disputes broke out. A 1906 declaration announced by the Ji'an magistrate in the late Qing reveals how state-owned forests were defined:

*People like you who log forest were craftsmen in ancient times. Zuozhuan 左传 states that where there is a forest in the mountains, there were forest-logging techniques. Zixi 子夏 once said that different craftsmen living together would make a workshop. Think for yourselves, in the hierarchy of elites, peasants, craftsmen, and merchants; you have a civilized title. You deserve the praises as the elites and officials. Why not have some refined thoughts and try to win credit for your ancient and famous ancestors? Over such a little thing, you even start a fight? The Japanese soldiers asked for timbers for military use, and you then assemble 600-700 people armed to fight with them? This is so rude! Just think whether or not you deserve your title as craftsmen (gong)? In the future, when you act, you should consider about your status. You should consider the state. Otherwise, where does the money come from for my clothes and food? Don't the forests you have logged come from the state's rivers and mountains (guojia jiangshan 國家江山) ?<sup>26</sup>*

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<sup>26</sup> Jian xian zhishi wu guangguo linshi baihua jiequangao 輯安縣知事吳光國臨時白話解勸稿, May 2<sup>nd</sup>, 1906, in Zhongguo renmin zhengzhi xieshang huiyi jilinsheng jianshi weiyuanhui wenshi ziliao weiyuanhui ed., 中國人民政治協商會議吉林省集安市委員會文史資料委員會, *Jian kangri douzhengshiliao wenshi ziliao xuan* 集安抗日鬥爭史料·文史資料選, No. 14 (Ji'an: Ji'an shi zhengxie wenshi ziliao weiyuanhui, 2008), 57-58.

The then Japanese soldiers confiscated the timbers logged by the Chinese loggers along the Yalu River and invoked a serious confrontation. As shown above, the magistrate was trying to persuade the Chinese loggers not to engage in any fight with the Japanese soldiers, in case it would cause more trouble for the Chinese government. It was obvious that this notion of “state forest” above was different from that in the Republican period. The late Qing “state forest” was more of a vague conception mostly triggered by sovereign conflicts over forest resources and without a systematic and bureaucratic state management plan of the forest.

### STATE FOREST REGISTRATIONS IN FENGTIAN

The concept of “state forest” (*guoyoulin*) was put into practice in 1912 when the Beiyang government (1912-1928) started regulating colonial penetrations into the northeastern forests. The Ministry of Agriculture and Forestry (MAF) issued “the Rules for the Allocation of State Forests in Three Eastern Provinces” (*dongsansheng guoyoulin fafang guize* 東三省國有林發放規則), authorizing the forestry agency to designate the untitled wilderness and native woodlands in the northeastern frontier into what was called “state forests.” Responsibilities for allocating these state forests fell under the Jilin Forest Works Bureau (*Jilin linwuju* 吉林林務局) and its branch in Harbin (*Harbin linwu fenju* 哈爾濱分局) directly under the MAF. Reorganized as the Forestry Bureau of Three Eastern Provinces in 1913, the Jilin Bureau covered all three provinces until 1917 when the new Ministry of Agriculture and Commerce (MAC) transferred its power to the three Forest Works Bureaus in Fengtian, Jilin, and Heilongjiang. The new Forest Works Bureau under each provincial government served to administer the state forest land, promote their commercial use, and collect government revenues. Due to funding shortages, the Forest Works Bureaus in Jilin and Heilongjiang provinces experienced dramatic abolition and restoration during the Republican period. While secured by the strong financial base of Fengtian and the local ruler Zhang

Zuolin, the Fengtian Forest Works Bureau encountered no suspension but expanded the office into the Industry Department (*shiyeting* 實業廳), fully integrating into the Fengtian provincial administration.

The localized state forest management in Fengtian began in 1917 when the Ministry of Agriculture and Commerce launched a new forestry reform and issued the “Rules for Forest Works Bureau in Northeastern China” (*Dongsansheng linwuju guicheng* 东三省林务局规程), transferring its power in Fengtian to its local forest works bureau. Thereafter, the Fengtian provincial government under Zhang’s control issued another three state forest ordinances that localized and accelerated state forest allocations in the region. Initially, the Fengtian Provincial government localized the deforestation and afforestation of state forests via two government orders. The first was the “Rules for Fengtian State Forest of Small Area Allocation” (*Fengtian guoyoulin xiaomianji fangfang guize* 奉天國有林小面積發放規則) that mostly followed the 1912 state forest allocation rules but limited the forest allocation area to two hundred *fangli*. The second was the “Rules for Fengtian State Forest Protection” (*Fengsheng baohu guoyoulin senlin guize* 奉省保護國有森林規則) that banned logging on trees less than ten years old and advocated on tree planting.<sup>27</sup> Moreover, Zhang Zuolin designed a “Provincial Forest Region” (*shengyoulin* 省有林) in an area of 40,000 *fangli* around Changbai Mountains, covering the three counties of Antu, Fusong, and Liuhe. Zhang Zuolin proposed to the MAC Chief Zhou Ziqi to contract the state forests in the above areas

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<sup>27</sup> “Fengtian shengzhang gongshu wei dongsansheng guoyoulin fangfang zanxing zhangcheng ji fengsheng guoyou senlin zhangcheng cao’an shi,” 奉天省長公署為東三省國有林發放暫行章程及奉省國有森林章程草案事, 1928, Liaoning Provincial Archives, JC010-01-004559.

as a provincial entity and put them directly under the Fengtian provincial government.<sup>28</sup> Zhou Ziqi approved the idea, but the financial burden of contracting forests in that vast area thwarted Zhang's grand provincial forest plan and suspended the program. However, the provincial government officially enclosed the woods in the three counties of Antu, Fusong, and Liuhe. Finally, with the rising number of local household state forest registrations, the Fengtian government charged loggers a special eight percent "state forest management fee" (*guoyoulin guanlifei*) on forests identified as state-owned. This was permissible through the "Rules for State Forest Management Fees Collections" (*Zhengshou guoyoulin guanlifei Guize* 征收国有林管理费规则).

The key policy on consolidating the state forest tenure was the 1919 "Fengtian General Regulations of State Forests Rearrangement" (*Qingli Fengtian guoyoulin jianzhang* 清理奉天国有林章程). The Fengtian regulation was specially released to deal with the ongoing local forestland disputes. It served two functions. First, it expanded and further detailed the categorization of "state forest." In the 1914 Forest Law, "state forest" was defined as trees that grew naturally on Chinese soil without workforce. However, in the 1919 Fengtian General Regulations, it stipulated another three situations where forests ought to be state-owned. It read:

*First, when the ownership of the forestland was acquired after the forests grew up, the forests should be owned by the state; second, without definite evidence of forest ownership, the forests possessed by corporate or individual should be owned by the state; third, under the first two circumstances, timbers, extracted from the natural forests or without legitimate ownership evidence, should be owned by the state.*

The new definition broadened the range of state forests and favored the forest works to identify more state forests bureau in the forestland disputes. Moreover, the 1919 regulation

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<sup>28</sup> Fengtian shengzhang gognshu wei nongshangbu ziqing fa antu fusong linqu zhizhao shi 奉天省長公署為農商部咨請發安圖撫松林區執照事, 191903, Liao Provincial Archives, JC010-01-7763

officially separated land ownership and forest ownership by setting a time limit on the old priority possession right, associated with land tenure, and supporting a new principle of “first-come, first-served,” in the process of claiming state forests. It decreed:

*The Forest Works Bureau gave priority to those, who planted trees on their own lands or who provided legitimate evidence of forest ownership, to report and claim their private forests within three months. If overdue, the woods would then be identified as state forests and should open to the public to claim. By that time, no forestland disputes should be allowed.*<sup>29</sup>

The separation was further enhanced by a government-issued order one month later. The order stressed that the state forest registration must not be mixed into land tenure registration and that a report-and-registration procedure for state forest was a must.<sup>30</sup>

The more localized legal arrangement for the state forest allocation in Fengtian persisted until the Mukden Incident in 1928. By 1928, the Beijing government’s Ministry of Agriculture and Works (MAW, renamed as Ministry of Agriculture and Mines in 1929) had replaced the old MAC. It enacted a new “State Forest Regulations” (*Guoyoulin fafang zhangcheng* 國有林發放章程), and the then Chief of MAW Mo Dehui 莫德惠 announced the abolition of the 1912 state forest allocation rules. The new state forest regulations mostly continued the 1912 state forest allocation procedures but doubled all the state-forest-related fees. In response to that, the head of Fengtian industry department, Liu Heling, adjusted the new unified state forest rules to Fengtian’s local customs and issued the new “State Forest Allocation Regulations in Fengtian” (*Fafang fengsheng guoyoulin zhangcheng cao’an* 發放奉

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<sup>29</sup> Fengtian shengzhang gongshu wei shiye ting cheng qingli guoyou lin jianzhang zhanxian sange yue shi 奉天省長公署為實業廳呈清理國有林簡章展現三個月事, 1919, Liaoning Provincial Archives, JC010-01-7789.

<sup>30</sup> Fengtian shengzhang gongshu wei huanren xianmin chengkong chengshenyuan gao suotang zhangshi jingtun quanjing senlin bing baosong diaocha jingguo shi 奉天省長公署為桓仁縣民呈控承審員高索堂仗勢鯨吞全境森林并報送調查經過事, 1919, Liaoning Provincial Archives, JC010-01-001313.

省國有林章程草案) that maintained the special provincial forest region and tripled the allocation fees.<sup>31</sup>

Table 17 Laws and Regulations on Northeast China's Forests

Timeline	Forest Laws and Regulations	Issuance Authorities
1912	“The Rules for the Allocation of State Forests in Three Eastern Provinces” ( <i>Dongsansheng guoyoulin fafang guize</i> 东三省国有林发放规则), <i>abolished in 1928</i>	Beijing (Ministry of Agriculture and Forestry)
191408	“A Revision to the Rules for the Allocation of State Forests in Three Eastern Provinces” ( <i>Xiuzheng dongsansheng guoyou senlin fafang guize bushi</i> 修正东三省国有森林发放规则部示)	Beijing (Ministry of Agriculture and Commerce)
1914	“Forest Law” ( <i>Senlin fa</i> 森林法)	
1915	“Implementary Provisions for Forest Law” ( <i>Senlin fa shixing xize</i> 森林法施行细则) “Reward Ordinance for Afforestation” ( <i>Zaolin jiangli tiaoli</i> 造林奖励条例)	Beijing (Ministry of Agriculture and Commerce)
1917	“Rules for Forest Works Bureau in Northeastern China” ( <i>Dongsansheng linwuju guicheng</i> 东三省林务局规程)	Beijing
1917	“Rules for Fengtian State Forest of Small Area Allocation” ( <i>Fengtian guoyoulin xiaomianji fafang guize</i> 奉天国有林小面积发放规则), <i>Abolished in 1929</i> “Rules for Fengtian State Forest Protection” ( <i>Fengsheng baohu guoyoulin senlin guize</i> 奉省保护国有森林规则), <i>Abolished in 1929</i>	Fengtian (Forest Works Bureau)  *Zhang Zuolin announced the independence of Fengtian
191808	“Rules for State Forest Management Fees Collections” ( <i>Zhengshou guoyoulin guanlifei Guize</i> 征收国有林管理费规则)	Fengtian Notice No.2, Fengtian Provincial Military Governor and Provincial Governor
191902	“Provincial Forest Region” ( <i>Shengyoulin</i> 省有林) in Antu, Fusong, and Liuhe “The Fengtian General Regulations of State-owned Forests Rearrangement” ( <i>Fengtian guoyoulin jianzhang</i> 清理奉天国有林简章)	Fengtian  Notice No.1, Fengtian Provincial Governor's Office
191905	Rules of Timber Logging ( <i>Cai fa shumu guize</i> 采伐林木规则)	Fengtian
191910	“Three-Month Extension for the Fengtian General Regulations of State Forests Rearrangement” ( <i>Qingli guoyoulin jianzhang zhanxian sange yue shi</i> 清理国有林简章展限三个月事)	
192806	“State Forest Regulations” ( <i>Guoyoulin fafang zhangcheng</i> 国有林发放章程) *Mo Dehui, Chief of Agriculture and Industry, announced that “The Rules for the Allocation of State Forests in Three Eastern Provinces” was officially abolished.	Beijing (Ministry of Agriculture and Works)
1929	“Draft State Forest Allocation Regulations in Fengtian” ( <i>Fafang fengsheng guoyoulin zhangcheng cao'an</i> 发放奉省国有林章程草案)	Fengtian

<sup>31</sup> “Fengtian shengzhang gongshu wei dongsansheng guoyoulin fafang zanxing zhangcheng ji fengsheng guoyou senlin zhangcheng cao'an shi,” 奉天省長公署為東三省國有林發放暫行章程及奉省國有森林章程草案事, 1928, Liaoning Provincial Archives, JC010-01-004559.

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“Temporary Regulations on Liaoning State Forest Arrangement”(Zhengli Liaoning guoyoulin zanxing zhangcheng 整理辽宁国有林暂行章程)

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Sources: *Zhangjian quanji* 张謇全集 (Nanjing: Jiangsu guji chubanshe, 1994): pp.358-360.; LPA 33082, 33083, 4548, 4559, 7763, 7789.

The state forest tenure registration was undertaken by the Fengtian Forest Works Bureau (reorganized into the Industry Department in 1918), with five branch offices in Benxi, Linjiang, Fusong, Huinan, and Huankuan. Its main function was to map, allocate, and lease state forests to individual households and villages as non-timber producing mountain farms (*shanchang*) and timber-logging camps (*famuchang*). Authorized by the Fengtian local regulations on state forest, the Forest Works Bureau only allowed three months for old controllers to employ their priority possession rights over their forests. Other than that, the bureau took on the principle of “the first claim, first-served,” and encouraged people to claim either the untitled wilderness or the un-owned state forests. Shaped by the two contradictory bureaucratic principles of land priority right and the first claim in the forest, the forested space in Northeast China was redefined and would witness a series of conflicts.

### *The Forestry Reports*

Fengtian’s state forest reporting-and-contracting rose in 1919. According to a forestry survey in 1929, in Fengtian, up to 1.551.668 *mu* of forests were under state ownership, 18.700 *mu* were under public ownership, and for about 311.669 *mu* were under private ownership.<sup>32</sup> Generally, between 1915 to 1930, 123 stands of state forests were registered at the Fengtian Forest Works Bureau. Among them, 113 records were state forest registers, 4 were state forest transfers, and 6 were state forest claim renewals. These records provided detailed information about locations, names, and sizes of the forests being claimed, vividly depicting both the government and people in the state forestry program. As demonstrated in the data set, the

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<sup>32</sup> An Shinong 安世农, *Zhongguo senlin fa* 中國森林法 (Shanghai: huatong shuju, 1933), 6.

geographical space where state ownership was established in forest mainly covered eleven counties located in the northern part of Fengtian. These counties constituted the “sovereign forestry space,” rivaling the Japanese’s special logging concession along the Yalu River and the attached land to the South Manchurian railways. Among them, Benxi 本溪, Xingjing 兴京, Xinbin 新宾, and Fengcheng 凤城 were the four main counties where state forest tenures were concentrated. In Benxi, the number of state forest registers reached 70, while the number was 18 in Xingjing. Moreover, there were 8 records in Xinbin and 6 records in Fengcheng. Other registers scattered in Huanren, Tonghua, Jinchuan, Kuandian, Fusong, Antu and Liuhe. Interestingly, all the four counties above were established as the Manchu Autonomous Counties in the PRC.

Table 18

State Forest Tenure Registration Records in Fengtian, 1915-1930												
Time	Benxi 本溪	Xingjing 兴京	Xinbin 新宾	Fengcheng 凤城	Huanren 桓仁	Tonghua 通化	Jinchuan 金川	Kuandian 宽甸	Fusong 抚松	Antu 安图	Liuhe 柳河	Total
1915	1											
1916									1			
1917		1								2	1	
1918												
1919												
1920	1	2				2						
1921	6	4										
1922	18											
1923	4	4										
1924	10	1		1	3							
1925	3	3										
1926	3	2		1								
1927	1	1		1								
1928	4											
1929	9		6	2			1					
1930	10		1	1				1				
Total	70	18	8	6	3	2	1	1	1	2	1	113

SOURCES: PLA 4560, 4577, 4578, 4580, 4581, 4582, 4584, 4586, 4593, 4594, 4595, 4596, 7729, 7765.

NOTE: the table only includes the state forest tenure registration cases released by PLA by June 2018. Forest claim transfers and renewals were only counted as one registration.

The forestry investigators submitted 70 forestry survey reports (*linye baogaoshu* 林業報告書) to the Industry Department. Each report contained ten sections of information, including the time of registration, the tenure holder's name, the forest farm location, contour and geology, the forest status, the age of stand, acreage, and volume, non-timber products, timber use, means of transportation, and timber market. From them, we can get a glance of state forests' topography, how they were used under the state forest tenure system, and who held their titles.

Oak trees were the major species under state ownership. Other species under state control included birches, elms, and poplar. The investigator specifically stressed that "pines no longer existed in this area." Moreover, regarding the usage of timbers logged in the state forest farms, the forestry reports indicated three ways: railroad ties (*zhenmu* 枕木), pit holders (*yaomu* 道木), and construction materials (*jiancai* 建材). Timber markets flourished in Benxi, Fushun, and Andong. They were transported to the markets through the water and railways. Fushun was famous for its coal industry and needed large pit holders. Therefore, businesses in Fushun and Qianjinzhai 千金寨 targeted pit holders; whereas railways were being established in south Fengtian and logs of railway sleepers were delivered to Andong 安东 and Dalian 大连 in large quantities. In Shenyang 沈阳 and Liaoyang 辽阳, where a migrant population was constantly rising, timbers of construction materials were most popular.<sup>33</sup>

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<sup>33</sup> Xiang Chi's "Fengtian Forestry Survey Reports Database."

People who contracted state forests came from all walks of society, from ordinary villagers at the bottom level to the governing elite like Zhang Xueliang 張學良.<sup>34</sup> Because contracting state forest was not inexpensive, most of the claimants were either entrepreneurs or local leaders, such as village heads. A villager or entrepreneur who successfully contracted a piece of state forest land usually had several ways to manage it. In one instance, they could establish a forestry company and hire loggers, requiring them to undersell all of their timbers to them at a reasonable price. In other cases, the forest landlord could merely charge a fee for access to that forest. In either case, the contracting of state forest to a villager or entrepreneur had only logging but not ownership rights of state forests. According to the records, 7 companies had contracted state forests in Benxi, Fusong, Xingjing, and Xinbin. Five were forestry companies that sold local lumbers, (including *Qiangben* 強本 and *Liaozhong* 遼中 companies in Benxi, *Changxin* 昌新 in Xingjing, and the Jilin *Songjiang* 松江 company in Fusong); one was the Shenyang-Hailong railway company, in need of railway sleepers; and another one was the coal and iron venture in Benxi, using timbers as pitwoods for mines. Six merchants claimed more than 1000 *mu* of state forest. Wang Fuchen contracted three pieces of state forest land in Benxi, Zhang Binchen, You Xuemeng, Wang Wenqing, Li Qiansheng, and Wu Huichen had claimed two pieces of state forests each. The Fengtian ruler Zhang Xueliang made his personal investment in Benxi as well, contracting an area of 11 *mu* of state forest in the big valley (*dajia lazi*) in Benxi.<sup>35</sup>

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<sup>34</sup> Zhang had contracted out the forestland in Benxi from Bao Shichang family. See “Fengtian shengzhang gongshu wei shiyeting chengqing gei geshang baolin xuke zhengshi,” 奉天省長公署為實業廳呈請給各商報林許可證事, 1923, Liaoning Provincial Archives, JC010-01-007765.

<sup>35</sup> “Liaoningsheng zhengfu wei nongkuangting chengbao donglu gexian senlin qingxing shi,” 遼寧省政府為農礦廳呈報東路各縣森林情形事, 1929, Liaoning Provincial Archives, JC010-01-004560.

## THE FORMATION OF FOREST RIGHTS AND PROPERTY DISPUTES

The development of state forestry rules in Fengtian precipitated a large number of forestland disputes. These conflicts mainly encompassed three types of struggles: struggles over the idea and practice of state forest tenure (*guoyoulin*); struggles over conflicting claims to the same piece of forestland (*baotao* 包套); and struggles over illegal logging and sales to Japanese merchants (*daofa* 盜伐 & *daomai* 盜賣). Fengtian forestry officials documented a total of 51 disputes spanning 1915 to 1930, of which ten went on to become lawsuits. Table 19 tabulates those disputes and lawsuits by category. Boundary disputes (*baotao*) over competing claims and forest monopoly made up one major category. These accounted for 46 percent of the cases. Consternations over illegal logging accounted for 36 percent of the disputes. Outside of boundary and illegal logging, conflicts between state forest tenure and private forest conventions, as well as conflicts between state timber harvesting and non-timber forest productions, were fewer but involved the most villagers and thus profoundly influenced the state forest policy in Fengtian.

Table 19 Categories of State Forest Disputes and Lawsuits

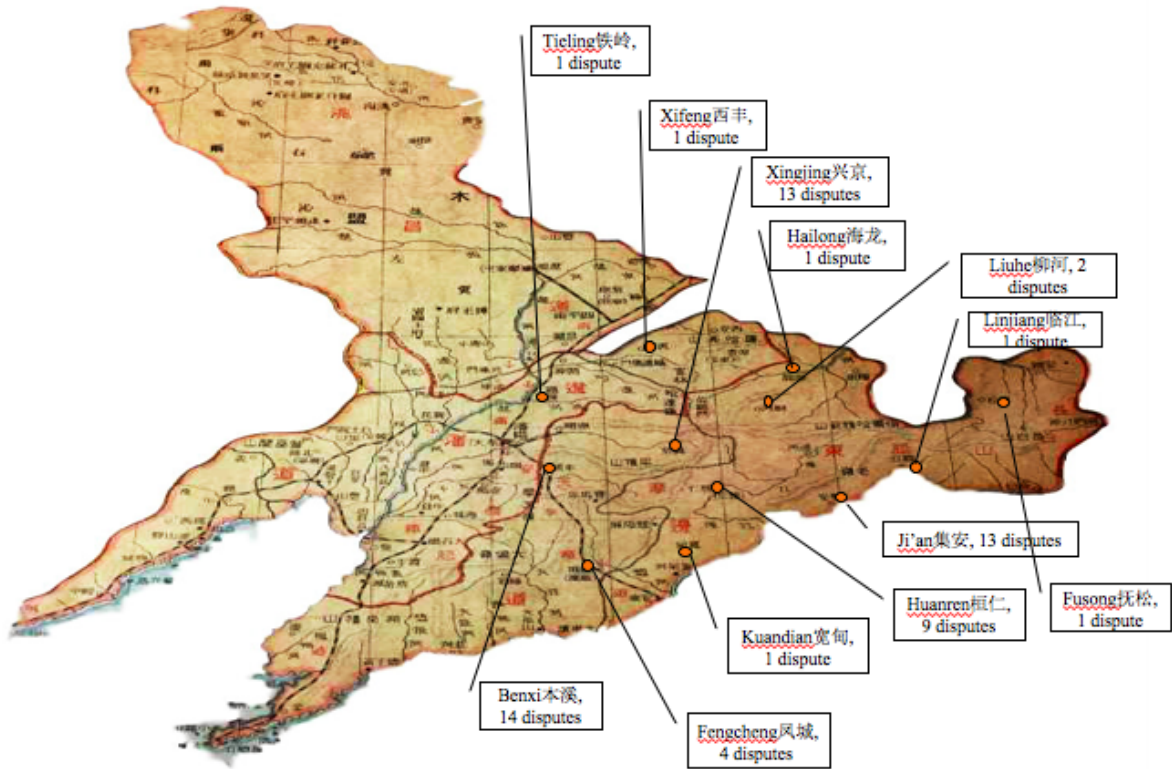
Category Place	State forest tenure	Boundary( <i>baotao</i> 包套)		Illegal logging( <i>daofa</i> 盜伐)		Other	Total
		Competing claims	Monopoly	Chinese	Japanese		
Benxi 本溪	1	1	6	2	2	2	14
Xingjing 兴京	1	3	2	5	2		13
Huanren 桓仁	1		6	1		1	9
Fengcheng 凤城		2		1	1		4
Liuhe 柳河		1	1				2
Kuandian 宽甸	1						1
Ji'an 集安					1		1
Linjiang 临江						1	1
Fusong 抚松	2						2
Huinan 辉南		1					1
Xifeng 西丰					1		1
Tieling 铁岭					1		1
Hailong 海龙					1		1

<b>Total</b>	<b>6</b>	<b>8</b>	<b>15</b>	<b>9</b>	<b>9</b>	<b>4</b>	<b>51</b>
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SOURCES: LPA 1313, 2276, 4579, 4596, 4582, 4583, 7713, 7716, 7827, 7029, 7730, 7765, 7748, 7771, 7775, 7748, 7789, 7894, 8306, 27952, 27273.

NOTE: "Other" includes logger fraud, vexatious litigation(*chansong*), and commercial rumor.

**Map of State Forest Disputes in Fengtian, 1915-1930**



Map 13 State Forest Disputes in Fengtian, 1915-1930 <sup>36</sup>

SOURCES: Provincial map of Fengtian in the Republican era.

*State Forest on Private Land*

The Forest Law and the subsequent rules and regulations on Northeast China's state forests led to a differentiation between land tenure and forest tenure on the same piece of

<sup>36</sup> Administrative units and river systems are constructed with 1820 datasets of China Historical GIS, Version 4. Cambridge: Harvard Yenching Institute, January 2007; spatial information for the Guizhou-Hunan macroregion is obtained from the data of Physiographic Macroregions (c) G. William Skinner, Mark Henderson, and Zumou Yue. Davis: University of California, Regional Systems Analysis Project, Jan 2007.

land. As a result, the ownership of forest was negotiated and thus challenged local communities' land tenure rights with regard to private forest conventions. Three rounds of complaints, filed by the local village leaders and the head of local Agricultural Society (*nonghui* 農會) in Ji'an, Kuandian, Benxi, Xingjing and Huanren counties towards the Fengtian Provincial Department of Industry, from 1919 to 1921, highlighted these tensions. Villagers in Dongbiandao with highly productive ginseng and cocoon forests had developed customary territorial control over the surrounding mountains. However, this convention came into conflict with the state forest system that identified natural forests as state-owned. The conflict soon generated a series of property disputes regarding the economic forest on mountains.

The conflict started with local residents' refusal to pay the state forest management fee required by the Forest Works Bureau. In October 1919, the Forest official Zhao Demao visited 8 *bao* 保 (*bahetan*, *sipingjie*, *huanshuidong*, *chagou*, *shuangshanzi*, *jingguiyu*, *bolinchuan* and *dabiangou*) in Kuandian County to collect the forest management fees from the households who owned the mountain farms (*shanchang*). However, he encountered stiff resistance from the *bao* leaders (*baozhang* 保長). They insisted that the forests, within the four boundaries recorded in their land certificates, were nothing but private properties. Since the local households had paid land rents and cocoon taxes, they officially owned the forests and were not obligated to pay any more state forest management fees. Customary land tenure practice in Northeast China that identified forests as attachments to land and considered that forest ownership naturally included in the ownership of land supported the private forest convention. As explained in the petition submitted by the Ji'an County magistrate Cheng Youshan 成友善, "Lands under cultivation were usually adjacent to cocoon-producing forests. It had become a common practice among the local folks, that as long as one had paid rents for

his own land, the mountain farms around should be included as their own as well.”<sup>37</sup> 山林大率毗連已墾地畝,在民間以為既經納課,則山場當兼括在內據為己有,相習成風(LPA 7789). However, Zhao Demao rejected the notion that forests on private land were private properties. He pointed out that “the forests in Dongbiandao had existed tens and hundreds of years before the migrants moved in. If the forests were not planted by the migrants themselves, then the forests were natural and should be owned by the state.” The legal base behind Zhao Demao’s argument lied in that private forests were only those planted by the landlords themselves. Otherwise, the forests were natural and should be state properties. Moreover, Zhao demanded the local households proceed with the state-owned forests report and contract procedures quickly. If not, the residents would lose their priority to claim state forests in their mountain farms.<sup>38</sup>

The Head of Industry Department, Tan Guohuan 談國桓, and the General-governor, Zhang Zuolin, supported the separation between forest and land ownership. In reply to the *bao* leaders, Tan Guohuan educated the villagers that forests on private land were not always private properties. Because “it was impossible to obtain land ownership and forest ownership with only one land certificate. The contracting of state forest and the contracting of land were two separate things.”<sup>39</sup> In the face of the continuing aggressive complaints, the Fengtian Provincial Legislative Assembly (*shengyihui* 省議會) tried to initiate an amendment to the state forest policy. However, Zhang Zuolin ended the legislative amendment and made a special declaration on the independence of forest ownership to close the case. He claimed:

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<sup>37</sup> Fengtian shengzhang gongshu wei shiye ting cheng qingli guoyou lin jianzhang zhanxian sange yue shi 奉天省長公署為實業廳呈清理國有林簡章展現三個月事, 1919, Liaoning Provincial Archives, JC010-01-7789.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

*It was a parallel relationship between the forest on the ground and the mine beneath the ground. The acquisition of land ownership and the acquisition of forest ownership were completely irrelevant...If we follow your people's claims to mix both ownerships, that was, the land ownership included the forest ownership, then why would you divide the land ownership and the mine ownership? Why not the land ownership alone included the mine ownership? Therefore, the state forest clause had nothing wrong, and there was no necessity in correcting it.*<sup>40</sup>

夫地上之林與地下之曠土對應之關係一也；取得土地所有權與取得林產所有權，截然兩毫不相涉。。為法理事實所共許。向無問題之可言，若如該民等之主張混林地為一，謂領地即包括領林，然則地與曠土何必分而為二。領地獨不能包括領曠耶？準斯以談，是該項條文並未錯誤，毋庸一會修正(LPA 7789).

Although Zhang Zuolin confirmed the validity of the Fengtian's state forest policy, the Forest Works Bureau extended another six months for local households in Dongbiandao to report and contract state forests on their private lands. In November 1921, the Fengtian Government issued a final order to clarify the land claims (*fanghuang* 放荒) and the state forest claims (*fanglin* 放林). The order underlined the two separate provisions and procedures for private land claims and state forest contracts. It stressed the difference between the forest tenure right (*linquan* 林權) and the land tenure right (*huangquan* 荒權):

*If a person, who contracts the state forest, is also willing to claim a piece of wildland, he must follow the rules of the State Wildland Claim Ordinance (Guoyou huangdi chengken tiaoli 國有荒地承墾條例). It cannot be said that the acquisition of forest right (linquan) means obtaining the land right (huangquan). It is also true that the landlord, who wishes to contract the state forest, must first comply with the State Forest Distribution Rules (Dongsansheng guoyou lin fafang guize). It cannot be said that the acquisition of land ownership is the acquisition of forest ownership. Fengtian Province holds large areas of forests and wildland. However, some people are used to old conventions, unwilling to succumb to the forest law. They only take the forest license but wants to keep the land as their own; or only take land certificate but mistakenly take the forest as what he deserved. Once the state forest has been contracted to others, they engage in disputes, arguing for their priority possession right. If lost, they despise the state power, and try to resist the result by borrowing mortgage on forest... One, who obtains forest certificate wants to claim the wildland, must visit the Land Disposal Bureau to apply for the land certificate; and one, who owns the land and wants to log state forests, must apply to the Industry Department for state forest contracts. The six-month extension will soon end, and so will your priority possession right. When the extension ends, whoever first reports and contracts the state forest, he will get the forest*

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<sup>40</sup> Ibid.

*use rights, and the right is hence determined. Any delay in contracting state forest will cause your regret.*<sup>41</sup>

是放林與放荒，既各有獨立之條文，各具不同之手續，則荒地所有權與森林所有權，亦當然純系兩事。蓋領林者如願領荒，須另遵領荒規則辦理，不能謂取得林權即取得荒權。亦猶之領荒者如願報林，須先遵領林規則辦理，不能謂取得荒權即取得林權。奉省大片森林，大段荒地，所在多有，只以人民狃於習慣，昧於法令。或僅持林照而認荒地為己有或僅持荒照，而誤以森林為應得；壹旦為他人報領，則又以優先占有等名詞藉口起而訟爭。爭之不勝，又往往蔑視國權；押借外債，藉圖抵制。究其結果，有林權者仍絕對不兼荒權，有荒權者仍絕對不兼林權。然因此誤解而廢時失業，破產亡家則時有所聞。嗣後有林照者果欲領荒，須另赴清丈局報墾，有荒照者果欲領林，須趕赴實業廳報采，須知清理國有林簡章，業經期滿撤銷，優先權之辦法亦失效力，無論何人壹經首報，權利即為確定，毋再坐誤，自貽後悔也 (LPA 1313).

The outcome of these negotiations was forestry reforms leading to the separation of land tenure and forest tenure, as well as ownership and management of state forests and the land disposal administration dealing with land tenures. Hence, there were some differences in property right arrangements for state forest lands as compared to household plots and private mountains. The ownership of the forests remained with the state, and only the logging rights to the trees were contracted to the individual household.

### *The Imperial Tomb Forest Dispute*

The perception and practice of state forest not only challenged the private forest convention but also triggered overlapping claims to the same piece of forestland. The Qing imperial tombs and its surrounding mountains drew frequent conflicts over forest boundaries. Besides, the involvement of banner institution would further complicate the matter. Bannerman Ji's dispute with the commoner Zhang illustrated how state forest tenure encountered the land disposal policy and reshaped Fengtian's social order. In the early 20<sup>th</sup> century, the Fengtian Bureau for the Disposal of Official Land conducted a full land survey and sold vast areas of official land to private civilians. The Yongling mausoleum official land

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<sup>41</sup> Ibid.

was also redistributed and privatized among the banner officials and the imperial tomb tenant farmers (*lingdian* 陵佃). Born as tomb tenant of Bordered Blue Banner (*hanjun xianglan qi*), Ji Xuecheng (紀學成) inherited from his father and ancestors 20 *fangli* of the *suique* forestland of Yongling, located at the Pear Trees Grassland (*lishu dianzi* 梨樹甸子) in the north of Fenghuangcheng County, with the right of permanent tenancy (*yongdian quan* 永佃權) and the permit for growing trees (*yangshu zhizhao* 養樹執照) issued by Yongling Mausoleum Office (*Yongling yamen* 永陵衙門). In claiming the forestland at the Bureau of Forest Works in 1915, Ji Xuecheng unexpectedly engaged in a dispute with a local villager Zhang Yongbo (張永波), who followed the principle of the Bureau of Forest Works to contract the same area of the forestland before him.

The contending focus was the ownership of a piece of fifty-five-*fangli* “extra land” (*fuduo* 浮多) surrounding Ji’s land. Ji’s justifications for territorial control over the extra land rested on the land lease contract issued by the Office of Banner Affairs (*qishu*) and the permit of growing trees issued by Shengjing Ministry of Works (*Shengjing gongbu*). According to Ji, his ancestors Ji Mingjin and Ji Xuekong worked as tenant farmers on the 121 *mu* of the leased land as early as the year of 1777. As the land was too barren to cultivate crops, Ji Mingjin repeatedly applied to cancel the tenancy but was refused by the Qing court. In 1871, the Guangxu Emperor’s approved Ji’s ancestors’ claims to grow trees on the barren land and issued them a permit for growing trees. In managing trees, Ji and his farther paid the land rent annually to the Office of Banner Affairs (*qishu*), and the timber tax to the Mountain and Forest Tax Bureau of Ministry of Works (*gongbu shanlin choufen ju* 工部山林抽分局).<sup>42</sup>

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<sup>42</sup> “Fengtian shengzhang gongshu wei jixuecheng qingling linhchang shi konggao zhangyongbo” 奉天省長公署為紀學成請領林場事控告張永波, 1919-1924, Liaoning Provincial Archives, JC010-01-007748.

Moreover, Ji's request for the extra land control was supported by another three shreds of evidence: the lease contract offered by the Xingjing Vice-General Government Office (*xingjing fudutong gongshu* 興京副都統衙門) that gave a detailed description of the location and the boundary of the forestland, the testimonies from his *Jia* leader (*jiazhang*) Yue Xuewu 乐学武 and the *bao* leader Wang Guo'en 王国恩, and the testimony from the boundary introducer (*yingjieren* 引界人) Zhao Zhenduo 赵振铎. Therefore, he argued that according to the land arrangement principle of the Bureau for the Disposal of Official Land, the original tenant farmer had the priority possession right (*youxian quan* 優先權) in requesting the forestland. As the actual controller of the land and the contributor of all kinds of taxes, he should be given priority in granting the forestland, even including the extra forests.

The territorial requests for extra land surrounding one's own properties were relatively uncontested during the Qing period, but with the emergence of state forest tenure, this was no longer the case. The recognition of the independent forest tenure, supported by the Bureau of Forest Works, deeply challenged the old rule of the customary land ownership over the extra land. In prior official land transfers, the "extra land" that went beyond the contract's boundary delineation but surrounded the user's land property was usually sold/given to the land users as well, even when other civilians tried to purchase the same piece of extra land. The rule was that the original land controllers should be given first priority and that their rights should be fully considered, in that the Qing court regarded the old landowners as the roots for preserving the old social order. Therefore, the recognition of the former controller's territorial request for the "extra land" adjacent to his own land property had almost become a rule. However, Bureau of Forest Works only allowed three months for old controllers to deploy their priority possession right in claiming state forest. Otherwise, the bureau held the principle of "the first claim, first-served," and encouraged people to claim either the untitled wilderness

(*wuzhu lindi*) or the state-owned forest. Thus, the old land users' customary land rights were threatened, and so too was the old social order.

The Bureau of Forest Works requested Ji to return the fifty-five *fangli* extra forestland to the new landlord Zhang Yongbo.<sup>43</sup> In the nineteen petitions that Ji presented to defend his customary land rights over the extra forestland, he frequently quoted the regulations of the bureau for the Disposal of the Official Land that placed the original land users at priority. “The estate certificates in Fengtian each came from their respective government office in charge, and no special certificate was ever issued. The Sanling Mausoleum office, whose certificates had stamps of the Jade Emperor and the president, was also a department of the provincial government. Its lease contract was not insignificant. Since I was allowed to deploy my priority possession right to claim state forest before, it should be fair that I would be granted priority in renewing the state forest registration over the extra land.”<sup>44</sup> [查奉省不動產契據均系各主管衙門發給，從未有特別照據。蓋用玉皇及大總統印信者三陵衙門，亦系省長所屬，所發租照自不得謂為無足重輕。前既準民按優先權報領，嗣後測出浮多亦應按優先權準民續領，方昭公允] In response to Ji, the Head of Department of Industry (*shiyeting*)<sup>45</sup> Tan Guohuan pointed out that “if no one claimed the extra forestland before Ji Xuecheng, they would consider assigning the extra land to him. But since Zhang

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<sup>43</sup> Ibid.

<sup>44</sup> “Ji Xuecheng chengwei tingfu menghun, yushe pianan qing lingxing shiyeting zhunmin xuling ziji senlin wuyong huabo shi,” 纪学成呈为厅覆蒙混语涉徧袒请令行实业厅准民续领自己森林无庸划拨事, 1920, Liaoning Provincial Archives, JC010-01-007748

<sup>45</sup> The Bureau of Forest Works was reorganized into the Department of Industry in Oct 1919.

Yongbo had claimed the land in the first place and the forestland did not originally belong to Ji's properties. Ji's persistent petition was making trouble out of nothing."<sup>46</sup>

The Yongling mausoleum officials' participation in this dispute further complicated the matter. Mu Fuxun 穆福勛 was originally a land surveyor and was later elevated to the Forest Member of Yongling mausoleum (*yongling senlin weiyuan* 永陵森林委員). In his petition, Mu Fuxun argued that Yongling, the imperial tombs for the ancestors of the Aisin Gioros before Nurgaci, was official land. It was neither affected by any of the land privatization projects nor specifically covered by the Forest Law. Therefore, he concluded that the Yongling Mausoleum officials should have power and legitimacy to judge any property disputes concerning the Yongling Mausoleum forests.<sup>47</sup> In practice, he led the county police to Ji Xuecheng's house and forbade Ji from engaging any timber business violently by confiscating his timber logs.<sup>48</sup> As Ji Xuecheng's business partner, Fu Changfa 傅长发 ran a timber grocery *shuanghefu* 雙合福 and used to regularly purchased timbers from Ji Xuecheng. In order to rescue Ji from prison, he filed a complaint to the court that reflected another side of the story. According to him, the Yongling mausoleum officials secretly colluded with loggers and planted opium in the official forestland of Yongling Mausoleum for personal benefits under the name of privatizing the official land. In 1918, the district governor Xu Huangchi 徐凰池 caught Mu Fuxun for illegally planting opium and imposed a 700 *yuan*

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<sup>46</sup> "Fengtian shengzhang gongshu wei jixuecheng qingling linhchang shi konggao zhangyongbo" 奉天省長公署為紀學成請領林場事控告張永波, 1919-1924, Liaoning Provincial Archives, JC010-01-007748.

<sup>47</sup> "Chengwei lingdian jixuecheng siya senlin daofa shuzhu bianmai muliao nieci chengsong, qingqiu jiang jixuecheng xiejiao xianshu guian fanban yibao senlin er mian kanfashi" 呈為陵佃紀學成私押森林盜伐樹株變賣木料捏詞呈送請求將紀學成解交縣署歸案訊辦以保森林而免看法事, 1920, Liaoning Provincial Archives, JC010-01-007748.

<sup>48</sup> "Wei mufuxun zunao caifa fanghai muye qing yanyu quid" 為穆福勛阻撓采伐妨害木業請嚴予取締, 1920, Liaoning Provincial Archives, JC010-01-007748.

penalty on him. As the loggers all broke away, Ji Xuecheng paid for Mu Fuxun's fines and prohibited any future opium planting nearby. Since then, Mu Fuxun had held the grudge toward them. What he did now was to make use of the forestland dispute to make reprisals against Ji. Besides, Mu Fuxun also used to request bribes from other tenant farmers and had seriously disrupted the local order. At last, Fu Changfa characterized that the Yongling Mausoleum official's interference was nothing but anti-Republic and an act of rebuilding of the Qing.<sup>49</sup>

The decision-making power finally fell in the hands of a banner institution, Yongling's Mausoleum's Government Office (*yongling yamen*). After rounds of petitions and replies between the Department of Industry and the Yongling officials, the Vice-General of Xingjing Government Office (*xingjing fudutong*) had the final say on the ownership of banner forests. The Vice-General De Yu closed the case by withdrawing the extra forestland that Ji and Zhang had contested to *Yongling yamen*. Soon, the Xingjing Government Office established a government-civilian co-managed logging camp (*yongxing caimu linchang* 永興採木林場) and required that all incomes generated by logging go to *Yongling Yamen's* coffer. As shown above, the Yongling forestland disputes, triggered by the national forest legislation, became a way for the reinvigoration of the banner institutions in the Republic Period. The unique forest environment of the imperial tombs, empowered by the Bureau of Forest Works, unexpectedly rescued the declining former Qing institutions and extended the banner legacies of Qing.

Moreover, the new forestry perspective also stimulated other forest-related policies that had been carried out by the previous banner institution. For example, the wood certificate for reforestation issued by the Qing government had been reactivated as a means of priority

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<sup>49</sup> “Cheng wei qingquan fushen yuli shangmin, kenqing chajiu weichi gonghe shi”呈为清权复伸渔利商民，恳请查究维持共和事,1920, Liaoning Provincial Archives, JC010-01-007748.

possession right to claim forests. From the Jiaqing period until 1875, the banner-institution issued tree planting grants (*yangshu zhizhao*), which served as a means of reforestation and bannermen subsidy. Tree planting grants were fee simple, with a requirement of enclosing mountains for forest nourishments. Deng Xianglin 邓祥麟's case was one of many examples. In October 1918, Deng Xianglin, who was entitled as the candidate to the imperial exam in the Qing (*yougongsheng*), reported to the Forest Works Bureau that his great grandfather Deng Peng 邓鹏 had obtained a wood certificate (*mupiao*) from the Shengjing Board of Works (*shengjing gongbu*), and his family had managed the forest farms at *Donglutang* valley (*donglu tanggou* 东路汤沟) for three generations. Unexpectedly the Qing government ended the Shengjing Ministry of Works in 1907 and withdrew the wood certificate. Now that as the Forest Works Bureau was established, the Deng family considered themselves holding priority in claiming the forest in *Donglutang* valley.<sup>50</sup> As a result, the Forest Works Bureau rejected Deng Xianglin's petition because the wood certificates and registration records of the Shengjing Ministry of Works had been destroyed during the continuous wars and they could not verify his claims. However, the case showed the banner legacy being recognized and empowered by the new conception of the state forests.

### *Temple forest Dispute*

The problems of competing claims were also demonstrated in the case of “Hao Jiaofang Suing E Quanyin for wrong coverings of forestland in the land contracts,” where state forest tenure became a tool used by a rapacious villager to occupy someone else's private forest. Hao Jiaofang served in the army and converted to Taoism in 1895 at the Demon King Taoist

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<sup>50</sup> “Fengtian shengzhang gongshu wei linwuju hanqing jianfa zhuixiao gongbu mupiao juanshi,” 奉天省長公署為林務局函請檢發追銷工部木票卷事, 1918, Liaoning Provincial Archives, JC010-01-

temple (*guiwang miao* 鬼王廟). Furthermore, he received a Taoist priest certificate (*jiedie* 戒牒) from the Beijing White Cloud Taoist temple (*baiyun guan*) and was sent to serve as an abbot in the Sanguan Taoist temple (*sanguan miao*) since 1908. The forestland dispute between him and the local villager E Quanyin centered on the forests attached to the Sanguan Taoist temple at Huangyao Valley (*huangyao yu* 黄药峪) that E's ancestor had donated to the temple. Dating back to 1804, two Taoist believers surnamed Qi 祁 and E 鄂 donated 60 *mu* of land to the Demon King Temple with a donation certificate (*sheshu*). As the Sanguan Taoist temple was a branch (*xiayuan* 下院) of the Demon King Taoist temple, the Demon King temple allocated the 60 *mu* of land to the Sanguan branch in 1827. According to Hao, successive abbots in the temple had expended money and time to cultivating the forest on the disputed land.<sup>51</sup>

Problems arose when Hao Jiaofang tried to register the forest of 30 *fangli* with the Forest Works Bureau in September 1919. The forestry officials informed him that the same piece of forestland had already been contracted by the two descendents from E's family, E Quanyin and E Guisen, as "heritage of his ancestors." In 1914, the Republican governor issued a new version of the land contract and requested that households replace their old contracts with new ones. E Quanyin took the chance to reclaim the land by including the forest regions that his ancestors had donated to the temple into his new land lease in 1914. As the officials of Tax Check Bureau had no idea of the donation, the new land lease was approved. E Quanyin and E Guisen also employed the priority possession right to justify their forest request. They argued that "although the land was donated to the temple, the forests on the land were not donated... Therefore, in accordance with state forest rules, we, as the

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<sup>51</sup> "Fengtian shengzhang gognshu wei hao jiaofang cheng benmiao sidi zhinei peiyang senlin bei tugun toubao shi" 奉天省長公署為郝教芳呈本廟四地至內培養森林被土棍偷報事, 1928, Liaoning Provincial Archives, JC010-01-12654.

posterity of the land controllers, should have the priority to claim the forests.” In defense, Hao Jiafang claimed that forest was planted by the temple abbots and was private property. After a two-year petition and investigation, the Head of Forest Works Bureau Liu Heling 刘鹤龄 finally decided that the “forest belong to Hao Jiaofang.”<sup>52</sup> Hao Jiaofang won his temple forest back in the end.

## CONCLUDING REMARKS

With the fall of the Qing dynasty in 1912, the new Republican Beijing government, whose central authority was unstable and held fluctuating interests that often conflicted with the provinces, launched China’s first state forestry program, with a special focus on Northeast China’s natural forests. The enacting of the “Rules for the Allocation of State Forests in the Three Eastern Provinces” (*Dongsansheng guoyoulin fajang guize*) and the subsequent laws on Northeast China’s state forest led to a differentiation between land and forest tenure on the same piece of land. This triggered overlapping claims. Moreover, the divorce of forest and land ownership challenged local communities’ land tenure rights with regard to private forest conventions and promoted the criminalization of unlicensed state forest logging. In a forested space like Northeast China with multi-layered forests and land institutions, the extension of the state forest tenure challenged the old customary land rule, invoked property disputes, and developed into a force of local empowerment of the banner institution and the Zhang Zuolin regime redefined the forested space of Northeast China. As the state forest tenure practices came to configure the ways in which forestland was contested and sold, owned and controlled, they underwrote the spread of new production relations and the reproduction of the forestry economy.

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<sup>52</sup> Ibid.

The independence of forest tenure created the independent forest names. The state forest registration labeled each forest stand with a separate name based on the forest's (*senlin*) character instead of the mountain (*shan*), such as “the Benxi Yellow Glass Mountain Forest” (*Benxi huangboliyu senlin* 本溪黄玻璃峪森林). In the state forests' names, the first part usually consisted of words indicating the location, such as *yu* 峪, *gou* 沟, *cha* 岔, *ling* 岭, *waizi* 崴子 and *lazi* 砬子, referring to mountains; or *quanzi* 泉子, *paizi* 排子 or *he* 河, referring to rivers. While the latter part of the forest names ended with Chinese characters of forest (*lin* or *senlin*). Thus, the forest names in the 1920s records were very different from those in the late Qing sources. The vocabulary transition from “mountain” (*shan*) and “land” (*di*) in the late Qing period to “forest” (*lin*) in the Republican period reflected the institutional change in Northeast China's land management, that was, the emergence of the state forest tenure system.

## EPILOGUE

An article published in *Nature Sustainability* shows that since 2000, the earth has added 5% of its greening area, among which 25% percent comes from China, about a quarter of the size of the Amazon forest.<sup>1</sup> The conclusion sparks immediate discussion and debates. Admittedly, some scholars have pointed out that this statistic was problematic, as the growing green area also included the farmland. However, from the perspective of China's forestry development, indeed, China's forestland has greatly increased in the past 20 years. From the remote sensing images provided by NASA, the Loess Plateau has turned green. Electronic programs such as "Ant Forests" (*mayi senlin* 蚂蚁森林) initiated by Ali Pay have contributed to China's forest growth, but more of it comes from the management of the Chinese forestry officials and specialists. Indeed, in terms of the forestry concept, technology, and capital, China's nowadays forestry management is way more effective and productive than that of the Qing government and that of the Republican government. However, the achievement in Chinese forestry also reminded us that China has always had its own and independent development path in its social, economic, and environmental development, and we should look into China's forestry history to understand them.

## TURNING TO A NATIONAL HISTORY

Northeast China, as the intersection of multi-centers of China proper, Russia, and Korea, functioned as the same bed for different dreams.<sup>2</sup> The crossed histories revolving around forests

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<sup>1</sup> Chi Chen and others, China and India Lead in Greening of the World Through Land-Use Management, *Nature Sustainability*, 2.2 (2019):122-129.

<sup>2</sup> Hyun Ok Park 2005. Hyun Ok Park, *Two Dreams in One Bed: Empire, Social Life, and the Origins of the North Korean Revolution in Manchuria* (Durham, N.C.: Duke University, 2005).

and the continuous territorial disputes suggest the dynamics and complexities of Manchuria and reject the claim that Manchuria was an “empty space” and only wilderness. Although Schlesinger has shown in his book that Northeast China’s frontier history in the seventeenth to the eighteenth century was “international space” rather than “national space.” However, into the nineteenth and twentieth century, as this dissertation shows, that border defense would integrate knowledge, conflict, and economy revolving around the forests and gave birth to a modern forestry frontier: a formation of the Chinese territoriality.

In the high Qing period, the Manchu rulers adopted a policy of forest conservation and ethnic separation. They classified the forested space into tribute mountains and hunting garrisons, and designated the areas east of the Willow Palisade as restricted zones of “four bans” (that banned logging, fishing, hunting, and farming). Meanwhile, the court stipulated:

“People who entered the paddocks without permission, regardless of being primary and accessory culprits, once got arrested, would be interrogated about their intentions: hunting or hunting dog training; vegetable picking or timber logging. They would be convicted of crimes according to previous penalty examples. Further, regardless of being prime or accessory culprits, people who (held timbers, vegetables, or animals) from the hunting ground would be face-tattooed as “thief of hunting garrison;” People who haven’t held stolen goods of (timbers, vegetables, or animals from the hunting ground) would be face-tattooed “trespasser of hunting garrisons.”<sup>3</sup>

[私入圍場人犯不論首從刺字，拿獲私入圍場人犯，審明或打槍放狗、或采菜砍木，除照例分別擬罪外，不論首從，已得贓者，皆面刺盜圍場字；未得贓者，皆面刺私入圍場字]

Further, the Qing court made a regulation about the forestland attached to the royal tombs:

“There were boundary limits in front of and at the back of the mountains (where the royal tombs were located). If there were illegal logging of the forest attached to the royal tombs, (the officials) would check the tree stumps, and suggest a decapitation to the court, in the light of ‘Law of Stealing Goods for the Royal Sacrifice.’” The accessory culprits would be exiled to a distant frontier for penal servitude.”<sup>4</sup>

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<sup>3</sup> Zhang Rongzheng eds., 張榮錚, *qingding lifanbu zeli*, 欽定理藩部則例, Vol.37, “touqie shang 偷竊上” (Tianjin: Tianjin guji chubanshe, 1998), 322.

<sup>4</sup> “Daqing luli dao yuanling shumu” 大清律例 • 盜園陵樹木, cited by Fab Baomin 樊寶敏, Li Heyong 李智勇, *qingdai qianqi linye sixiang chutan* 清代前期林業思想初探, in Ni Genjin 倪根金 ed., *shengwu shi yu nongye shi xintan* 生物史與農史新探 (Taipei: wanren chubanshe, 2005), 147.

[山前山後各有禁限，若有盜砍樹株，驗實真正樁茬，比照盜大祀神禦物律斬，奏請定奪。  
為從者發近邊充軍]

Although the strict bans have not fundamentally put an end to the private penetrations of the northeastern forest, the management and use of the frontier forest were still in the hands of the Qing royal family.

The second industrial revolution of the late nineteenth century generated unprecedented demand for wood used in mines, railroads, and construction in East Asia. Heavily laden with timbers, the land of Manchuria were sites of encounter and social contestation for most of the twentieth century. As early as in 1896, the Tsar Russian emperor Nicolas I, in the hope of bringing the Western civilization to the Far East, and expanding the fiscal revenues, launched a military intrusion and railway extension into the forested areas deeply along the Amur and the Songhua River.<sup>5</sup> Meanwhile, the modern Japanese elites, aiming for a remedy for the Malthusian trap at home, targeted the Korean Peninsula as well as Qing's Manchuria in a series of wars. Soon after the Russian and the Japanese soldiers and scientist had an unpleasant encountering at the upper reaches of the Yalu River contesting for the Yalu River forests, the frontier forests became an objects of dispute in the twentieth century, where the old politicized space of tributary (both of Manchu-tribal and of Sino-Choson diplomatic relations) declined, and a new extractive economy of forests was in formation.

The Qing court's control over Northeast China's forest has also been seriously challenged. Although the forest utilization projects by Russia and Japan were mostly carried out in the name of cooperation with the Qing court, such as the China-Eastern Railway and the Sino-Japanese Yalu River Logging Company, the Qing court had almost no real impact on the forest harvesting activities. Therefore, every time when a Sino-Russo- or Sino-Japanese logging company was

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<sup>5</sup> Victor Zatssepine, *Beyond the Amur: Frontier Encounters between China and Russia, 1850-1930* (Vancouver: UBC Press, 2017).

established, it meant that the territorial and the economic rights of the forest were transferred to the imperial powers. For example, by the end of the nineteenth century, the forests in Jilin and Heilongjiang were lush and “had not experienced axes for thousands of years.” The forested acreage reached 2.07 million, and the forest stocks had more than 50,000 *shi*. However, after the Qing government signed the China-Eastern Railway treaty with Tsar Russia in 1896, the CER company soon initiated a large-scale forest extraction along the railroad. In 1905, after the outbreak of the Russo-Japanese War, logging along the railway line was out of control. A large number of Russian merchants and soldiers took the opportunity, and extract forests unscrupulously for own benefits. As a result, within no more than twenty years, the forest along the sixty miles of the railroad was consumed.<sup>6</sup>

The New Policies Era marked a policy shift in Qing’s forest government. In 1907 and in 1908, the Qing government revised the logging contracts with Russia, in order to safeguard their own sovereign and economic interests, especially the timber revenues.<sup>7</sup> The creation of China’s first civil Jilin Forestry Bureau (*Jilin linyeju*) in 1907 was Qing’s another bold reform to step forward and compete with foreign powers for timber profits. This indicated that the Qing government has resorted to new ideas and means to resist Russia for its forest penetration. Further, it manifested the rise of nationalism in forest management. Although the new policy and practice of the Jilin Forestry Bureau did not function smoothly, at least not able to achieve the original design of the Chinese elites, it had positive implications in promoting the idea of *linye* (林業 forestry).

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<sup>6</sup> Lu Minghui 盧明輝 ed., *qingdai beibu bianjiang minzu jingji fazhanshi* 清代北部邊疆民族經濟發展史 (Harbin: Heilongjiang jiaoyu chubanshe, 1994), 263-264.

<sup>7</sup> Xu Shichang 徐世昌, *dongsansheng zhenglue* 東三省政略, Vol. 3, “Jiaoshe 12 senlin” 交涉十二・森林, in Zheng Yi 鄭毅 ed., *dongbei nongye jingji shiliao jicheng 3* 東北農業經濟史料集成3 (Changchun: Jilin wencshi chubanshe, 2005), 315.

As most scholars have seen, the main purpose of the New Policies in the late Qing Dynasty was to maintain the precarious rule of the Qing.<sup>8</sup> Like the Meiji state-sponsored projects, the New Policies projects launched by the Qing government were in need of long-term large-sum capital investment. However, Qing's weak fiscal situation after a series of imperial reparations was unable to fund them. Under this circumstance, the industrial and commercial (*shiyè* 實業) reform impeded by funding shortage thus continuously caused conflicts between the local government and the local merchants/labors that further aggravated Qing's ruling crisis. This conundrum that entrapped Qing was pointed out by Zhang Jian 張謇, who was appointed as the chief of the Ministry of Agriculture and Commerce (MAC) in the early years of the Beiyang government. He said:

“When China's fiscal strength declined, the elites all advocated on profit-making. Provincial-government-run enterprises thus began to appear. However, these government-run enterprises functioned in an extravagant and wasteful manner, and the redundant personnel enjoyed the benefits. There was no one responsible for or specialized in running the enterprise, which resulted in costly expense and low retribution. These government-run enterprises actually exaggerated the state's financial deficit by increasing expenditure and failing to make profits as the commercial firms did. These enterprises impeded (the industrial and commercial reform).”<sup>9</sup>

[國力日孱，士夫竟言生利，而各省官營業，始紛紛出現。然排調恢張，員司充斥，視為大眾分利之藪。全無專勤負責之人，卒之糜費不貲，考成不及，於財政上有徒然增豫計溢出之嫌，於實業上不能收商賈同等之利。名為提倡，實則沮之]

Although Zhang Jian might have a biased view towards Qing's New Policies, as he was trying to justify the Republican government's legitimate replacement of Qing, in terms the commercial and industrial management, he was correct about Qing's bureaucratic maladies. In the case of

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<sup>8</sup> Wang Xiaoqiu 王晓秋, Shang Xiaoming 尚小明 eds., *Wuxu weixin yu qingmo xinzheng—wanqing gaige shi yanjiu* 戊戌維新與清末新政—晚清改革史研究 (Beijing University Press, 1998).

<sup>9</sup> Zhang Jian 張謇, *xiang buyuan xuanbu nonglin gongshang zhengce de tonggao* 向部員宣布農林工商政策的通告 (October 24<sup>th</sup>, 1913), in Shen Jiawu 沈家五 ed., *Zhangjian nongshang zongzhang renqi jingji ziliao xuanbian* 張謇農商總長任期經濟資料選編 (Nanjing: Nanjing University Press, 1987), 8.

the Jilin Forestry Bureau, the implementation of the Forestry Bureau requires the cooperation of other departments. However, the official correspondence and dispute settlement between different departments were time-consuming and to some extent, even delayed the Forestry Bureau's plan to promote timber sales and caused losses. Again as the Forestry Bureau was government-run, these losses were rarely counted in the normal operation scope, and it was difficult to recover them effectively after the loss accumulation.

In the early twentieth century, Qing's forest governance for diversity accommodation was replaced by a state-making quest confronting the imperial pressures. With the management priority shifted, the forest policy departed from the track of closing-off and tributary conservation formed in the early Qing period to the path of modern forestry. Russia's and Japan's involvement in local forestry industries and China's correspondence forces have thus changed the political and social order of this region, opening up a new dimension of forest governance in the Beiyang period.

The origins of Northeast China's state forestry can be traced to the China's first regional forest code, Regulations of State Forest Allocations in Three Eastern Provinces (*dongsansheng guoyoulin fafang guize* 東三省國有林發放規則), which took effect in 1912, the same year when the new Beiyang government replaced the Qing court, and underpinned management policies for the next ten decades. A new generation of political leaders who came in the office during the New Policies Era moved the country in the direction of Western industrialization, a managed economy, and political centralization bordering on the government of frontier forests.

This dissertation shows the entwined history of the formation of the Beiyang government's state forestry apparatus during the twentieth century. The dismantling of the existing regime of private land property that alienated rural household from their own forested mountain farms in rounds of land and forest reforms opened the way for a new concept of

state forest tenure that was utilized as a border defense strategy. However, resource conflicts broke out in villages over the separation of forest ownership from private landownership that limited the villagers' customary use. Further, though the new rules criminalized the timber transactions with the Japanese enterprises such as SMR and other timber firms as illegal logging of state forest, local people continued their business. Their rationale for making a living outweighed Beijing's exerting forestry control to secure land from foreign invasion.

The state, represented by officials working at the local and national levels—though not always in harmony with each other—were deeply implicated in the process of inaugurating formal controls over the forest resources. One pattern began when international conflicts between the Russian/Japanese Armies and the Chinese loggers over the floating logs and forest concessions provoked government intervention. In the second pattern, the government officials controlled the forests by enacting new state land and forest regulations, and by destabilizing the Qing legacies embedded in the land, both of which introduced tremendous uncertainty into questions of land/forest tenure and access to forest resources. The transformation both provoke and are provoked by state intervention had transformed the forest frontier into a sovereign forestry space, and thus joined the ongoing narrative of national history.

## NEW NARRATIVES OF SUBALTERN FORESTS

Tropical forests had been playing an essential role in the Western imperialist expansion and the environmental science formation. The two major issues— the white-indigenous interaction and the capitalist-labor tension —engendered patterns of institutions, politics, and categories in the tropical world (or global south) that repeated themselves in places such as the Himalayas, southwestern India, southern Mexico, and Brazil, and had long dominated the forest history field for long. The temperate zone forests joined in the global market much later

in the twentieth century and in a more different way. Since most of the classic issues, such as community-based forest management, conservation, and the making of environmental subjects, were contributed by the tropical environment in southwestern India southern Brazil, southern Mexico, and Indonesia, I ask, what similar or different narratives and theories could the temperate zone forests bring to the field of global forest studies?

By temperate-zone forests, I specially refer to the forests in Northeast China, Hokkaido, and the northeastern USA. All the three regions were known for pine timber productions, logger migration, and frontier integration. In their histories, woodlands in the temperate zones became regions of refuge where local societies found a degree of autonomy and materiality. Meanwhile, they were also regions of resources when the more developed regions craved for extra market and raw materials.

North America's sawmill gave birth to a highly-industrial pattern of the forestry industry. According to Cox, the establishment of the sawmill was a marker to distinguish what was agriculture and what was forestry (or modern forestry).<sup>10</sup> Japan soon adopted the technology.<sup>11</sup> The Japanese officials imported the equipment for wood processing from the U.S. and applied them to its forested colonies, such as Hokkaido. As a result, the North American head-saw technology, as well as the sawmill system contributed to the extractive and industrial characteristics in modern Japanese forestry, the idea and practice of *ringyo* (forestry).

In the early twentieth century, the Asian countries largely depended on American timbers for industrial constructions, such as railroad building and housing construction. The

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<sup>10</sup> Thomas Cox, *The Lumberman's Frontier: Three Centuries of Land Use, Society, and Change in America's Forests* (Oregon: Oregon State University Press, 2010).

<sup>11</sup> Thomas Cox, *The North American-Japan Timber Trade: The Roots of Canadian and U.S. Approaches, Forest and Conservation History* (1990):112-121.

U.S. saw both Japan and China as emerging markets, and actively engaged in the transpacific timber trade. However, Japan imported logs from the U.S. in abundance but meanwhile struggled to compete with the U.S. for China’s market of logs and manufactured wood goods. China, with its low mechanization in its lumber industry, was the largest receiver of both Japan’s and U.S.’s lumber products. Thus, the three sites of temperate-zone forests across the Pacific were connected through timber trade.

Dating back to 1900s, Asian tracks heavily depended on timbers imported from Japan. About half of the railroad ties needed for China’s and Asia’s railway construction were Japan-produced, and Mitsui’s timber trade paved the way for the expansion of Hokkaido timbers in the Asian railroad ties market.<sup>12</sup> The Hokkaido timbers enjoyed the advantage of being cheap before the WWI. According to price data that I have collected, the Hokkaido timber price ranked the lowest in every column (every port city) before the 1910s, compared to the American pines. Therefore, one of Professor Asuka’s arguments that “American timbers as railroad ties were of poor quality and sold at a low price” was not valid.<sup>13</sup> On the contrary, as the price data shows, American timbers were more expensive than Japanese timbers at least before the 1910s.

Table 20 Railroad Ties Price at Various Chinese Markets (1903-1907)

Sleepers	Number	Price at Hankou in 1907	Price at Tianjin in 1903	Price at Shanghai in 1903
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<sup>12</sup> Yamaguchi Asuka 山口明日香, “Tetsu-dō-gyō-teki hatten to makuragi,” 鐵道業的發展と枕木, *shinrin shigen no kankyō keizai-shi: Kindainihon no sangyoka to mokuzai 森林資源の環境經濟史: 近代日本の産業化と木材* (Keiō University Press, 2015), 110-111.

<sup>13</sup> Ibid.; Thomas Cox had another explanation for Japanese millmen’s complaints. He argued that the American pines exported to Japan were cants processed by American standards but did not fit the peculiar Japanese measurement. However, the American sawmills stuck to American standards of manufactured wood goods, and the Japanese timber merchants were unsatisfied. See Thomas Cox, *The North American-Japan Timber Trade: The Roots of Canadian and U.S. Approaches, Forest and Conservation History* (1990): 114-115.

<b>Hokkaido Lumber</b>	One log	1 tael or 1 圓 60 钱(JPY)	<1 圓 <i>en</i> (JPY)	75 copper coins
<b>Oregon Pine</b>	One log	3 圓 <i>en</i> (JPY)	1 圓 70-80 钱 (JPY)	1 圓 80 钱(JPY) (JPY)

Source: Mizuno, Kōkichi 水野幸吉, *Chūō Shina jijō* 中央支那事情, 1907.

\*One tael=1 圓 60 钱 in JPY (1907, p.7.)

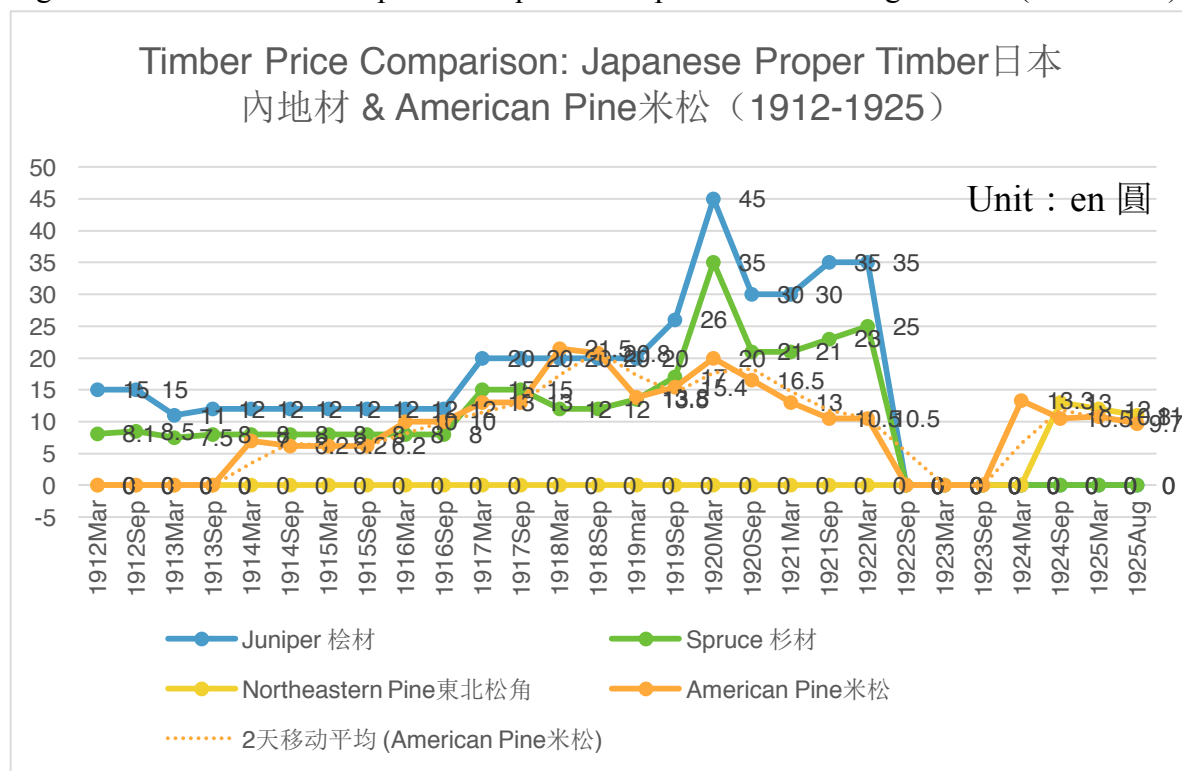
The first WWI marked a watershed of Japanese timber's retreat and American timber's invincible entrance into the Asian market. With the post-WWI economic and industrial development of Japan, its domestic demand for lumber products increased greatly. As a result, the market price of Japanese timbers surged and thus weakened its competitiveness in the Asian market. Before the 1910s, Japanese timber only cost two-thirds of American timber. However, the years 1912 to 1925 saw a reversal: the price surge in Japanese timbers and the price plummet in Oregon pines, in response to the demands of domestic and international timber markets.

Figure 13 plots four data series, three for Japanese proper timbers (including the Japanese Juniper, spruce, and pine) and one for American timbers. The three series, given by the blue, red, and grey lines, are the prices of Japanese Junipers and spruces from 1912 to 1922, and that of the pines from 1924 to 1925. The fourth series, given by the yellow lines, is the Oregon pine price. A trend line is also plotted for this series. Between 1912-1916, the prices of the Japanese Junipers and spruces were almost stagnant, hovering around 12 for Juniper and 8 for spruce, with very slight fluctuations. American timber price shows only slight growth from 6.2 to 10 during the same period.

Things change abruptly around 1916. The three major series (in red, blue, and yellow) began to rise the growth is exponential before 1920. The price of the Japanese Juniper rises threefold between 1916 and 1920, increasing from around 12 to more than 45 per log. Similarly, the annual Japanese spruce cost rises by, from 8 per log in 1916 to 35 in 1920. Although the price of the Oregon pine rises as well, from 6.2 in 1914 to 20 in 1920, it keeps

around 50 percent lower than that of the Japanese timber. After 1920, both the Japanese Juniper and spruces prices per logs plummet by around 33 percent and stagnate; while the Oregon pine price drops by 17.5 percent and reverses the trend. From 1924 to 1925, the price of the Oregon pine drops from 10.5 to 9.7 and keeps lower than that of the Japanese pine from 13 to 11, showing a complete price advantage in the international timber market in the 1920s.

Figure 13 Timber Price Comparison: Japanese Proper Timber & Oregon Pines (1912-1925)



\*"Price 0" represents no data.

\*\*Price data for "Sep 1925" are not available, therefore I use the price for "Aug 1925."

Sources: Tetsudō-shō un'yu-kyoku 鉄道省運輸局, Mokuzai ni-seki suru keizai-chō 木材ニ関スル經濟調査, 1925, pp.177-180.

Table 21

Timber Price Comparison: Japanese Proper Timber & Oregon Pines (1912-1925) Unit: 圓 en

年次	JUNIPER 桧材	FUR 杉材	NORTHEASTERN PINE 東北松角	AMERICAN PINE 米松
1912MAR	15	8.1	n.a.	n.a.
1912SEP	15	8.5	n.a.	n.a.
1913MAR	11	7.5	n.a.	n.a.
1913SEP	12	8	n.a.	n.a.
1914MAR	12	8	n.a.	7
1914SEP	12	8	n.a.	6.2
1915MAR	12	8	n.a.	6.2

1915SEP	12	8	n.a.	6.2
1916MAR	12	8	n.a.	10
1916SEP	12	8	n.a.	10
1917MAR	20	15	n.a.	13
1917SEP	20	15	n.a.	13
1918MAR	20	12	n.a.	21.5
1918SEP	20	12	n.a.	20.8
1919MAR	20	13.5	n.a.	13.8
1919SEP	26	17	n.a.	15.4
1920MAR	45	35	n.a.	20
1920SEP	30	21	n.a.	16.5
1921MAR	30	21	n.a.	13
1921SEP	35	23	n.a.	10.5
1922MAR	35	25	n.a.	10.5
1922SEP	n.a.	n.a.	n.a.	n.a.
1923MAR	n.a.	n.a.	n.a.	n.a.
1923SEP	n.a.	n.a.	n.a.	n.a.
1924MAR	n.a.	n.a.	n.a.	13.3
1924SEP	n.a.	n.a.	13	10.5
1925MAR	n.a.	n.a.	12	10.8
1925AUG	n.a.	n.a.	11	9.7

Sources: Tetsudō-shō un'yu-kyoku 鉄道省運輸局, Mokuzai ni-seki suru keizai-chō 木材ニ関スル經濟調査, 1925, 177-180.

Japan's great demand for American timber increased after the 1922 Kanto Earthquake.

Oregon pine was the typical variety imported from the United States. From 1915 to 1921, the ratio of the total import coincided with that of American timber imports, showing American pine's competitiveness in Japan's market. Things changed in 1923, with Japan's ever-rising demand for post-earthquake reconstructions, the imports of American pines rose from 2,724,724 in 1921 to 9,896,303 in 1924. The growing trend reserves and percentage of American pines in the total foreign imports keeps high, from 73% in 1921 to 85% in 1924.

What the data shows also tallied with the Japanese news report. On February 24, 1923, the Harbin Daily News (*harubin mainichi shinbun* 哈爾濱日日新聞) published a piece of news about the timber competition in Japan proper. It characterized the American timber as “the strongest component” to the Japanese wood. Due to the logging ban and the afforestation

policy in Japan, the author advocated that “it was necessary to set tariffs on imported timbers as protection.”<sup>14</sup> Later in June 1931, the Harbin Daily News published another article with a detailed review of the American timber exports to Japan. According to the article, the American pines entered the Asian market to China and Japan in 1915. The number of Japan’s export of the American timbers was on a steady rise. In 1919 to 1920, Japan imported about 8,000,000 to 9,000,000 *shi* timbers from the USA, and the number rose to 10,000,000 *dan* in 1924. The Japanese government reformed the domestic timber tax system, and in 1930, the import of the American timbers declined to about 6,000,000 *shi*.<sup>15</sup>

It is noteworthy that during Japan’s post-earthquake restoration, the Japanese domestic timbers and the Manchurian timbers were not even on the list of timber-in-urgent-need. What was going on in the 1920s’ international timber market? A Survey by a Chinese forestry expert Zhai Runtian 翟潤田 discussed this issue. Zhai graduated from the Hokkaido University, Forestry Department. As a Chinese northeastern-born, he came back to northeast China after graduation and was appointed as a forestry investigator in Jilin Province. In his investigation, he discovered that in the market for construction materials, American timbers had squeezed out the Manchurian timbers, as the modern house constructions had a standard measurement for lumbers processed by head-saw. However, timbers produced in northeast China were still processed in “a certain old-fashioned form” whose size and measurement was not convenient for modern builders to use. When Manchurian timbers must be used, builders had to refabricate them into the appropriate size, which was not only labor-consuming but also wasteful. Therefore, the construction groups in China preferred purchasing timbers from

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<sup>14</sup> “Nihon naichi o butai ni mitsudomoe no mokuzai-kai Enkaishū-zai sattō su” 日本内地を舞臺に三巴の木材界 沿海州材 殺到す, *Harubin niche niche shinbun* 哈爾濱日日新聞, February 24, 1923, Vol.2, No. 331, 2b, Dalian Municipal Library.

<sup>15</sup> Yamazaki Yoshimasa 山崎義政, “Hokuman-zai no shōrai” 北滿材の将来, *Harubin ichinichi shibun* 哈爾濱日日新聞, January 17, 1931, Vol.8., No. 2694, 1b.

the United States. Moreover, Japan's post-earthquake restoration program did not purchase any timber from northeastern China.<sup>16</sup>

Ever since the WWI, the proportion of American pines exported to China had been on a steady rise, and China became the largest US hardwood importer in the world in 2010. According to the Appalachian Hardwood Center White Paper No.72, the US hardwood exports to China in 2016 contributed \$1.2 billion in revenue and supported 97,000 American hardwood loggers across the country.<sup>17</sup> Thus, China's demand for US hardwood is crucial to US economy and loggers' employment. Previous scholarship has studied timber trade between U.S and Japan, or between Japan and Russia, few have paid attention to China-Japan-U.S. timber trade.<sup>18</sup> This project shows some preliminary finding and suggests that the economic and technological exchange in forestry industry among the triangle structures (China-Japan-U.S.) should be the new focus in both temperate-zone forest studies and the trans-pacific trade that might also provide an insight into the ongoing trade dispute between the world's largest economies.

## NORTHEAST CHINA'S TIMBERS

Japan's deep involvement in Northeast China's lumbering and wood processing industries had multiple implications. One of them was to rediscover and realized the value of timbers. The fame of Northeast China's standing timber was first earned largely through the

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<sup>16</sup> "Diaocha jilin muye shikuang baogao ji jingying fuan linye jihua shu" 調查吉林木業實況報告及經營撫安林業計劃書, in "Fengtian shengzhang gongshu wei guanyu fusong he antu senlin zhi tiaocha jingyingshi" 奉天省長公署為關於撫松和安圖森林之調查經營事, 1920- 1924, Liaoning Provincial Archives, Jc10-01-4631.

<sup>17</sup> Clinton Gabbert & Joseph McNeel, 2018

<sup>18</sup> Thomas Cox, The North American-Japan Timber Trade: The Roots of Canadian and U.S. Approaches, *Forest and Conservation History* (1990):114

publicity attendant upon the building of the China-Eastern Railway. Most of Northeast China's forests belong to the mixed area of the belt, with conifers predominating on the northern slopes of the Great Khingan Mountains, and deciduous species better represented on the southern slopes on the Changpai Range, where the rainfall is abundant.<sup>19</sup> It was generally agreed that there were in Manchuria about 71,261,000 acres of forests, occupying 22.2 percent of the total land area, and there were about 300 different coniferous species and 21 deciduous.<sup>20</sup>

Table 22: Northeast China's Forest Data, 1928

Areas	Forest Coverage (Unit <i>Machi</i> 町)	Forest Volumes (Unit: <i>shi</i> 石)
Yalu River Forests 鴨綠江流域	668,254	337,487,203
Songhua River Forests 松花江流域	1,932,933	937,687,595
Mudan River Forests 牡丹江流域	343,782	264,678,305
Sanxing Forests 三姓地方	5,419,330	1,395,609,780
Harbin-Suihua Railway Forests 东 铁哈绥线	2,338,818	802,020,300
Tumen River Forests 豆满江流域	214,045	123,152,710
Less Khingan Mountains 小兴安岭	7,223,908	2,167,172,400
Yilehuli Mountain 伊勒呼里山	6,320,920	1,896,276,000
One part of the Greater Khingan Mountain 大兴安岭之一部	4,514,942	1,354,482,600
Total	28,977,022	9,278,566,893
		10,000,000,000

Source: Dongsheng tielu jingji yuekan bianjibu 東省鐵路東省經濟月刊編輯部, *dongsheng jingji xiaoxi huizhi: dongsansheng linye xianzhuang* 東省經濟消息匯誌: 東三省林業現狀, *Dongsheng jingji yuekan* 東省經濟月刊, Harbin, 4(1), 1928, 130.

The Manchurian timbers, including the Yalu River timber (*yalu jiangcai* 鴨綠江材) and the Dadonggou timber (*dadong goucai* 大東溝材) used to dominate the north China (and northeast China) market before 1904. According to a survey by the Japanese Ministry of Agriculture in 1909, in the YL-timber-swept markets, such as Tianjin, Yingkou, Qinhuangdao 秦皇島, Beijing, and the coastal areas of Shandong, the imports of YL timbers ranked top,

<sup>19</sup> Ivan M. Elchibegoff, *United States International Timber Trade in the Pacific Area* (Stanford, London: Stanford University Press, Oxford University Press, 1949), 92.

<sup>20</sup> *ibid.*, 95.

followed by the Fuzhou 福州 timbers, and the sleepers and squared pines from Hokkaido and Oregon pines from the USA only ranked third and fourth, with very limited market proportions.<sup>21</sup>

The Manchurian timber boom had much to do with the case of railway between Suzhou and Hangzhou under the Jiangzhe Railway Company (*jiangzhe tielu gongsi* 江浙鐵路公司, referred as JRC). The Jiangzhe Railway Company was established in 1905, under the leadership of Tang Shouqian 湯壽潛. It was aimed at building a railway line in Zhejiang without the interferences of foreign powers. The Yalu River timber then became one of the most important source for railroad ties for the JRC. From 1905 to 1910, JRC purchased more than 100,000 logs from the Andong merchants every year.

After the Japan-Russia war of 1904-1905, the Japanese merchants were in charge of the timbers of Yalu River. The Japanese sold the Manchurian timbers to Jiangsu and Zhejiang provinces at an extremely low price of “eight *jiao* 角 per log.” While the timbers from Chinese merchants in Andong cost more than “one *yuan* 元.” In order to support the Andong Chinese timber merchants, the then-Shengjing-General Zhao Erxun 趙爾巽 reduced the Yalu River timber tax so that the Manchurian timbers continued to constitute important raw materials for railway building in Jiangsu and Zhejiang. In 1907 and 1908, with the establishment of Yalu River Logging Company, the Yalu River timbers were again monopolized by the Japan side. However, timbers sold to JRC became an exception, and they were excluded from the Yalu River Logging Company’s business.

As have discussed earlier, the Manchurian timbers mostly mainly covered timber markets in northeastern China and north China. Its influence in south China was very

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<sup>21</sup> Noshoroshō sanrin kyoku 農商務省山林局, *Seikan ryōkoku taiwan kakuchi ichiba mokuzai jōkyō chōsa-sho* 清韓兩國及台灣各地市場木材商況調查書, 1909, 13; 177.

limited. According to an estimation, until 1923, the consumption of the NE China's timbers was dominantly consumed by the of the three eastern provinces themselves, especially by the China-Eastern Railway. The number of timbers transported and sold from coastal China to inland China was also increasing, but the number of timbers for foreign exports was small.<sup>22</sup>

The Japanese merchants had invested vigorously in Northeast China's forestry. For example, the Japanese merchants participated in the two companies of *Hailin* 海林 and *Zhamian* 札免 in developing the Greater Khingan mountains. However, the timber enterprises ran by the Japanese *zaibatsu* suffered a serious deficit in the 1920s. From 1926 to 1930, the Japanese newspapers such as the *Harbin Letters* (哈爾濱通信) and the *North Manchuria* (*hokuman shu* 北滿洲) were moaning over the slack log/lumber business. The news titles, such as “*North Manchurian Forestry Industry Entering Hibernation*” and “*The Pessimistic North Manchurian Lumber*” had dominated the front pages.<sup>23</sup>

The Chinese forestry expert Zhai Runtian 翟潤田 attributed the timber business loss to three factors. In the first place, timber tax in Jilin Province was too harsh to survive. For every hundred *yuan*, it cost about 35 *yuan* to pay the tax; and therefore both the Chinese and the Japanese timber firms could hardly profit. Second, the threats of bandits in Jilin were severe. When loggers were logging in the mountains, the bandits blackmailed them or robbed them of their food on the river bank. When it was summer, the bandits set up informal passes along

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<sup>22</sup> Ling Daoyang 凌道揚, “Zhenxing manzhou senlin zhi guanjian,” 振興滿洲森林之管見, *Dongbei xinjianshe* 東北新建設, 1928 1 (2): 16.

<sup>23</sup> “Tomin jotai ni ireru hokuman no hayashi,” 冬眠状態に入れる 北滿の林業界, *Harubin tsushin* 哈爾濱通信, April 12, 1929, No.2376, 2b.; “Hokuyo zai no shinshutsu de hokuman zai shikan saru,” 北洋材の進出で北滿材悲觀さる, *Harubin shinbun* 哈爾濱新聞, September 15, 1929, No.2309, 2b. stored in the Dalian Municipal Library.

the river and blackmailed loggers/merchants, otherwise performed tortures to them. Even though there were water policemen established along the river coast of Jilin, “there were as many as 500 river policemen who either blackmailed loggers or robbed ships of opium and fish.” Finally, the changing ratio of Jilin copper and Fengtian copper harmed those who sold timbers between the two provinces.<sup>24</sup> Under such circumstance, not only did Manchuria export little amount of timbers but it had been compelled to import from the United States and Japan in abundance. Later in the Puppet Manchukuo period, the Japanese state and merchants would promote the brands and sales of Northeast China’s timbers as a part of the Manchukuo state forestry project.

#### RESOURCE MODERNITY IN *LIN*

Forests in Northeast China formed a comprehensive environment that contained different cultural meanings (such as *weji*) and forest products (such as *ginseng*). However, in the early twentieth century, it was recognized and practiced a domain for modern forestry government, and transformed from a shared eco-system to a pacific resource supplier. The deconstruction of *weji* into a timber-producing entity characterized by *lin* both identified and erased the rich legacies Northeast China once contained.

The establishment of *lin* as a scientific depiction of the forest landscape had a lot to do with Chinese absorption of the Japanese modern forest categories. For example, In Japan’s context, the term *rinya* 林野 itself contained the meaning of being untitled. However, when used in China’s context, *rinya* 林野 was interpreted as an equivalent for forest while the

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<sup>24</sup> “Diaocha jilin muye shikuang baogao ji jingying fuan linye jihua shu” 调查吉林林业实况报告及经营抚安林业计划书, in “Fengtian shengzhang gongshu wei guanyu fusong he antu senlin zhi tiaocha jingyingshi” 奉天省長公署為關於撫松和安圖森林之調查經營事, 1920- 1924, Liaoning Provincial Archives, JC10-01-4631.

meaning of untitled was gone. The Japanese terms such as *rinya* (林野 untitled wilderness) that had special indications were naturalized as a scientific depiction of the forest landscape by the Chinese forestry practice. In 1929, the Shanxi Provincial Government issued a document with titles “Ordering each forest district to promulgate survey forms of wild mountain, wild land, and deserted forest.” [訓令各林區署遵照頒發調查荒山荒地荒廢林野各表式查填報核文] The forestry official specially added *huangfei* (荒廢 deserted) in front of *rinya* 林野 to keep indicated its ownership status.

In addition to Japan’s influence, the establishment of modern forestry in Northeast China marked by the new term *lin* was finally confirmed and carried out by the Beiyang Ministry of Agriculture and Commerce and its Forest Works Bureaus with a China agency. Official policy at the beginning of the twentieth century aimed to bring forests under centralized control in the form of state forest (*guoyoulin*). The forestry officials carried out surveys; classified categories of forests; made working plans for planting, mapped state forest territory; registered state forestland; and restricted collection of fodders and firewood. The new Chinese forest bureaucracy with its reclassification, new regulation, and strict implementation in the first decade of the twentieth century were an unprecedented revitalization and intrusion into the Qing and Japanese legacies of land and forest government. The transformation continues today.

Appendix: Japanese Surveys on Northeast China's forests (1899-1930)

Time	Investigator	Area	Institution	报告书 Reports
1899-1900	杉原龜三郎	China	Ministry of Agriculture and Commerce	1905 清國林業及木材商況視察復命書 [A Report on the Inspection of Qing China's Forestry and Timber Commerce]
1902	本多靜六	Siberia, China, Korea	Ministry of Agriculture and Commerce	
1902-1903	宮島多喜郎 田中喜代次	North China and Korea (timber demand)	Ministry of Agriculture and Commerce	1903 清韓兩國森林視察復命書 [A Report on the Inspection of Qing China and Korea's Forests] 1905 清韓兩國森林視察復命書 [A Report on the Inspection of Qing China and Korea's Forests]
1902	鶴岡永太郎	Russian logging society at the Hun River	Ministry of Diplomacy	1906 滿洲產業調查資料 (林業第4班) [Manchuria's Industry Survey Documents on Forests]
1902-1903	長倉純一郎	Shanghai, the Yangzi River	Ministry of Agriculture and Commerce	1903 清國視察復命書 [A Report on the Inspection of Qing China]
1904	宮崎辰之允	China	Ministry of Agriculture and Commerce	1905 清國林業及木材商況視察復命書
1904	今川唯市	Yalu River		
1904	西田又二	Yalu River	Ministry of Agriculture and Commerce	1905 鴨綠江森林作業調查復命書 [A Report on the Survey of The Yalu River Forest Project]
1904	永田正吉	Korea	Ministry of Agriculture and Commerce	
1905	今川唯市	Yalu River	The Kuantung Army	1911 長白山脈林況調查復命書 [A Report on the Survey of Changbai Mountain Forests]
1905	永田正吉	Korea	Ministry of Agriculture and Commerce	1905 韓國森林調查書 [A Survey on Qing and Korea's Forests]
1905	永田正吉	Korea	Ministry of Agriculture and Commerce	1905 韓國森林調查書 [A Survey on Qing and Korea's Forests]
1905-1906	中牟田五郎	Manchuria industry	Manchuria Industry Association	1906 滿洲產業調查資料 (林業) [Manchuria Industry Survey Documents on Forestry] 滿洲森林調查書
1906	諸戶北郎	Manchuria (timber use)	Ministry of Agriculture and Commerce	

1906	太田銃太郎	Changbai Mountain	The Kuantung Army	
1904	遼東兵站監部	Manchuria	he Kuantung Army	1906 滿洲要覽 (全)
1907	守田利遠	Manchuria	the Kuantung Army	1907 滿洲地誌 (上中下) [Manchuria Geography]
1907	大曾根誠二	Changbai Mountain	The Kuantung Army	
1908	橋口正美	Manchuria		
1908	堀田榮治	Manchuria, Taiwan, Korea	Ministry of Agriculture and Commerce	1909 清韓兩國及台灣各地市場木材商況調查書 [A Report on the Timber Markets in Qing, Korea, and Taiwan]
1908	原田覚二	China	Ministry of Agriculture and Commerce	x
1908	江崎正忠他	Songhua River	Oji Paper	1907 滿洲松花江奧森林調 [A Survey on Songhua River Forests]
1909	大田篤	Changbai Mountain	Kanto Office under the Korean Governor's Office	1910 間島産業調査書 [A Survey Report on Kanto Industry]
1910	今川唯市	Changbai Mountain		
1912	中村憲兵	Changbai Mountain	The Kuantung Army	
1913	竹内	Changbai Mountain	Korea Temporary Land Survey Bureau	
1913	帆足準三	Changbai Mountain		
1914	土屋陸軍將校	Changbai Mountain	Korea Temporary Land Survey Bureau	
1915	彼末徳雄	Changbai Mountain, the Great Khingans	Yalu River Logging Company	1915 鴨綠江森林及林業 [Forests and Foresty of the Yalu River]
1914	小出房吉	Songhua River, Tumen River, Mudan River	SMR	1918 南滿松豆牡流域森林調査書 [A Survey Report on the Songhua River, Tumen River, and Mudan River Forests]
1916	吉岡豪雄	Changbai Mountain		白頭山森林調査復命書 [A Survey Report on the Paektu Mountain Forests]
1916	原鍬三郎他	China-Eastern Railway	Oji Paper	
1916	池部佑吉	Mishan 密山市 and Yilan 依蘭 in Jilin	Ministry of Agriculture and Commerce	1918 吉林省森林調査復命書 [A Survey Report on the Jilin Forests]

1917	彼末德雄	the upper reaches of the Nen River	Okura	
1918	村井貞三他	Northern Kanto (間島)	The Funing Firm in Jilin	
1918	間島總領事、朝鮮總督府、東拓	Eastern and Hunchun	Kanto council, Oriental Vision, and the Korean Governor's Office	白頭山植物調查書[A Survey Report on the Plants on the Mount Paektu]
1918	丸山佐四郎	Hengdao hezi -Hailin in Jilin Province	Oriental Vision	
1918	星直太郎	China-Eastern Railway in Jilin	Oji Paper	富寧造紙股份有限公司委託吉林省牡丹江及松花江兩流域森林調查報告書 [A Survey Report on the Mudan River and Songhua River Forests, relegated by the Funing Paper Company]
1918	川上三郎	Songhua River and Meng River	Oji Paper	
1918	青柳勝後	Andong Province, Sanjiang Province	SMR	1920 吉林省東北部林業 [Forestry in the Northeastern Jilin Province]
1920	滿鐵	the Great Khingan	SMR	
1925	鈴木賢三郎	Kanto	The Korean Governor's Office	間島地方森林復命報告 [A Survey Report on Kanto's Local Forests]
1925	草間正慶	China-Eastern Railway and Gaya River	SMR	1929 吉會鐵道沿線森林調查書 [A Survey Report on the Forests Along the Ji-Hui Railway]
1926	庄田作輔	Ji-Hui Railway, Sihechuan, Mudan River, and Gaya River	SMR	1929 吉會鐵道沿線森林調查書 [A Survey on the Forests Along the Ji-Hui Railway]
1926	山田弘之	Forest Law	SMR	1926 東三省森林法規類纂 [A Compilation of Forest Laws and Regulations of Three Eastern Provinces]
1927	東拓	Kanto	Oriental Vision	東拓 間島調查報告 [Kanto Survey Report]
1927	天圖鐵路公司			1928 木材生產調查書 [A Survey Report on Timber Business]
1928	滿鐵庶務部調查課	Jilin Province	SMR	1928 吉林省之林業 [Forestry in Jilin Province]

1929	板倉真五	Jilin Province	SMR	吉林省における森林採伐に関する関係 昭和5年「吉林省森林 no 企業化に関する調査」[A Survey on the Commodification of Jilin Forests]
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Sources: Nagai Risa 永井リサ, Taiga no soshitsu タイガの喪失, in Ayumu Yasutomi-Fukao Yoko 安富歩 深尾葉子 eds., Manshū no seiritsu: Shinrin no shōjin to kindai kūkan no keisei 満洲の成立: 森林の消尽と近代空間の形成 (Nagoya University Press, 2009), 7-8.

## BIBLIOGRAPHY

### ARCHIVAL SOURCES

Archives of the Republican China 民國時期檔案. Shanghai Municipal Archives, Shanghai.

Archives of the Republican China 民國時期檔案. Liaoning Provincial Archives, Shenyang.

Archives of Fengtian Official Land Measurement Bureau 奉天全省官地清丈局檔案. Liaoning Provincial Archives, Shenyang.

Documents of the Forestland Registers of Fengtian 奉天林务局林场報告書. Liaoning Provincial Archives, Shenyang.

Archives of Fengtian Provincial Government Office (1906-1993) 奉天省公署檔案(1906-1993). Liaoning Provincial Archives, Shenyang.

Archives of Fengtian Provincial Finance Department 奉天省財政廳檔案. Liaoning Provincial Archives, Shenyang.

Archives of Huangcheng Prefecture Government Office 鳳城縣公署檔案. Liaoning Provincial Archives, Shenyang.

Archives of Benxi Prefecture Government Office 本溪縣公署檔案. Liaoning Provincial Archives, Shenyang.

Archives of Jilin Provincial General Bureau of Forestry (1907-1912) 吉林全省林業總局檔案 (1907-1912). Jilin Provincial Archives 吉林省檔案館, Changchun.

Asia Library“亚细亚文库”, Jilin University Library 吉林大學圖書館, Changchun.

Full Database of Ming and Qing's Archives and Documents 明清檔案文獻全文數據庫. China's First Historical Archives, Beijing.

Archives of Zhao Er'xun 趙爾巽檔案. China's First Historical Archives, Beijing.

Archives of Imperial Household Department of Qing 清代內務府檔案. China's First  
Historical Archives, Beijing.

The Forest Policy Archives 林政文庫. Library for Agriculture and Life Science, Tokyo  
University, Tokyo.

“The Collection Relating to the Former Japanese Colonies: 滿蒙,” Japan Center for Asian  
Historical Records. <https://www.jacar.go.jp/chinese/index.html>

Dandong Municipal Archives 丹東市檔案館, Dandong.

Heilong jiangsheng shiyeting quanzong 黑龍江省實業廳全宗. Heilongjiang Provincial  
Archives 黑龍江省檔案館, Ha'erbin.

Heilong jiangsheng senlin ju quanzong 黑龍江省森林局全宗. Heilongjiang Provincial  
Archives 黑龍江省檔案館, Ha'erbin.

#### PUBLISHED SOURCES (in Japanese)

Tetsudō-shō un'yu-kyoku 鐵道省運輸局, *Mokuzai ni-seki suru keizai-chō* 木材ニ関スル經  
濟調査, 1925

Noshoroshō sanrin kyoku 農商務省山林局, *Seikan ryokoku shinrin shisatsu fukumei-sh* 清韓  
兩國森林視察復命書 (Hokkaido University Library, 1903).

Noshoroshō sanrin kyoku 農商務省山林局, *Shinkoku ringyō oyobiki-zai shōkyō shisatsu  
fukumei-sho* 清國林業及木材商況視察復命書 (Hokkaido University Library, 1905).

Noshoroshō sanrin kyoku 農商務省山林局, *Seikan ryōkoku chi taiwan kakuchi ichiba  
mokuzai jōkyō chōsa-sho* 清韓兩國及台灣各地市場木材商況調查書 (Hokkaido  
University Library, 1909).

Andong shangye huiyisuo 安東商業會議所, *Yalu jiang mucai* 鴨綠江木材 (Tokyo: Tokyo University Library, 1922).

Yalu River Logging Company, *Yaru kawa ryūiki no un'yō to chōsa* 鴨綠江流域作業及調査 [The Survey of the Yalu River Area], Dandong Municipal Library, Dandong.

Minamimanshūtetsudō kabushikigaisha chōsa-ka-cho 南滿州鐵道株式会社調査課, *Kitsurin no ringyō* 吉林省之林業, 1924.

Mizuno, Kōkichi 水野幸吉, *Chūō Shina jijō* 中央支那事情, 1907.

Minami Manshū Tetsudō Kabushiki Kaisha 南滿洲鐵道株式会社庶務部調査課編, *Minamimanshū Kitsurin fukin no shinrin nami ni ringyō ni tsuite* 南滿洲吉林附近の森林並に林業に就いて, 1927

Mitsui Bunko 三井文庫, *Kinsei kōki ni okeru shuyō bukka no dōtai* / Mitsui Bunko hen. 近世後期における主要物価の動態, 1989

Mitsui Bunko 三井文庫, *Manshūkoku shisatsu hōkokusho* / Izumiyama Sanroku hen. 滿洲國視察報告書, 1935

Mitsui Bunko 三井文庫, *Mitsui jigyōshi. Shiryō hen.* 三井事業史. 資料篇 (Mitsui Bunko, 1973)

Mitsui Bunko 三井文庫, *Shiryō ga kataru Mitsui no Ayumi: Echigoya kara Mitsui zaibatsu* 史料が語る 三井のあゆみ: 越後屋から三井財閥 (Mitsui Bunko, 2015)

Mitsui Bunko 三井文庫, *Mitsui no Ayumi* 三井のあゆみ (Mitsui Bunko, 2015)

#### PUBLISHED SOURCES (in Chinese)

Aisin Gioro, hiowan yei 愛新覺羅·玄燁, *Kangxi jixia gewu bianyizhu* 康熙幾暇格物編譯註, annotated by Li Diyi 李迪. Shanghai: Shanghai guji chubanshe, 2008.

- Beijing tushuguan yingyinshi 北京圖書館影印室 ed., *qingmo minguo caizhengshiliao jikan*  
清末民國財政史料輯刊, Vol.4, Beijing: Beijing tushuguan chubanshe, 2007
- Cao Baoming 曹保明, *Gudu de famuren* 孤獨的伐木人. Beijing: xiyuan chubanshe 西苑出版社, 2003.
- Chen Rong 陳嶸, *zhongguo senlin shiliao* 中國森林史料, Nanjing: jinling University, 1934.
- Chenrong 陳嶸, *Lidai senlin shilue ji minguo linzheng shiliao* 历代森林史略及民国林政史料. Nanjing: Jinling daxue nongxueyuan senlinxi linyebu tuiguangbu, 1951.
- Cong, Peiyuan 叢佩遠, *Dongbei sanbao jingji jianshi* 東北三寶經濟簡史. Beijing: Nongye chubanshe, 1989.
- Dandongshi difangzhi bangongshi ed. 丹東市地方誌辦公室, *Dandongshi zhi* 丹東市誌, 6  
Shenyang: Liaoning kexuejishu chubanshe, 1996.
- Dongbei wuzi tiaojie weiyuanhui yanjiu zu 東北物資調節委員會研究組, *dongbei jingji xiao congshu (linchan)* 東北經濟小叢書(林產). dongbei wuzi tiaojie weiyuanhui, 1948.
- Dongsansheng zhongguo jingshihui, Fushun shekeyuan 東三省中國經史會、撫順社科院 ed., *Dongbei diqu ziben zhuyi fazhan shi yanjiu* 東北地區資本主義發展史研究.  
Harbin: Heilongjiang renmin chubanshe, 1987.
- Fuxin shi renmin zhengfu defangzhi bangongshi ed., 阜新市人民政府地方志办公室, *Fuxin shizhi* 阜新市志, Vol.4, 1999.
- 高強, *Qingmo dongbei bianhuan yu yimin shibian wenti yanjiu* 清末东北边患与移民实边问题研究. Xi'an: Shanxi jiaoyu chubanshe, 2009.
- Guoli gugong bowuyuan 國立故宮博物院 ed., *Yuan shikia zouzhe zhuanji* 袁世凱奏摺專輯, Vol.6, <http://www.guoxuedashi.com/guji/320626d/>.

- He Xiya 何西亞, “dongbei shicha ji,”東北視察記 in *dongbei zhongri guanxi guancha ji* 東北中日關係觀察記, 1932.
- Hu, Zengyi 胡增益, *Xin manhan dacidian* 新滿漢大詞典. Xinjiang: xinjiang renmin chubanshe, 1992.
- Jin, Yufu 金毓黼 ed., *Liaohai congshu* 遼海叢書, No. 7. Shenyang: Liaoshen shushe, 1985.
- Jilinsheng difangzhi bianzuan weiyuanhui 吉林省地方誌編纂委員會 eds., *Jilinshengzhi* 吉林省志. Changchun: Jilin wenwu chubanshe, 1991.
- Jilin sheng dangan guan 吉林省檔案館, Jilin sheng shehui kexueyuan lishisuo 吉林省社會科學院歷史所 eds., *qingdai jilin dangan xuanbian* 清代吉林檔案選編, Jilin: jilin sheng dangan guan, 2014.
- Liaoning sheng dangan guan 辽宁省档案馆 ed. *fengxi junfa dangan shiliao huibian* 奉系军阀档案史料汇编, 1990.
- Liu Zhifan 劉誌凡, Jilin shengzhi 吉林省誌, Vol.30, *Caizhengzhi* 财政志. Changchun: Jilin renmin chubanshe, 1993.
- Li Shutian 李澍田, Pan Jinglong 潘景隆 eds., *Qingdai minguo jilin dangan shiliao xuanbian: shewai jingji maoyi* 清代民國吉林檔案史料選編：涉外經濟貿易, Jilin: Jilin wenshi chubanshe, 1995.
- Li Shutian 李澍田 *Jilin dizhi, Jilin jiuwen lu, jilin xiangtuzhi* 吉林地誌·雞林舊聞錄·吉林鄉土誌. Changchun: Jilin wenshi chubanshe, 1996.
- Li, Shutian 李澍田 ed., *Jilin jilue* 吉林紀略. Changchun: Jilin wenshi chubanshe, 1985.
- Li, Xingsheng 李興盛 eds., *Bohai guozhi changbian* 渤海國誌長編. Harbin; Heilongjiang renmin chubanshe, 1995.

- Ma, Ruichen 馬瑞辰, *Maoshi zhuanjian tongshi* 毛詩傳箋通釋, Vol. 13. Beijing: zhonghua shuju, 2012.
- Minguo zhengfu jingji weiyuanhui 民國政府經濟委員會, “dongbei linye zonglan” 東北林業總覽, in *zhongguo ziran ziyuan zaoqi diaocha baogao* 中國自然資源早期調查報告, No.1, Beijing: xianzhuang shuju, 2010.
- Pan, Jinglong 潘景隆, Zhang xuanru 張璇如, *Jilin gongpin* 吉林貢品. Tianjin: Tianjin guji chubanshe, 1992.
- Sa, Ying'e 薩英額, *Jilin shizhi jilin waiji* 吉林史誌·吉林外記, collated by Shi Jixiang 史吉祥 and Zhang Yu 張羽. Shanghai: shanghai guji chubanshe, 1995.
- Sun Xuelei 孫學雷, Liu Jiaping 劉家平 eds., *Qingdai guben waijiao dangan* 清代孤本外交檔案, Vol. 42, 43, 45, 50. Beijing: quanguo tushuguan wenxian suowei fuzhi zhongxin, 2003.
- Suowei fuzhi zhongxin 縮微複製中心 ed., *minguo yu weimanzhou shiqi dongbei jingji shiliao congshu* 民國與偽滿洲時期東北經濟史料叢書, Beijing: quanguo tushuguan wenxian suowei fuzhi zhongxin, 2009.
- Tianjinshi danganguan 天津市檔案館 ed., Yuan Shikai tianjin dangan shiliao xuanbian 袁世凱天津檔案史料選編. Tianjin: Tianjin guji chubanshe, 1990.
- Wang Chengjing 王成敬, *dongbei zhi jingji ziyuan* 東北之經濟資源. Shanghai: shangwu yinshuguan, 1947.
- Wang Jiegong 王介公, *Andong xianzhi* 安東縣志, Vol. 8, 1931.
- Weizhen 魏震, *Nanmanzhou diaocha riji* 南滿洲調查日記, 1904.
- Wu, Zhaoqian 吳兆騫, *Qiuqieji* 秋茄集, collated by Ma Shouzhong 麻守中. Shanghai: shanghai guji chubanshe, 1993.

- Xia Yuxu 夏宇旭, Han Shuying 韓淑英 eds., *qingdai dongbei bianjiang manyu diming ziliao bianmu jicheng* 清代東北邊疆滿語地名資料編目集成, Jilin: jilin wenshi chubanshe, 2009.
- Xia Runsheng 夏潤生 ed., *Xu Nailin ji* 徐鼐霖集. Changchun: Jilin wenshi chubanshe, 1989.
- Xu Lihua 徐麗華 ed., *Zhongguo shaoshu minzu guji jicheng (hanwen ban)* 中國少數民族古籍集成 (漢文版) No. 36. Chengdu: Sichuan renmin chubanshe, 2002.
- Xiong Baizhi 熊白知 ed., *minguo dongbei xianzhi jiyao* 民國東北縣治紀要, 2009.
- Zhao, Erxun 趙爾巽, *Ershiwu shi* 二十五史, Vol. 135. Shanghai: Shanghai guji chubanshe, 1986.
- Zhang, Chao 張潮, Yang, Fugu 楊復古等, *Zhaodai Congshu* 昭代叢書, Vol.3., No. 26. Shanghai: shanghai guji chubanshe, 1990.
- Zhang Rongzheng eds., 張榮錚, *qinding lifanbu zeli*, 欽定理藩部則例, Vol.37. Tianjin: Tianjin guji chubanshe, 1998.
- Zhan Ziyou 詹自佑, *dongbei de ziyuan* 東北的資源. Shanghai: dongfang shudian, 1946.
- Zhang, Jiasheng 張佳生, *Duru jiajing: manzu zongshi wenxue* 獨入佳境: 滿族宗室文學. Shenyang: liaohai chubanshe, 1997.
- Zhang, Jinyan 張縉彥, *Ningguta shanshuiji yuwai ji* 寧古塔山水集·域外集, collated by Li Xingsheng 李興盛. Harbin: Heilongjiang renmin chubanshe, 1984.
- Zheng Yi 鄭毅 ed., *Dongbei nongye jingji shiliao jicheng* 東北農業經濟史料集成, Vol.2. Changchun: jilin wenshi chubanshe, 2005.
- Zhongguo renmin zhengzhi xieshang huiyi liaoningsheng weiyuanhui wenshiziliao weiyuanhui 中國人民政治協商會議遼寧省委員會文史資料委員會 ed., *Liaoning*

- wenshi ziliao xuanji* 遼寧文史資料選輯, 26. Shenyang: Liaoning wenshi chubanshe, 1989.
- Zhongguo kexueyuan minzu yanjiusuo Liaoning shaoshu minzu lishi diaochazu 中國科學院民族研究所遼寧少數民族社会历史调查组, *Manzu lishi dang'an xuanji* 滿族歷史檔案選輯. Beijing: Zhongguo kexueyuan chubanshe, 1963.
- Zhongguo di'er lishi dang'an guan 中国第二历史档案馆 ed., *zhonghua minguo shiliao dang'an huibian disan ji nongshang* 中华民国史档案资料汇编 第3輯 农商 1. 1991
- Zhongguo bianjiang shidi zhongxin 中國邊疆史地中心, Liaoning sheng dangangan 遼寧省檔案館, Jilin sheng dangangan 吉林省檔案館, Heilongjiang sheng dang'an guan 黑龍江省檔案館 eds., *dongbei bianjiang dang'an xuanji* 東北邊疆檔案選輯, Guilin: guangxi university press, 2007.
- Zhongguo diyi lishi dang'an guan 中國第一歷史檔案館 ed., *qingdai junjichu dianbaodang huibian* 清代軍機處電報檔匯編. Vol. 28-33., Vol.42., Vol. 45., Vol.50. Beijing: renmin university press, 2005.
- Zhongguo diyi lishi dangangan 中國第一歷史檔案館, Records of Qing 清實錄, 53. Beijing: Zhonghua shuju, 1987.
- Zhongguo renmin zhengzhi xieshang huiyi jilinsheng jianshi weiyuanhui wenshi ziliao weiyuanhui ed., 中國人民政治協商會議吉林省集安市委員會文史資料委員會, *Ji'an kangri douzhengshiliao wenshi ziliao xuan* 集安抗日鬥爭史料·文史資料選, No. 14. Ji'an: Ji'an shi zhengxie wenshi ziliao weiyuanhui, 2008.
- zhongyang dang'an guan 中央档案馆, zhongguo di'er lishi dang'an guan 中国第二历史档案馆, jilinsheng shehui kexueyuan 吉林省社会科学院 eds., *diguo zhuyi qinhua dang'an*

ziliao xuanbian 日本帝国主义侵华档案资料选编, dongbei jingji lueduo 东北经济掠夺. Beijing: zhonghua shuju, 1991.

#### NEWSPAPERS & MAGAZINES

*Manshu nichibun* 满洲日报, 1906-1930

*Harubin Shōkyō tsūshin* 哈爾濱商況通信 1930-1933

*Harubin niche niche shinbun* 哈爾濱日日新聞, 1925-1926

*Harubin tsushin* 哈爾濱通信, 1923-1928

*Harubin shinbun* 哈爾濱新聞, 1920-1939

*Kita manshū* 北滿洲

Muye jie 木業界, 1925-1940

Shanggong yuekan 商工月刊, 1938-1940

Zhongdong jingji yuekan 中東經濟月刊, 1930-1932

Shiye zazhi 實業雜誌, 1912-1930

Nongxue bao 農學報, 1897-1906

Nongkuang yuekan 農礦月刊

Shiye yuekan 實業月刊

Dongbei xinjianshe 東北新建設

Shenhai tielu yuekan 沈海鐵路月刊

Dongsansheng guanyin jingji yuekan 東三省官銀號經濟月刊

Dongsheng jingji yuekan 東省經濟月刊

#### RESEARCHES BOOKS AND ARTICLES

- Ayumu Yasutomi-Fukao Yoko 安富步 深尾葉子 eds. 2005. *Manshū no seiritsu: Shinrin no shōjin to kindai kūkan no keisei* 滿洲の成立：森林の消尽と近代空間の形成. Nagoya University Press.
- Agrawal, Arun. 2005. *Environmentality: Technologies of Government and the Making of Subjects*. Duke University Press Books.
- An Shinong 安世农. 1933. *Zhongguo senlin fa* 中國森林法. Shanghai: huatong shuju.
- Ayihara, Yoshiyuki “Forests as Commons in Early Modern China: An Analysis of Legal Cases,”  
[https://www.researchgate.net/publication/330402949\\_Forests\\_as\\_Commons\\_in\\_Early\\_Modern\\_China\\_An\\_Analysis\\_of\\_Legal\\_Cases](https://www.researchgate.net/publication/330402949_Forests_as_Commons_in_Early_Modern_China_An_Analysis_of_Legal_Cases)
- Adshead, Samuel Adrian M. 1997. *Material Culture in Europe and China, 1400-1800: The Rise of Consumerism*. New York: St. Martin's Press.
- Bao Qiang 包千谷. 2004. Poem Selections of Bao Qiang 包千谷詩文選, Bao Yingqing, 包應卿, Bao Ying 包應森 ed., Beijing: Zhongguo xiju chubanshe.
- Bello, David. 2016. *Across Forest, Steppe and Mountain: Environment, Identity and Empire in Qing China's Borderlands*. Cambridge UK: Cambridge University Press.
- \_\_\_\_\_. 2010. The Culture Nature of Imperial Foraging in Manchuria,” *Late Imperial China*, 31.2 (2010): 1-33.
- \_\_\_\_\_. 2005. “To Go Where No Han Could Go for Long: Malaria and the Qing Construction of Ethnic Administrative Space in Frontier Yunnan,” *Modern China*, 31.3: 283-317.
- \_\_\_\_\_. 2014. “Relieving Mongols of Their Pastoral Identity: The Environment of Disaster Management on the 18th Century Qing China Steppe.” *Environmental History*, 19.(3): 480-504.

- Brandt, Loren., Rawski, Thomas G. 2008. "China's Great Economic Transformation," in Brandt and Rawski, *China's Great Economic Transformation*. Cambridge University Press.
- Berkes, Fikret, and Carl Folke, eds. 1998. *Linking Social and Ecological Systems. Management Practices and Social Mechanisms for Building Resilience*. Cambridge: Cambridge University Press.
- Barton, Gregory Allen. 2002. *Empire Forestry and the Origins of Environmentalism*. Cambridge University Press, 2002
- Bernahard Eduard Fernow. 1911. *A Brief History of Forestry: In Europe, the United States and Other Countries*. Toronto: University Press.
- Carter, James Hugh. 2002. *Creating a Chinese Harbin: Nationalism in an International City (1916-1932)*. Cornell University Press.
- Caffrey, Patrick J. 2013. "Transforming the Forests of a Counterfeit Nation: Japan's 'Manchu Nation' in Northeast China," *Environmental History* 18 (April 2013):309–332.
- \_\_\_\_\_. 2002. *The Forests of Northeast China, 1600-1953: Environment, Politics and Society*." Ph.D. Dissertation, Georgetown University.
- Carter, James Hugh. 2002. *Creating a Chinese Harbin: Nationalism in an International City, 1916–1932*. Ithaca, NY: Cornell University Press.
- Cox, Thomas. 2010. *The Lumberman's Frontier: Three Centuries of Land Use, Society, and Change in America's Forests*. Oregon: Oregon State University Press.
- \_\_\_\_\_. The North American-Japan Timber Trade: The Roots of Canadian and U.S. Approaches, *Forest and Conservation History* (1990):112-121.
- Cosmo, Nicola Di and Wyatt, Don J. eds., 2003. *Political Frontiers, Ethnic Boundaries, and Human Geographies in Chinese History*. London: Routledge.

- Chen, Chi and others. 2019. China and India Lead in Greening of the World Through Land-Use Management, *Nature Sustainability*, 2.2 (2019):122-129.
- Chen, Shuang. 2017. *State-Sponsored Inequality: The Banner System and Social Stratification in Northeast China*. Stanford University Press.
- Chen Feng 陈锋. 2004. Qingmo minguo nianjian riben duihua diaocha baogao zhongde caizheng yu jingji ziliao 清末民国年间日本对华调查报告中的财政与经济资料, *Jindaishi yanjiu* 近代史研究, 3(2004): 291-314.
- Chen, Yue 陳躍. 2011. Qingdai dongbei diqu shengtai huanjing bianqian yanjiu 清代東北地區生態環境變遷研究. Ph.D. Dissertation, Shandong University.
- Du Zhengzhen 杜正貞. 2017. Wanqing minguo shanlin suoyouquan huode yu zhengming—Zhejiang longquanxian yu jiandexian de bijiao yanjiu 晚清民國山林所有權獲得與證明——浙江龍泉縣與建德縣的比較研究, *Journal of Modern History* 近代史研究, 4 (2017): 78-91.
- Duus, Peter., Myers, Ramon H., Peattie, Mark R. eds. 2014. *The Japanese Informal Empire in China, 1895-1937*. Princeton University Press.
- Duara, Prasenjit. 2003. *Sovereignty and Authenticity: Manchukuo and the East Asian Modern*. Lanham, MD: Rowman and Littlefield.
- \_\_\_\_\_. 1988. *Culture, Power, and the State: Rural North China, 1900-1942*. Stanford: Stanford University Press.
- Denison, Edward., Chung, William. 1976. “Economic Growth and Its Sources,” in Hugh Patrick and Henry Rosovsky, ed., *Asia's New AppGiant*. Washington: Brookings Institution, pp. 63-151.

- Devon, Dear. 2014. “*Marginal Revolutions: Economies and Economic Knowledge between Qing China, Russia, and Mongolia, 1860–1911.*” PhD dissertation, Harvard University.
- Diao Shuren 刁书仁. 1992. *Dongjiang yanjiu lunji 东疆研究论集*. Changchun: Jilin wenshi chubanshe.
- Elliott, Mark C. 2001. *The Manchu Way: The Eight Banners and Ethnic Identity in Late Imperial China*. Stanford University Press.
- \_\_\_\_\_. The limits of Tartary: Manchuria in Imperial and National Geographies, *The Journal of Asian Studies*, 59.3 (2000): 603-646.
- Esselstrom, Erik. 2009. *Crossing Empire's Edge: Foreign Ministry Police and Japanese Expansion in Northeast Asia*, University of Hawai'i Press.
- Elchibegoff, Ivan M. 1949. *United States International Timber Trade in the Pacific Area*. Stanford, London: Stanford University Press, Oxford University Press.
- Elvin Mark, 1993. “Three Thousand Years of Unsustainable Growth: China’s Environment from Archaic Times to the Present,” *East Asian History*, No.6, Dec 1993: 7-46
- Elvin Mark and Ts'ui-Jung Liu (editors). 1998. *Sediments of Time: Environment and Society in Chinese History* (Studies in Environment and History). (Cambridge: Cambridge University Press. 1998)
- Elvin Mark, 2006. *The Retreat of Elephants: An Environmental History of China*. Yale University Press.
- Elleman, Bruce A. and Kotkin, Stephen, eds., 2009. *Manchurian Railways and the Opening of China: An International History*. Armonk, NY: M. E. Sharpe.
- Feng Xu 馮煦, Chen Shili 陳師禮, ed. 2005. *Wanzheng Jiyao 皖政輯要*. Huangshan: Huangshan shushe.

- Fedman, David. 2012. "Triangulating Chōsen: Maps, Mapmaking, and the Land Survey in Colonial Korea." *Cross-Currents: East Asian History and Culture Review*, 1(1): 205-234.
- \_\_\_\_\_. 2015. "The Saw and the Seed: Japanese Forestry in Colonial Korea, 1895 – 1945." Ph.D. Dissertation. Stanford University.
- Frank, Andrew Gunder. 1998. *Reorient: Global Economy in the Asian Age*. Berkeley: University of California Press.
- Francks, Penelope. 1992. *Japanese Economic Development: Theory and Practice* London: Routledge, pp. 226-243.
- Gao, Shouxian 高寿仙. 2006. Mingdai Beijing ranliao de shiyong yu caigong 明代北京燃料的使用与采供, *Gugong bowuyuan yuankan* 故宫博物院院刊, 1 (2006):123-140.
- Gong Shengsheng 龚胜生. 1995. Yuanmingqing shiqi Beijing chengde ranliao gongxiao xitong yanjiu 元明清时期北京城燃料供销系统研究, *Zhongguo lishi dili luncong* 中国历史地理论丛, 1 (1995): 141-156.
- Gottschang, Thomas R. and Lary, Diana. 2000. *Swallows and Settlers: The Great Migration from North China to Manchuria*. Ann Arbor: Ann Arbor Center for Chinese Studies, University of Michigan.
- Hirano, Katsuya. 2009 "The Politics of Colonial Translation: On the Narrative of the Ainu as a 'Vanishing Ethnicity'" *The Asia-Pacific Journal*, 4(3), <http://japanfocus.org/-Katsuya-HIRANO/3013>
- \_\_\_\_\_. 2015. "Thanatopolitics in the making of Japan's Hokkaido: Settler Colonialism and Primitive Accumulation," *Critical Historical Studies*, 2(2): 191-218.
- Halsey, Stephen R. 2015. *Quest for Power: European Imperialism and the Making of Chinese Statecraft, 1850-1949*. London: Harvard University Press.

- Hecht, Susanna., Morrison Kathleen., Paddock, Christine. Eds., 2014. *The Social Lives of Forest: Past, Present, and Future of Woodland Resurgence*. Chicago: University of Chicago Press.
- \_\_\_\_\_. 2014. *From Fragmentation to Forest Resurgence: Paradigms, Representations, and Practices*, The University of Chicago Press.
- \_\_\_\_\_. 2004. Forests Lost and Found in Tropical Latin America: The Woodland “Green Revolution.” *The Journal of Peasant Studies* 41.5 (August): 877-909.
- \_\_\_\_\_. 2013. *The Scramble for the Amazon and the Lost Paradise of Euclides da Cunha*. Chicago: University of Chicago Press.
- \_\_\_\_\_. 2011. *The Fate of the Forest: Developers, Destroyers, and Defenders*. Chicago: The University of Chicago Press.
- \_\_\_\_\_. 2007. Forests, Fields and Family: Women and Children in the Extractive Economies of Acre, Brazil, *Journal of Agrarian Change*. 7.3: 316-347.
- Hidemasa Morikawa. 1992. *Zaibatsu: The Rise and Fall of Family Enterprise Groups in Japan*. Tokyo: University of Tokyo Press, pp. xv-25.
- Hudson, Mark J. 2014. “Placing Asia in the Anthropocene: Histories, Vulnerabilities, Responses”, *Journal of Asian Studies*, 73.4: 941-962.
- Huang Haitao 黃海濤. 2007. *Mingqing shixue jingji lunli sixiang yanjiu* 明清實學經濟倫理思想研究. Kunming: Yunnan University Press.
- Huang Jiayuan 黃甲元. 1992. *Changbai shanqu kaifa shigao* 長白山區開發史稿, Changchun: jilin wenshi chubanshe.
- Hong Guangji 洪廣冀. 2004. *linxue, zibenzhuyi, yu bianqu tongzhi: rishi shiqi linye diaocha yu zhengli shiye de zai sikao*, 林學、資本主義與邊區統治：日治時期林業調查與整理事業的再思考, *Taiwanshi yanjiu* 臺灣史研究, 11.2 (2004): 54.

- Isett, Christopher Mills. 2007. *State, Peasant, and Merchant in Qing Manchuria, 1644-1862*, Stanford University Press.
- Ives, J., Pitt, David C. 1988. *Deforestation: Social Dynamics in Watersheds and Mountain Ecosystems*. Routedledge Press.
- Karl, Appuhn. 2009. *A Forest on the Sea: Environmental Expertise in Renaissance Venice*. Johns Hopkins University Press.
- \_\_\_\_\_. 2000. "Inventing Nature: Forests, Forestry, and State Power in Renaissance Venice," *The Journal of Modern History*. 72.4: 851-89.
- Kanno, Naoki 菅野直樹. 2000. Kamo ōryokukō to ki kōshi to Nihon no Manshū shinshutsu -- shinrin shigen o meguru taigai kankei no hensen 鴨鴨緑江採木公司与日本の満州進出 -- 森林資源をめぐる対外関係の変遷, *Kokushi-gaku*, 172 (2000):45-76.
- Kaneko, fumio 金子文夫. 1982. Kiyosu ni okeru Ōkura zaibatsu 清洲における大倉財閥, in Ōkura zaibatsu kenkyūkai-hen 大倉財閥研究会 ed., *Ōkura zaibatsu no kenkyū* 大倉財閥の研究. Kondō shubbansha 近藤出版社, 1982.
- Keijiro Otsuka, Frank Place. 1998. *Land tenure and natural resource management: A comparative study of agrarian communities in Asia and Africa*, The Johns Hopkins University Press, Baltimore and London, 1998
- Koji, Matsushita. 2002. *National Forest Management*, in Yoshiya Iwai ed., *Forestry and Forest Industry in Japan* (Canada: UBC Press).
- Kim, Seonmin. *Ginseng and Borderland: Territorial Boundaries and Political Relations Between Qing China and Choson Korea, 1636-1912*. University of California Press.
- Ku Pōmjŏn 丘凡真. 2009. "19 segi Sōnggyōng tongbyōnoe sanjang ūi kwalli wa Cho Ch'ōng kong- dong hoech'o" 19世紀盛京東邊外山場의管理와朝清公同會哨. *Sarim 史林* 32 (2009): 261-300.

- Lattimore, Owen. 1932. *Manchuria: Cradle of Conflict*. New York: Macmillan.
- \_\_\_\_\_. 1934. *Mongols of Manchuria: Their Tribal Divisions, Geographical Distribution, Historical Relations with Manchus and Chinese, and Present Political Problems*. New York: John Day.
- \_\_\_\_\_. 1940. *Inner Asian Frontiers of China*. New York: American Geographical Society.
- \_\_\_\_\_. 1962. *Studies in Frontier History: Collected Papers, 1928–1958*. London: Oxford University Press.
- Langston, Nancy. 1995. *Forest Dreams, Forest Nightmares: The Paradox of Old Growth in the Inland West*. Seattle: University of Washington Press.
- Lary, Diana. 2010. *Warlord Soldiers: Chinese Common Soldiers 1911-1937*. Cambridge University Press.
- \_\_\_\_\_. ed., 2007. *The Chinese State at the Borders*. Vancouver: University of British Columbia Press.
- Larson, Anne M. 2013. Land Tenure and REDD+: the Good, the Bad and the Ugly , *Global Environmental Change-Human and Policy Dimensions* 23: 678-689.
- Lee, Robert H. G. 1970. *The Manchurian Frontier in Ch'ing History*. Cambridge, MA: Harvard University Press, 1970.
- Linda, Grove., Shinya, Sugiyama. eds. 2001. *Commercial Networks in Modern Asia*, Routledge.
- Li Wenliang 李文良. 1999. *Rizhi shiqi Taiwan linye zhengli shiye zhi yanjiu—yi taoyuan daxi diqu wei zhongxin* 日治時期台灣林野整理事業之研究——以桃園大溪地區為中心, Master thesis, National Taiwan University.

- Li Bozhong 李伯重. 1984. Mingqing jiangnan gongnongye shengchan zhongde ranliao wenti 明清江南工农业生产中的燃料问题, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 4(1984): 34-49.
- Li Bozhong 李伯重. 1986. "Mingqing shiqi jiangnan diqu de mucai wenti" 明清时期江南地区的木材问题, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 1(1986): 86-96.
- Li Bozhong 李伯重. 2002. *Fazhan yu zhiyue—Mingqing jiangnan shengchanli yanjiu* 发展与制约——明清江南生产力研究. Taipei: lianjing chubanshe.
- Lu Minghui 盧明輝 ed. 1994. qingdai beibu bianjiang minzu jingji fazhanshi 清代北部邊疆民族經濟發展史. Harbin: Heilongjiang jiaoyu chubanshe.
- Matsuzato, Kimitaka ed. 2017. *Russia and Its Northeast Asian Neighbors: China, Japan, and Korea, 1858–1945*. Lanham, MD: Lexington Books.
- Marks, Robert. 2011. *China: Its Environment and History*. Lanham, Md.: Rowman & Littlefield.
- \_\_\_\_\_. 1998. *Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China*. Cambridge: Cambridge University Press.
- Menzies, Nicholas K. 1994. *Forest and Land Management in Imperial China*. St. Martin's Press, Inc.
- \_\_\_\_\_, 1988, 1994 "A Survey of Customary law and Control over trees and wildlands in China." In *Whose Trees? Proprietary Dimensions of Forestry*, ed. Louise Fortmann and John W. Bruce, 51-62. Boulder, CO: Westview Press.
- \_\_\_\_\_. 1996. the volume on Forestry in Joseph Needham's *Science and Civilisation in China*. (Vol. VI.pt 3. Cambridge, Cambridge University Press.

- \_\_\_\_\_. 2007. *Our Forest, Conservation, and the State in Community-Base Forest Management*. Columbia University Press.
- Mitter, Rana. 2000. *The Manchurian Myth: Nationalism, Resistance and Collaboration in Modern China*. California University Press.
- Moore, Aaron Stephen. 2013. "The Yalu River Era of Developing Asia': Japanese Expertise, Colonial Power, and the Construction of Sup'ung Dam," *The Journal of Asian Studies*, Vol. 72, No. 1 (2013), 115-139.
- \_\_\_\_\_. 2013. *Constructing East Asia: Technology, Ideology, and Empire in Japan's Wartime Era, 1931-1945*. Stanford: Stanford University Press.
- Morris-Suzuki, Tessa. 2014. "The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan's Imperial Order," *Japanese Studies*, 33 (3): pp:225-242.
- McCord, Edward. 2014. *Military Force and Elite Power in the Formation of Modern China* (London and New York: Routledge.
- \_\_\_\_\_. 2003. *The Power of the Gun: The Emergence of Modern Chinese Warlordism*. Berkeley: University of California Press. Online:  
<http://texts.cdlib.org/view?docId=ft167nb0p4>
- \_\_\_\_\_. 2015. "Military Atrocities in Warlord China." In *Civil-Military Relations in Chinese History. From Ancient China to the Communist Takeover*. Edited by Kai Filipiak. London and New York: Routledge: pp. 210-237.
- McKean, M. A. 1982. *The Japanese Experience with Scarcity: Management of Traditional Common Lands*. *Environmental Review* 6:63-88.
- Matusaka, Yoshihisa Tak. 2001. *The Making of Japanese Manchuria, 1904-1932*, Harvard University Asia Center.
- Mette, High., Schlesinger, Jonathan. 2011. Rulers and Rascals: The Politics of Gold in Qing Mongolian History, *Central Asian Survey*, 29(3): pp.289-304.

- Jonathan Schlesinger, “*Inventing Nature in the Qing Empire: Environment, Identity in Northeast China and Mongolia, 1750-1850.*” PhD. Dissertation, Harvard University, 2012.
- \_\_\_\_\_. 2016. *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule.* Stanford, California: Stanford University Press.
- Muscolino, Micah S. 2009. *Fishing Wars and Environmental Change in Late Imperial and Modern China,* Harvard University Asia Center.
- Myers, Ramon H. 1989. *The Japanese Informal Empire, 1895–1931.* Princeton University Press.
- \_\_\_\_\_. 1976. “Socioeconomic Change in Villages of Manchuria During the Ch’ing and Republican Periods: Some Preliminary Findings.” *Modern Asian Studies*, 10 (4): 591-620.
- McCormack, Gavan. 1977. *Chang Tso-Lin in Northeast China: China, Japan, and the Manchurian Idea, 1911-1928.* Stanford University Press.
- Nagasawa. Yasuaki, *The Works of Japanese Business Historians in 1982: Business History of Japan.*
- Nanjing linye daxue yichan yanjiushi 南京林業大學遺產研究室 ed. 1989. Zhongguo jindai linyeshi 中國近代林業史. Beijing: zhongguo linye chubanshe.
- Nish, Ian. 2016. *The History of Manchuria (1848-1948): A Sino-Russo-Japanese Triangle.* Renaissance Books Limited.
- Nixon, Rob. 2013. *Slow Violence and the Environmentalism of the Poor.* Harvard University Press.
- Ni Genjin 倪根金 ed. 2005. shengwu shi yu nongye shi xintan 生物史與農史新探. Taipei: wanren chubanshe.

- Nishimura shigeo 西村成雄. 1984. *Chūgoku kindai Tōhoku chiiki-shi kenkyū* 中國近代東北地域史研究. Hōritsubunkasha 法律文化社.
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press.
- \_\_\_\_\_. 2010. "Beyond Markets and States: Polycentric Governance of Complex Economic Systems." *American Economic Review*. American Economic Association. 100.3: 641-72.
- O'dwyer, Emer. 2015. *Significant Soil: Settler Colonialism and Japan's Urban Empire in Manchuria*, Harvard University Asia Center.
- Ōjiseishi sanrin jigyō-shi henshū iinkai 王子製紙山林事業史編集委員会, Ōjiseishi sanrin jigyō-shi 王子製紙山林事業史, 1976.
- O'Brien, Patrick. 2012. "Fiscal and Financial Preconditions for the Formation of Developmental States in the West and the East from the Conquest of Ceuta (1415) to the Opium War (1839)." *Journal of World History* 23(3): 513-553.
- Okochi, Akio; Yasuoka, Shigeaki. eds. 1984. *Family Business in the Era of Industrial Growth: Its Ownership and Management*. University of Tokyo Press.
- Okazaki, Tetsuji. 1996. "The Japanese Firm under the Wartime Planned Economy," in Masahiko Aoki and Ronald Dore, eds., *The Japanese Firm*. New York: Oxford University Press. pp. 350-378.
- Park, Hyun Ok. 2005. *Two Dreams in One Bed: Empire, Social Life, and the Origins of the North Korean Revolution in Manchuria*. Durham, N.C.: Duke University.
- Perlin, John. 1989. *A Forest Journey: The Role of Wood in the Development of Civilization*. Harvard University Press.
- Perlin, John. 2011 *the Foundation of Civilization*. University of Minnesota Press.
- Perfecto, Ivette; Vandemeer, John; Wright, Angus. 2009. *Nature's Matrix: Linking Agriculture, Conservation, and Food Sovereignty*. Earthscan.

- Pomeranz, Kenneth. 2000. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton: Princeton University Press.
- \_\_\_\_\_. 1993. *The Making of A Hinterland: State, Society, and Economy in Inland North China, 1853-1937*. Berkeley: University of California Press, 1993.
- Qiu, Zhonglin 邱仲麟. 2003. Renkou zengzhang, senlin kanfa, yu mingdai Beijing shenghuo ranliao de zhuanbian 人口增长、森林砍伐与明代北京生活燃料的转变, *Zhongyang yanjiuyuan lishi yuyan yanjiusuo jikan* 中央研究院历史语言研究所集刊, 74.1 (2003): 141-188.
- \_\_\_\_\_. 2007. Mingdai de meikuang kaicai——shengtai bianqian, guanfang jucuo yu shehui shili de jiaohu zuoyong 明代的煤矿开采——生态变迁、官方举措与社会势力的交互作用, *Qinghua xuebao* 清华学报, 37.2 (2007): 361-399.
- Peattie, Mark R. 1988. “The Japanese Colonial Empire, 1895–1945.” In *The Cambridge History of Japan*. Edited by John W. Hall, Marius B. Jansen, Madoka Kanai, and Denis Twitchett. Vol. 6. Cambridge, UK: Cambridge University Press.
- Radkau, Joachim. 2012. *Wood: A History*. Polity Press.
- Reardon-Anderson, James. 2005. *Reluctant Pioneers: China's expansion northward, 1644-1937*, Stanford University Press.
- \_\_\_\_\_. 2000. “Land Use and Society in Manchuria and Inner Mongolia during the Qing Dynasty.” *Environmental History* 5 (2000): 503-530.
- Rebecca Neaera, Abers., Keck, Margaret E. 2013. *Practical Authority: Agency and Institutional Change in Brazilian Water Politics*. Oxford University Press.
- Rosenthal, Jean-Laurent., Wong, R. Bin. 2011. *Before and Beyond Divergence: The Politics of Economic Change in China and Europe*. Cambridge: Harvard University Press.
- Robbins, Paul. 2004. “Chapter 3: The Critical Tools,” in *Political Ecology: A Critical Introduction*. Wiley-Blackwell Publishing.

- Rolf Peter Sieferle. 2010. *The Subterranean Forest: Energy Systems and the Industrial Revolution*. White Horse Press.
- Su, Yunshan 蘇, 雲山; Iwai, Yoshitomi 岩井, 吉彌. 1993. Hokuman tōshintetsudō ensen ni okeru shinrin kaihatsu kōzō no tokushitsu 北滿東清鐵道沿線における森林開発構造の特質, *Bulletin Of The Kyoto University Forests* 65 (1993):182-193.
- Schelesinger, Jonathan. 2016. *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing Rule*. Stanford University.
- Shan, Patrick Fuliang. 2017. *Taming China's Wilderness: Immigration, Settlement, and the Shaping of the Heilongjiang Frontier*. London: Routledge.
- Shao, Dan. 2011. *Remote Homeland, Recovered Borderland: Manchus, Manchoukuo, and Manchuria, 1907-1985*. Honolulu: University of Hawai'i Press.
- Strauss, Julia C. 2009. Forestry Reform and the Transformation of State Capacity in Fin-de-Siècle China, *The Journal of Asian Studies*, 68.4 (2009):1163-1188.
- Sun, Donghu 孙东虎. 2007. Yuanmingqing Beijing de nengyuan gongying ji shengtai xiaoying 元明清北京的能源供应及生态效应, *Zhongguo lishi dili lunwen* 中国历史地理理论丛, 1 (2007): 134-144.
- Scott, James. C. 1999. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.
- Rawski, Evelyn S. 1996. "Presidential Address: Revisioning the Qing: The Significance of the Qing Period in Chinese History," *The journal of Asian Studies*, 55(4): pp. 829-831.
- Rao Ye 饶野. 1997. 20 shiji shangbanye riben dui yalujiang you'an senlin ziyuan de lueduo 20世纪上半叶日本对鸭绿江右岸我国森林资源的掠夺, *zhongguo bianjiang shidi yanjiu* 中国边疆史地研究3(1997): 90-99.

- Robert Stolz. 2014. *Bad Water: Nature, Pollution, and Politics in Japan 1870-1950*. Duke University.
- Sotobayashi-kai Mamō buhai 外林会満蒙部会. 1977. Mamō tairiku ringyō-shi 満蒙大陸林業史. Nōrin shuppan kabushikigaisha 農林出版株式会社.
- Schneider, Aaron L. 1989. *Deforestation and Development in Canada and the Tropics: The Impact on People and the Environment*. University College of Cape Breton Press.
- Smith, Norman. 2017. *Empire and Environment in the Making of Manchuria*. UBC Press.
- Stradling, David, Thorsheim, Peter. 1999. "The Smoke of Great Cities: British and American Efforts to Control Air Pollution, 1860-1914," *Environmental History*, 4(1): 6.
- Shen Jiawu 沈家五 ed. 1987. Zhangjian nongshang zongzhang renqi jingji ziliao xuanbian 張謇農商總長任期經濟資料選編. Nanjing: Nanjing University Press.
- Takayoshi, Koseki 小関, 隆祺. 1962. The Processes of Development of Forestry in Hokkaido (Hokkaidō ringyō no hatten katei 北海道林業の発展過程), *Hokkaido University Agricultural Department Seminar Forest Research Report*, 1962-11, 22(1): 25-94.
- Tao Mian 陶勉. 1999. qingdai yalujiang youan huangdi kaiken jingguo 清代鴨綠江右岸荒地開墾經過, *zhongguo bianjiang shidi yanjiu* 中國邊疆史地研究, 1(1999): 56-58.
- Tao Yan 陶炎. 1987. Dongbei linye fazhan shi 東北林業發展史. Changchun: jilin shehui kexueyuan.
- Tessa, Morris-Suzuki. 2014. "The Nature of Empire: Forest Ecology, Colonialism and Survival Politics in Japan's Imperial Order," *Japanese Studies*, 33.3(2014): pp:225-242.
- Tsing, Anna Lowenhaupt. 2015. *The Mushrooms at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton University Press.

- Tsukasa, Toshin 塚東進. 1990. Hinaka gōben ōryokukō to ki kōshi no bunseki - Chūgoku Tōhoku chiiki ni okeru Nihon shihon ni yoru ringyō shihai no tokushitsu 日中合弁鴨緑江採木公司の分析-中国東北地域における日本資本による林業支配の特質, *Ashia keizai* アシア経済, 31.10 (1990): 37-56.
- Toshio, Kanno 萩野敏雄. 1965. Chōsen Manshū Taiwan ringyō hattatsu shiron 朝鮮・満州・台湾林業発達史論. Rin'yakōsaikai 林野弘済会.
- Togai Yoshio. 山口和雄. 1998, *Mitsui Zaibatsu shi : Taishō, Shōwa hen* 近代日本の商品取引: 三井物産を中心に. Tokyo sharin.
- Totman, Conrad. 1985. *The Origins of Japan's Modern Forests: The Case of Akita*. University of Hawaii Press.
- \_\_\_\_\_. 1995. *The Lumber Industry in Early Modern Japan*. University of Hawaii Press, 1995.
- \_\_\_\_\_. 1998. *They Green Archipelago: Forestry in Preindustrial Japan*. Ohio University Press.
- \_\_\_\_\_. 2007. *Japan's Imperial Forest, Goyorin, 1889-1945: With A Supporting Study of the Kan/Min Division of Woodland in Early Meiji Japan, 1871-76*.
- Sugihara, Kaoru., Wong, R. Bin. 2015. "Industrious revolutions in early modern world history," *Cambridge World History* 6(2): pp 283-310.
- Seow, Victor Kian Giap. 2014. "Carbon Technocracy: East Asian Energy Regimes and the Industrial Modern, 1900-1958," Ph.D. dissertation, Harvard University.
- Sun Chuanjie, Sun Jingli 孙传杰, 孙静丽. 1996. Riben dui woguo odngbei senlin ziyuan de lueduo 日本对我国东北森林资源的掠夺, *Shijie lishi* 世界历史 6(1996): 75-81;
- Tang, John. 2006. *Flat-footed Giants: Zaibatus and Industrialization in Meiji Japan, 1868-1912*. All-UC Conference. <http://www.ejs.ucdavis.edu/All-UC/conferences/2006-spring/Tang.pdf>

- Tamanoi, Mariko Asano. 2005. *Crossed Histories: Manchuria in the Age of Empire*. Asian Interactions and Comparisons, University of Hawaii Press.
- Vandergeest, Peter, and Nancy Lee Peluso. 2006. "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1. *Environment and History* 12.1 (2006):31-64.
- \_\_\_\_\_. "Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 2. *Environment and History* 12.4 (2006):359-393. PDF
- \_\_\_\_\_. 2011. "Political Ecologies of War and Forests: Counterinsurgencies and the Making of National Natures." *Annals of the Association of American Geographers* 101.3 (May 2011) 587-608.
- Von Glahn, Richard. 2016. *The Economic history of China: From Antiquity to the Nineteenth Century*. Cambridge: Cambridge University Press.
- Wang Changfu 王長富.1990. *Zhongguo linye jingjishi 中國林業經濟史*. Beijing: Dongbei linye daxue chubanshe.
- \_\_\_\_\_. 1991. *Jindai dongbei linye jingjishi 近代東北林業經濟史*. Beijing: zhongguo linye chubanshe.
- \_\_\_\_\_. ed. 2000. *Dongbei jindai linye keji shiliao yanjiu 東北近代林業科技史料研究*. Harbin: dongbei linye daxue chubanshe.
- Wang, Dachuan 王大川. 2005. *Kindai Manshū ringyō ni okeru nitchū gōben jigyō hayashi ba-ken funsō o chūshin ni 近代満州林業に於ける日中合弁事業--林場権紛争を中心に*, *Keizaironsō bessatsu chōsa to kenkyū 經濟論叢別冊 調査と研究* (2005), 30: 62-75.
- \_\_\_\_\_. 2009. *Kindai Chūgoku Tōhoku chihō ni okeru ringyō kaihatsu 近代中国東北地方における林業開発*, Ph.D. dissertation, Kyoto University.

- Wang Xiliang王希亮. 2017. Jindai zhongguo dongbei senlin kaifa yu shengtai kongjian bianqian近代中国东北森林开发与生态空间变迁, *lishi yanjiu*历史研究 1(2017): 85-103.
- Wang Xiaoqiu王晓秋, Shang Xiaoming尚小明eds.,1998. Wuxu weixin yu qingmo xinzheng—wanqing gaige shi yanjiu戊戌維新與清末新政—晚清改革史研究.Beijing University Press.
- Wang Chengli 王承礼. 1991. zhongguo dongbei lunxian shisinin shi gangyao中国东北沦陷十四年史纲要. Beijing: zhongguo dabaike quanshu chubanshe.
- Wang Chi-Wu. 1961. *Forests of China*. Cambridge: Harvard University.
- Westoby, Jack. 1991 *Introduction to World Forestry*. Wiley Press.
- Wolff, David. 1999. *To the Harbin Station: The Liberal Alternative in Russian Manchuria, 1898–1914*. Stanford, CA: Stanford University Press.
- William, Cronon. 1992. ‘A Place for Stories: Nature, History and Narrative’, *The Journal of American History* 78(4): 1347-76.
- \_\_\_\_\_. 1993. “The Uses of Environmental History” (Presidential Address, American Society for Environmental History), *Environmental History Review*, 17.3: pp.1-22.
- Worster, Donald. 1990. Alfred Crosby, Richard White, et al., “A Roundtable: Environmental History.” *Journal of American History* 76 (1990), pp. 1087-1147.
- \_\_\_\_\_. Donald, 1977. Worster. *Nature’s Economy: A History of Ecological Ideas*. New York: Cambridge University Press.
- Wilson, Jeffrey K. 2012. *The German Forest: Nature, Identity, and the Contestation of a National Symbol, 1871-1914*. University of Toronto Press

- Wong, R. Bin. 2015. "Self-strengthening and other political responses to the expansion of European economic and political power" *Cambridge World History* vol. 7.1, pp 366-94.
- \_\_\_\_\_. 2012. "Taxation and Good Governance in China, 1500-1914," in B. Yun-Casalilla and Patrick O' Brien, eds. *The Rise of Fiscal States: A Global History, 1500-1914* (Cambridge University Press, 2012): 353-377;
- \_\_\_\_\_. 2013. "Reflections on Qing Governance: Chinese Empire in Comparative Perspective," *Crossroads* 5: 103-14.
- Wu, Shellen Xiao. 2015. *Empires of Coal: Fueling China's Entry into the Modern World Order, 1860-1920*. Stanford University Press.
- Wright, Tim. 2007. "The Manchurian Economy and the 1930s World Depression," *Modern Asian Studies*, 41(5): 1073-1112.
- \_\_\_\_\_. 1992. 'Introduction: Chinese Economic History in a Period of Change', pp. 1-28 in Tim Wright ed, *The Chinese Economy in the Early Twentieth Century: Recent Chinese Studies* (Macmillan) translated by Professor Wang Yuru of the Nankai Institute of Economics as '80 niandai Zhongguo jindai jingji shixue yanjiu de zhuyao wenti' in *Nankai jingji yanjiu* 1992.6 (December 1992): 62-69; another version published as 'Biandong shiqi de jindai Zhongguo jingji shixue' in Ding Richu ed, *Jindai Zhongguo, di yi ji* (Modern China, no. 3) (Shanghai: Shanghai shehui kexue chubanshe, 1993), p. 193-223.
- \_\_\_\_\_. 1980. "Entrepreneurs, Politicians and the Chinese Coal Industry, 1895-1937," *Modern Asian Studies* 11.4 (October 1980): 579-602.
- \_\_\_\_\_. (Joint article with Professor Shannon Brown, then of the University of Maryland), "Technology, Economics and Politics in the Modernization of China's Coal Mining

- Industry: The First Phase, 1850-1895,” *Explorations in Economic History* 18.1 (January 1981): 60-83.
- \_\_\_\_\_. 1981. “The Growth of the Modern Chinese Coal Industry, 1896-1936: An Analysis of Supply and Demand,” *Modern China* 7.3 (July 1981): 317-350.
- Xu, Lu, Sidney. 2019. *Ho! Japanese Settler Colonialism in Hokkaido and the Making of Japanese Migration to the American West, 1869–1888*, *The Journal of Asian Studies*, 78.3 (2019): 521-547.
- Yang Daqing. 2011. *Technology of Empire: Telecommunications and Japanese Expansion in Asia, 1883–1945*. Cambridge: Harvard University Asia Center.
- Yang, Tai-shuenn. 1987. "Property Rights and Constitutional Order in Imperial China." Ph.D. diss., Indiana University, Bloomington.
- Yamamura, Kozo. 1976. “General Trading Companies in Japan: Their Origins and Growth,” in Hugh Patrick, ed., *Japanese Industrialization and its Social Consequences*. Berkeley, University of California.
- Yamaguchi, Asuka 山口明日香. 2015. “Tetsu-dō-gyō-teki hatten to makuragi,” 鐵道業的發展と枕木, shinrin shigen no kankyō keizai-shi: Kindainihon no sangyoka to mokuzai 森林資源の環境經濟史：近代日本の産業化と木材. Keiō University Press, 2015.
- Young, O. R. 1982. *Resource Regimes. Natural Resources and Social Institutions*. Berkeley: University of California Press.
- Young, Louise. 1998. *Japan’s Total Empire: Manchuria and the Culture of Wartime Imperialism* (Berkeley: University of California Press, 1998)
- Yoshiki, Enatsu. 2004. *Banner Legacy: The Rise of the Fengtian Local Elite at the End of the Qing*, The University of Michigan Ann Arbor.

- \_\_\_\_\_. 2002. Establishment of the Modern Land System in Fengtian (Southern Manchuria) at the Beginning of the Twentieth Century: Development of Land Market in Manchuria. *The Memoirs of the Toyo Bunko* 59: 87-107.
- Yuan ,Tingzhi 元延植. 1998. Qing zhongqi Beijing diqu de meitan buzu he qingchao de duice 清中期北京地区的煤炭不足和清朝的对策, *Zhongguo shehui jingjishi yanjiu* 中国社会经济史研究, 3 (1998): 66-76.
- Yin, Weilun 尹偉倫, Yan, Geng 嚴耕.eds. 2012. *Zhongguo linye yu shengtaishi yanjiu*中國林業與生態史研究. Beijing: zhongguo jingji chubanshe.
- Xu Shuming 许淑明. 1992. Qingmo jilinsheng de yimin yu nongye kaifa 清末吉林省的移民与农业开发, *zhongguo bianjiang shidi yanjiu* 中国边疆史地研究4(1992): 18-27.
- Zatsepine, Victor. 2017. *Beyond the Amur: Frontier Encounters between China and Russia, 1850-1930*. Vancouver: UBC Press.
- Zhao, Gang. 1983. *The Economic Development of Manchuria: The Rise of a Frontier Economy*. Vol. 43. University of Michigan Center for Chinese Studies Publications.
- Zhao, Zhongfu 趙中孚1981. Qingdai dongsansheng de diquan guanxi yu fengjin zhengce 清代東三省的地權關係與封禁政策 [The Land Rights Relationship and the Closing-off Policy of the Three Provinces in the Qing Dynasty], *Zhongyang yanjiuyuan jinshisuo jikan* 中央研究院近史所集刊, 10 (1981): 283-302.
- \_\_\_\_\_. 1986. Qingdai dongbei sansheng beibu de kaifa yu hanhua 清代東北三省北部的開發與漢化 [Development and Localization of the Three Provinces of the Northeast in the Qing Dynasty], *Zhongyang yanjiuyuan jinshisuo jikan* 中央研究院近史所集刊, 15 (1986): 1-14.

- Zhao, Hai. 2015. “*Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China, 1918–1954.*” PhD dissertation, University of Chicago.
- Zhaozhen 趙珍. 1997. *Ziyuan, huanjing, yu guojia quanli: qingdai weichang yanjiu* 資源、環境與國家權力：清代圍場研究. Beijing: Renmin University press.
- Zhang, Ling. 2009. “Changing with the Yellow River: An Environmental History of Hebei, 1048-1128” *Harvard Journal of Asiatic Studies* 69(1): 1-36.
- \_\_\_\_\_.<sup>2016</sup>. *The River, the Plain, and the State: An Environmental Drama in Northern Song China, 1048-1128*. Cambridge: Cambridge University Press, 2016.
- Zhang, Meng. 2017. “*Timber Trade Along the Yangzi River: Market, Institutions, and Environment, 1750-1911.*” Ph.D. Dissertation, UCLA.
- Zhao Xingyuan 趙興元. 2004. *Tumen jiang beichaoxian yimin wenti yanjiu* 圖們江北朝鮮移民問題研究. Jilin wenyi chubanshe, 2004.
- Zhang Jie 張杰. 1994. Qingdai yalujiang liuyu de fengjin yu kaifa 清代鴨綠江流域的封禁與開發, *zhongguo bianjiang shidi yanjiu* 中國邊疆史地研究, 4(1994): 42-52;
- Zhongguo linxuehui 中國林學會 ed. 1996. *Zhongguo senlin de bianqian* 中國森林的變遷. Beijing: linye chubanshe.
- Zhongguo kexueyuan linye turang yanjiusuo 中國科學院林業土壤研究所ed. 1964. *Dongbei jingji mucai zhi* 東北經濟木材誌. Beijing: kexue chubanshe.