LAND & WATER: A HISTORY OF FIFTEENTH-CENTURY VIETNAM FROM AN ENVIRONMENTAL PERSPECTIVE

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAI'I AT MĀNOA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

HISTORY

May 2017

By

Hieu M. Phung

Dissertation Committee:

Liam C. Kelley, Chairperson
Barbara Watson Andaya
Edward L. Davis
Matthew P. Romaniello
Wensheng Wang
David R. McCraw

ABSTRACT

Debates and concerns about contemporary environmental problems have challenged historians to examine the human past from a perspective that explores the role of the natural environment in the historical development of individual societies. This dissertation examines how premodern Vietnamese rulers, officials, and scholars perceived "the environment" in the fifteenth century and how they documented the human-environment interaction. The fifteenth century, especially the long reign of King Thanh Tong of the Le dynasty (1460-97), was one of the most prosperous eras in Vietnam's pre-twentieth-century history, and the aim of this study is to shed new light on this historical period. Rather than focusing on court politics, intellectual developments, or warfare, this dissertation uses the Vietnamese primary sources in classical Chinese as a basis for understanding how the environment was conceptualized. A recurring theme in these sources concerns the attitudes towards land and water, which were fundamental in facilitating humannature interactions in fifteenth-century Vietnam. The evidence shows that when the Le rulers established their dynasty in northern Vietnam, they focused on understanding how the landscape should be conceptually "mapped" and on recording the natural resources that different regions within this land could provide. Their emphasis on land resources reveals a deeper environmental goal: how to transform the land into an environment that would be eminently suited to wet rice farming. This goal is also illustrated in the Vietnamese state's efforts to build dikes and to develop strategies to cope with water-related natural disasters such as droughts and floods. Overall, the environmental analysis in this dissertation posits that "geographical considerations" can have some application in certain contexts, like fifteenth-century Vietnam. However, it was through a long historical development that the Vietnamese people came to self-identify as inhabitants of a society where rice-growing lay at the cultural core. In this history, both the particular environmental conditions of northern Vietnam and the historical conjunctures of the fifteenth century lent impetus to a Vietnamese self-perception of themselves as quintessential wet rice producers.

ACKNOWLEDGEMENTS

This dissertation would not have been possible if not for the help I received from many people. It therefore behooves me to express my deepest gratitude to everyone who assisted me with this project, for their outstanding contributions to my thinking and academic growth, and for the emotional support they provided me, without which I could not have succeeded.

I would like to first thank my supervisor, Professor Liam Kelley, for his guidance and support from the very first days I decided to undertake my graduate study in the United States. After I came to the University of Hawai'i at Mānoa in 2010, he consistently helped me adapt to the curriculums and learn to conduct research in American universities. Dr. Kelley also provided a generous amount of his time to provide me with feedback and to correct my dissertation draft cover to cover. Most importantly, I believe that working with him has engendered in me the value of possessing freedom and independence in my journey to become a scholar. This is the best gift my supervisor could have given to me.

My sincerest thanks also go to professors Edward Davis, Matthew Romaniello, Wensheng Wang, and David McCraw not only for their constructive feedback to my dissertation but also for their wonderful seminars, which helped "bend" my mind in ways previously unknown to me. I would also like to express my respect to the late professor Jerry Bentley for his thought-provoking seminar in World History. This was one of the first classes in my graduate school and it opened up an entirely new terrain of knowledge for me.

This dissertation would have never come in life without the precious help and inspirations that I received from professor Barbara Watson Andaya. Her teaching uncovered a nascent interest I had in the environmental history of Vietnam. I am particularly grateful for her willingness to read my incomplete chapter drafts, for the insightful comments that helped me

keep track of my main ideas, and for her timely advice whenever I needed. Her diligence, wisdom, and modesty have enabled me to grow both as a better scholar and as a person.

A great number of people, both of whom I have known for many years and some I have never met, generously provided me with countless materials for my research. In addition to my advisor, who first introduced me to the microfilm archive of premodern Vietnamese texts here at the University of Hawai'i at Mānoa, particular thanks go to Dr. Niu Junkai at Sun Yat-Sen University (China) and Dr. Ueda Shinya at Osaka University (Japan) for their provision of the copies of many Han-Nom texts from libraries in France and Japan. In Hanoi, I received help from various librarians at the Library of the Institute of Han-Nom studies, especially from anh Nguyễn Văn Thanh. Many friends outside of the United States have never failed to share with me the information and materials that have utility to my research. They are Dr. Alexei Volkov (National Tsing-Hua University, Taiwan), Dr. Yufen Chang (Academia Sinica, Taiwan), Law Lok Yin (Nanyang University, Singapore), and in Vietnam: Nguyễn Thanh Tùng, Quách Hiền, Phạm Văn Hưng, Trần Văn Quyến, Nguyễn Ngọc Phúc, Vũ Đường Luân, to name but a few. I ask forbearance of all those whom I cannot mention here but my gratitude extends to them.

My seven-year doctoral study was only possible with the generous funding I received from many organizations and individuals. The Harvard Yenching Institute provided me with a three-year fully funded scholarship to cover my entire coursework (2010- 2013). The Department of History at the University of Hawai'i at Mānoa provided me with a three-year graduate assistantship (2013-2016). I was honored to have received the Idus Newby Award for my dissertation research in Summer 2013. The Richard H. and Hester V. Cox Fellowship of the East-West Center, the private Faith C. Ai Memorial Scholarship Fund, and the June Chun Naughton International Student Services Fund provided me necessary financial support in the

last phase of my doctoral study (2015-2016). I would like to thank all of these institutions and individuals for their support and inspiration.

Throughout my academic sojourn, the support and encouragement given to me by my friends and my family are ineffable. Susan Carlson, our department graduate secretary, not only helped my study with countless paperwork but has also been my great friend during these years. Despite that we were both very busy with graduate life, Tomoko Fukushima was always a great ally in our perpetual academic struggle and it was with her that I shared a great deal about my life and study. My high-school friend Mỹ Hòa and many friends both in Vietnam and at the East-West Center in Hawaii helped me come to understand that writing a dissertation did not have to be a lonely experience. Sharing nearly thirty years of friendship together, Nhung Walsh has never failed to support me at any moment of hardship or to celebrate with me during times of happiness. And, of course, my dear teacher, $c\hat{o}$ Trần Thành, was always there for me, helping me to know that people in Vietnam like her gleefully anticipated my graduation.

I wish to give particular thanks to my parents and my sister's family in Vietnam as well as to my family here in the United States. My parents have provided me the unrestricted freedom necessary to pursue what I want, and my dear sister, *chi* Thảo, and her family, *anh* Đăng, Gấu and Thỏ, have given me tremendous love and care, despite that we are separated by thousands of miles of the Pacific Ocean. In Hawaii, Cindy Corsi encouraged me a great deal in the last months of my dissertation. And finally, my special thanks go to my best friend and beloved husband, Michael Corsi, for staying with me during those periods of greatest hardship until my today's accomplishment.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1. INTRODUCTION	
Environmental History as a New Approach to the Study Vietnamese History	
Fifteenth Century in Vietnamese Environmental History	
Thinking about Regions in the Premodern History of Vietnam	
Location(s) of the Red River and the Red River Delta	
Adoption of Confucianism in Fifteenth-Century Vietnam	
The Sources	
The Argument and the Structure of the Dissertation	31
CHAPTER 2. DOCUMENTATION OF LANDSCAPE	33
Treatise on the Land	35
Regional Landmarks and Demarcated Regions	44
A Capital-Centric Perception of Territory	50
Cartographical Documentation of Landscape	60
Conclusion	71
CHAPTER 3. INVESTIGATION OF SOILS	74
Classifying Regional Soils and Ranking the Quality of Fields	
Identifying Local products	
The Relationship between Commercial Crops and Food Crops	92
"Those that are Compatible with the Land"	97
Fertile Soil for the Rice Crop	107
Conclusion	114
CHAPTER 4. CONSTRUCTION OF RIVER DIKES	116
The Red River that Demanded Dikes	117
The Shifting Course of the Red River	127
The Impact of Climate Change	135
Is the Chiem Crop the Champa Rice?	140
Double Cropping and the Summer Harvest	143
The Policy of "Encouraging Agriculture"	152
Conclusion	155

CHAPTER 5. ROUTINIZATION OF WATER-RELATED DISASTERS	157
The Category of Natural Disasters	157
Natural Disasters in Fifteenth-Century Historical Sources	160
Specialized State Reporters of Natural Anomalies	163
The Conceptions of Natural Disasters in Fifteenth-Century Vietnam	170
Debates over Solutions to Natural Disasters	177
Self-reproach as a Response to Natural Calamities	186
Routinization of the Management of Natural Calamities	192
Conclusion	200
CONCLUSION	202
APPENDIXES	211
Appendix A: Timeline of the Treatise on the Land and related events	
Appendix B: An Introduction to Different Versions of the Treatise on the Land	213
Appendix C: A Synopsis of the Contents of Treatise on the Land	215
Appendix D: Dating the Treatise on the Land	219
BIBLIOGRAPHY	223

LIST OF TABLES

Table 2.1. Local Landmarks of Regional Units in the <i>Treatise on the Land</i>	37
Table 3.1. Information of Regional Soils & Field Ranks according to the <i>Treatise on the Land</i> (1435)	
Table 3.2. Types of Soil Reported in the <i>Treatise on the Land</i>	79
Table 5.1. Natural Incidents Reported for the Period from 1434 to 1504 based on the <i>Dai View Ky Toan Thu (the Complete Book)</i>	
Table 5.2. Comparing the Number of Natural Incidents Recorded in the Period from 1434 to 1469 with that in the Period from 1470 to 1504	.194

LIST OF FIGURES

Figure 1.1. A Sketch of the Current Red River Network in Northern Vietnam	19
Figure 2.1. A Representation of the Approximate Locations of the Fifteen Regions in F Century Vietnam	
Figure 2.2. The An Nam Map	64
Figure 2.3. The Hong Duc Map	65
Figure 4.1. Approximate Locations of Long Bien and Tong Binh in the period from the tenth centuries	
Figure 4.2. The Shifting Course of the Red River	129
Figure 4.3. A "Chinese" Account of the Phu Luong River	134

CHAPTER 1. INTRODUCTION

A drought struck the Le dynasty in the fourth lunar month in 1449. It was the seventh year since King Nhan Tong (r. 1443-1460) had been crowned. The king was now eight years old and the Empress Dowager, the mother of King Nhan Tong, had assumed the regency. Dynastic historians of the Le dynasty recounted that in order to request rainfall in that summer of 1449, the king went to pray at a Daoist temple inside the royal capital, which was named "Spectacular Numina Palace" (景靈宮 Cảnh Linh cung). Subsequently, two high officials were sent to pray to the deities at two sacred mountains, Tan Vien and Tam Dao. The rain, however, did not come until King Nhan Tong issued a decree of self-reproach, a practice that only appears to have become common around the mid to late fifteenth century. The significance of this event should have been the reason why the dynastic historians carefully recorded that, "It rained during the night of the very day when this decree was issued."

I have selected this episode to introduce my dissertation because it opens the door to several questions that will recur in the following chapters. From one perspective, such a practice of performing rain rituals demonstrates the presence of a belief that supernatural forces could affect the weather and other elements in the natural environment. Alternatively, readers familiar

¹ The way of dating the event in question is not entirely accurate because it combines elements that are derived from two different types of calendars. The year "1449" is taken from the Gregorian calendar, but the "fourth lunar month" comes from a particular lunisolar calendar used by traditional Vietnam and China. To get a general sense of the month in the Gregorian system, people in Vietnam often add one unit to the ordinal number of the lunar month. For instance, it is likely that the fourth lunar month would have meant the month of May. However, due to the particular nature of the lunisolar calendric system, a Chinese and Vietnamese lunar year sometimes can have an extra month added to the regular twelve months. In this dissertation, since the twelfth lunar month often stretches over December to the January of the following year, I will make a specific note when mentioning an event that occurred in that lunar month.

² Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Dai Viet Su Ky Toan Thu 大越史記全書 [The Complete Book of the Historical Records of the Dai Viet]*, Paris.SA.PD.2310 (The Grand Secretariat of the Le dynasty, 1697), BK 11/78b-79b. (Hereafter The *Complete Book*.)

with prognostication in traditional China might view this story as an example of the Vietnamese adaptation of that Chinese model. This tradition of prognostication often argued that the occurrence of natural anomalies was related in one way or another to the morality of the current government. Although the dynastic chronicles did not implicitly state that the king's decree of self-reproach helped generate the rain, the Chinese-style historiography that dynastic historians of Vietnam adopted strongly suggests this implication.

This dissertation seeks to go beyond these general interpretations and it attempts to do so by gaining a better understanding of the environment-related records left to us by people in the past. Instead of questioning the "truth" of the coincidence between the king's decree of self-reproach and the rain that subsequently fell, the present research asks why and how drought and rainfall concerned Vietnamese rulers, administrators and dynastic historians. Another resultant question concerns the locations where natural events such as the drought and the rainfall in 1449 were reported. While fifteenth-century Vietnamese rulers and writers might have applied Chinese ways of thinking in addressing their encounters with those natural processes, the material environment of Vietnam was certainly an important force that shaped human-nature relationships. Put differently, if the dynastic historians regarded a certain natural event as deserving of attention, how they knew about it and/or from which location they observed it hold the potential for understanding the manner in which it mattered to them.

In pursuing these issues, I realize that the interaction between humans and their environment provides a larger framework for an analysis of the types of records in question. In other words, we need to identify the humans who were concerned about these types of natural processes as well as the environment that provided the material to shape those human perceptions.

Environmental History as a New Approach to the Study Vietnamese History

The interaction between humans and the natural environment has been the central question in the practice of environmental history. This type of study initially emerged from an awareness of the deteriorating impact human actions have had on nature. In its early phase in the 1970s and 1980s, environmental history focused more or less on writing degradation narratives. These historical narratives focused on the processes in which human activities exhausted the ability of the natural environment to recover at its natural pace. However, environmental historians have vigorously sought to advance their projects by infusing new approaches into the craft of history itself.³ It is in this later development that the theme of human-nature interactions became the focus of environmental history. In what follows, I will not aim to review the vast body of literature on environmental history. Instead, a brief discussion of some ideas and reflections on what an environmental approach means in the writing of history will serve as a cursory explanation of how the research on early Vietnam in this dissertation contributes to the field of environmental history.

In the 2000s, there were many efforts to define or redefine the focus of environmental history. In an article in *History and Theory* in 2003, world and environmental historian J. R. McNeill clearly defined the mission of environmental history as the devotion to "the mutual relations between humankind and the rest of nature." As he observed at that time, environmental history was present in academia not only in the United States but also in many other areas in the

³ J. R. McNeill, "The Historiography of Environmental History," in *The Oxford History of Historical Writing: Volume 5: Historical Writing Since 1945*, ed. Axel Schneider and Daniel Woolf (Oxford: Oxford University Press, 2011), 164.

⁴ J. R. McNeill, "Observations on the Nature and Culture of Environmental History," *History and Theory* 42, no. 4 (December 1, 2003): 6.

world.⁵ Scholars had also reached a consensus that there are three main approaches to environmental history. They include studies that focus on material aspects, on political and policy-related environmental issues, and on human ideas and perceptions of the environment.⁶ In the same issue of this journal, U.S. urban and environmental historian Ellen Stroud similarly carried out the task of defining environment history. Stroud argued that "environment" is not a category of analysis in a way that class, race, and gender are. In her view, unlike these three categories, the concept of environment is not defined by power relationships between people.⁷ Further, Stroud addressed her concerns about the lack of a clear vision that distinctly characterized the work of environmental historians. She argues that while the environment is "at once a material reality separate from ourselves, an enveloping world of which we are a part, and a series of social constructions," the focus of environmental history lies in examining the first aspect, that is, the environment as a material reality.⁸

While these two articles have a different departure point, they are useful as complements to each other because the three subfields that McNeill suggested to define environmental history can be merged with Stroud's ideas to form the following conception: The initial question in environmental history is how to understand the material environment, but the practice of doing environmental history uses this understanding to examine how aspects of society such as policies and intellectual developments were conditioned by those material components of the

⁵ McNeill, "Observations," 15–30.

⁶ McNeill, "Observations," 6. J. Donald Hughes suggests three themes of environmental history; his first and third themes are similar to McNeill's descriptions while the second theme covers a larger topic, which includes "the many ways in which human-caused changes in the environment rebound and affect the course of change in human societies." J. Donald Hughes, *What Is Environmental History?*, 1st ed. (Cambridge: Polity, 2006), 3.

⁷ Ellen Stroud, "Does Nature Always Matter? Following Dirt through History," *History and Theory* 42, no. 4 (December 1, 2003): 76.

⁸ Stroud, "Does Nature Always Matter?," 78.

environment. The present dissertation will follow this characterization of environmental history. In particular, as its title suggests, this study examines two interrelated aspects of the fifteenth-century Vietnamese environment, land and water. Its central goal is to characterize the particular conditions of land and water in the lowlands of northern Vietnam that came to influence Vietnamese self-perception in the fifteenth century.

My research is grounded in premodern historical sources that were compiled during the mid to late fifteenth century. However, primary sources from later periods, especially those dated from before 1800, will be used at times in order to shed light on the fifteenth century. As a preliminary comment, some notes about the relationship between the availability of sources and the production of environmental history are needed. Let us first pay attention to a valuable observation by U.S. environmental historian Paul Sutter in regard to what he calls "non-U.S. environmental historiography." In the same year that the journal *History and Theory* devoted a full volume to environmental history, the journal Environmental History initiated a new section titled "Reflections" in order to present essays that cover broad issues in the literature of environmental history. Paul Sutter contributed the first "Reflections" essay and he wrote about some of his reflections on how environmental historians "studying Europe or South Asia, whatever their national origin, might differ in their approach from those studying the United States." 10 Sutter acutely observes that one of the most significant distinctions in non-US. environmental historiography is its emphasis on environmental issues in tandem with colonial and imperial processes. He carefully qualifies that even when US. environmental historians take on this theme, they focus on the collision of capitalism with wild nature instead of the

⁹ Adam Rome, "From the Editor," *Environmental History* 8, no. 1 (January 1, 2003): 7.

¹⁰ Paul S. Sutter, "What Can U.S. Environmental Historians Learn from Non-U.S. Environmental Historiography?," *Environmental History* 8, no. 1 (2003): 110.

intervention of the colonial and postcolonial states as in the studies of their counterparts outside the United States.¹¹ Here, although Sutter does not mention the issue of historical sources, it can be surmised that colonial powers often produced very substantial records of the land and the people under their control.

While Sutter largely refers to the studies of his colleagues in regions such as India and Africa, the predominant characteristic of non-US. environmental historiography that he points out also applies to the main trend in the current literature on Southeast Asian environmental history. It should be noted that an increasing number of studies on environmental history over the last two decades demonstrates a serious effort to make nature the center of historical analysis. The emergence of Southeast Asian environmental history has been part of this scholarly trend.

However, compared with environmental histories of other parts of the world, the incorporation of the environmental approach in studying Southeast Asian history has been slow in development, often due to the lack or limitations of historical sources. When scholars like Peter Boomgaard and Greg Bankoff initiated the writing of environmental history in Southeast Asian studies, they first worked with the sources generated by colonial states. Historians of Vietnam have come to environmental history even more recently and the same choice of historical sources has defined its focus on the interactions between the colonial states and their environs. For instance, John Kleinen has relied on colonial and post-colonial sources in his research on Vietnamese local people's perceptions of and reactions to natural disasters. More

¹¹ Sutter, "What Can U.S. Environmental Historians Learn," 111.

¹² See, for instance, Peter Boomgaard, *Frontiers of Fear: Tigers and People in the Malay World, 1600-1950* (New Haven: Yale University Press, 2008); Greg Bankoff, *Cultures of Disaster: Society and Natural Hazards in the Philippines* (London; New York: Routledge, 2003).

¹³ John Kleinen, "Historical Perspectives on Typhoons and Tropical Storms in the Natural and Socio-Economic System of Nam Dinh (Vietnam)," *Journal of Asian Earth Sciences* 29, no. 4 (February 15, 2007): 523–31.

recently, David Biggs has focused on land and water in the Mekong Delta in southern Vietnam while Pamela D. McElwee has examined forest management in Vietnam from the colonial period to the present time. Both of these studies have also put an emphasis on the theme of state building in colonial and postcolonial periods.¹⁴

Adopting an environmental approach for the study of premodern Vietnam has raised specific problems not only because of the relative lack of historical records but also because of issues relating to the nature of using premodern materials. Besides the different language (namely classical Chinese) that was used in premodern Vietnamese sources, my experience in writing this dissertation has pointed to the presence of several other challenges. Nonetheless, a few scholars have taken on these challenges. For instance, Li Tana mainly uses dynastic histories, as I do in this dissertation, but her analysis also combines information from archeological and geographical studies. ¹⁵ One of her students, Kathryn Dyt, has used nineteenth-century dynastic histories to discuss rain rituals in the Vietnamese royal court. ¹⁶

One of the most significant challenges in the employment of premodern historical sources in the writing of environmental history entails the demanding task of reading and interpreting many basic concepts relating to the natural environment. For instance, as Chapter 5 will show, our modern notion of natural disasters has both a broader and more restricted meaning than what people like fifteenth-century Vietnamese rulers and writers regarded as "heaven-sent" calamities.

¹⁴ David Biggs, *Quagmire: Nation-Building and Nature in the Mekong Delta* (Seattle: University of Washington Press, 2010); Pamela D. McElwee, *Forests Are Gold: Trees, People, and Environmental Rule in Vietnam* (Seattle: University of Washington Press, 2016).

¹⁵ Li Tana, "Towards an Environmental History of the Eastern Red River Delta, Vietnam, c.900–1400," *Journal of Southeast Asian Studies* 45, no. 3 (October 2014): 315–37. This is one of her first articles on Vietnamese environmental history. For other related studies by Li Tana, see Chapter 4 of this dissertation.

¹⁶ Many discrepancies exist between the dynastic histories in the nineteenth century and in earlier periods, and this can affect the approach to examine the histories that were recorded in these sources. Kathryn Dyt, "'Calling for Wind and Rain' Rituals," *Journal of Vietnamese Studies* 10, no. 2 (May 1, 2015): 1–42.

On the one hand, the material loss and affected population during the course of a natural disaster are highlighted by the term "natural disaster" while they are not in the concept of a "heaven-sent" calamity. On the other hand, "heaven-sent" calamities covered a wide range of natural anomalies such as comets and the sightings of strange plants and animals. This aspect clearly differentiates the "heaven-sent" calamities from the modern concept of natural disasters.

Another difficulty in reading historical sources from premodern Vietnam, and one shared by historians of different interests, is the identification of place names. Not only does Vietnam still lack a comprehensive historical atlas, but there is also little understanding of how people in the past named different topographical features in their landscapes. The analysis of rivers and river names in Chapter 4 is a case in point. As I show in that chapter, Phu Luong is often considered a historical name for the Red River, the largest river in northern Vietnam. However, enough evidence shows that Phu Luong was a name that referred to only a section of what modern people have termed the Red River. The section of the Red River that was identified as the Phu Luong largely stretched from the Bach Hac confluence (where the Da, the Thao and the Lo rivers converge) through Thang Long-Hanoi to somewhere just past Nam Xuong (at the locality of Ly Nhan district in modern Ha Nam).

The environmental histories of earlier periods outside Vietnam often rely on proxy or indirect data such as ice cores, pollen samples, changes in sea levels, and tree ring dating.¹⁷

Although the same approach could be applied to Vietnam, the existing environment-related information in Vietnamese dynastic histories (and, I believe, in other types of written sources such as stele inscriptions, local gazetteers, and even private writings like prose and poetry) convinces us that the environmental history of premodern Vietnam can be developed based on

¹⁷ K. Jan Oosthoek, "Reconstructing Past Climates," *Environmental History Resources*, accessed March 9, 2017, https://www.eh-resources.org/reconstructing-past-climates/.

the extant written sources. While this dissertation is mostly based on dynastic histories and some state-related documents, which are familiar sources to historians of premodern Vietnam, I argue that taking a new approach to reading those sources often opens up new questions or that it at least compels us to renew our conventional understanding of the past.

In brief, this dissertation has been written from a conviction that studies of Vietnamese history from an environmental perspective can combine with other environmental studies of Southeast Asia to present this region more actively. Transnational and transregional studies in Southeast Asian environmental historiography are still awaiting more research that begins with the examination of the primary sources kept in different national archives. Clearly, these sources represent a rich trove for expanding regional and comparative knowledge.

Fifteenth Century in Vietnamese Environmental History

Historians often regard their main task as analyzing *change*. When it comes to environmental history, an interesting question is put forth in regard to the concept of change. For instance, many environmental historians owe an intellectual debt to Fernand Braudel and his fellows in the Annales School for their promotion of the notion of "total history"—which brings the environment to the fore. In Braudel's sense of total history, history does not proceed with one but with three different registers of time past: the long-term, slow-moving one or the *structure* or *longue durée*, the mid-term, cyclical one or the *conjucture*, and the short-term events or *événement*. Of these three, the first register involves the environment. While Braudel posited that the environment played an important role in shaping the course of history, he was not writing a geography-determined history. He maintained that the actions of men and women were the driving force of history. It is through "the unceasing work of human hands," Braudel argued, that

the Mediterranean became a unit with its dynamic sea-routes, as well as "its cities born of movement, its complementary populations, its congenital enmities." ¹⁸

Hence, in turning to the environment, Braudel recognizes changes, though at very slow-moving speed. In the present research, my focus is on the last three quarters of the fifteenth century, which is a short period of time in comparison with the *longue durée* embedded in the history of environment. My main purpose is, therefore, not to focus on environmental changes that could only be made visible on a thousand-year scale. Not does this dissertation aim at the analysis of any "conjuncture" primarily because research on this more detailed scale is not yet available. Having said that, at the place where enough evidence is allowed, I try to detect some changes in the pattern of human-nature interactions. The analysis in Chapter 4 will show that an emphasis on the construction of dikes evolved in tandem with unstable weather conditions and the state's determined effort to promote agricultural expansion between the twelfth and fifteenth centuries.

In much of what follows in this dissertation, I maintain a focus on the detection of the environmental factors that interested observing eyes in the past. During an examination of what these factors contributed to the history of fifteenth-century Vietnam, I find that an important contribution of these environmental factors, if not the most, is that they took part in the shaping and reshaping of Vietnamese self-perceptions in the period under discussion. Although more studies are needed in order to answer the question as to whether the same understanding can be applied to other periods of Vietnamese history, the fifteenth century is significant for two major reasons.

¹⁸ Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, 1st. US, vol. 2 (New York: Harper & Row, 1973), 1239.

The first reason concerns the large corpus of scholarship in Vietnamese historiography dealing with this period. Adopting a new approach to fifteenth-century Vietnam that privileges the environment will enrich this literature. So far, historians of Vietnam have paid attention to the territorial expansion in the fifteenth century. For example, any general narrative of history will notes that in 1471 the southern border of Vietnam was pushed further south to the area of modern Binh Dinh, a coastal province in south-central Vietnam. Changes also occurred in the western borderlands that adjoined the lands of Thai and Lao peoples. ¹⁹ In demographical terms, Li Tana proposes that a surge in population in the late fifteenth century stimulated the expansion of political control, so that "Dai Viet imposed firm control over its neighboring areas on a scale that had never been seen in its history." ²⁰ Li Tana also points out that the fifteenth century is a turning point because the Le dynasty in its initial phase successfully opened up the lower Red River delta. ²¹

Political history has long established that the Ming occupation of Vietnam from 1406 to 1427 significantly interrupted Vietnamese dynastic history. ²² As a historian who has written extensively about the long fifteenth century of Vietnamese history, John K. Whitmore argued almost three decades ago that a crucial aspect of the twenty-year occupation of Vietnam had to

¹⁹ John K. Whitmore, "The Two Great Campaigns of the Hong-Duc Era (1470-97) in Dai Viet," *South East Asia Research* 12, no. 1 (March 2004): 119–36.

²⁰ Li Tana, "The Ming Factor and the Emergence of the Việt in the 15th Century," in *Southeast Asia in the Fifteenth Century: The China Factor*, ed. Geoff Wade and Sun Laichen (Singapore: NUS Press, 2010), 92.

²¹ Li Tana, "The Ming Factor and the Emergence of the Việt," 94–95.

²² A volume on fifteenth-century Southeast Asia devotes a full section for the relationship between the Dai Viet and the Ming dynasty. See Geoff Wade and Sun Laichen, eds., *Southeast Asia in the Fifteenth Century: The China Factor* (Singapore: NUS Press, 2010).

do with "the early Ming dynastic desire for a moral world in its own image." Although the Ming officials in Giao Chi (i.e., Chiao-Chih/Jiaozhi—the name the Ming authorities called northern Vietnam during their occupation in the mid-fifteenth century) devoted much effort to materialize their initial goal for universal morality, as Whitmore put it, how to control and to exploit this newly integrated area of the empire was for them an urgent task. Thus, the introduction of Neo-Confucianism into Giao Chi also necessarily served this pressing reality. We will turn to the introduction of Neo-Confucianism in a later section.

The second reason for studying the fifteenth century is the opportunity it provides for understanding the history of a dynasty at its initial phase. In the process of this dissertation, I initially planned to write an environmental history of the late eighteenth century. I intended to do so because there are abundant sources accessible for this period. Moreover, because it was a time of significant political change, I speculated that environmental factors might have been a critical contributing factor. However, my preliminary research has showed me that it is difficult to appreciate the particular features of the eighteenth century if we do not know what had been established earlier in the same land that eighteenth-century rulers, administrators and writers called their homeland. The perception embedded in the dynastic histories that one dynasty, the Le dynasty, continuously maintained its rule over northern Vietnam from the fifteenth to eighteenth centuries often overlooks the differences between these two historical periods. Even though studies of this period are available in Vietnamese historiography, the type of understanding that I am looking for, namely environmental history, is still limited.

²³ John K. Whitmore, "Chiao-Chih and Neo-Confucianism: The Ming Attempt to Transform Vietnam," *Ming Studies*, no. 1 (1977): 51.

Thinking about Regions in the Premodern History of Vietnam

An important value that an environmental approach has provided to this research is the appreciation of *place*. Environmental studies often take the "ecosystem" as an essential unit of analysis. This unit can be briefly defined as "a community of different species interacting with one another and with their nonliving environment of matter and energy."²⁴ However, how to define the boundaries of an ecosystem is always open for debate. In other words, it is by no means simple to demarcate the boundaries of an environment that one wishes to study. Another common approach is to base one's analysis on topographical zones. Although this approach often proves effective in explaining the geographical distribution of human settlements, it does not often shed light on the way the people who resided in a certain environment would have perceived it. Finally, a common framework is to apply the boundaries of the nation-state, and without question, this approach makes little sense when the central focus is the environmental factors, as they are often not confined by the human-made boundaries of modern states.

While we do not have a perfect approach to *locate* an environment, this dissertation will continue to refer to a Vietnamese environment with a caveat. The adjective "Vietnamese" here only denotes the continuity of a community in the same piece of land. This community has changed significantly over time in all aspects—demographically, ethnically, politically, economically, and culturally. However, there were relatively continuous efforts that the people who resided in this land put forth in order to reinforce the notion of "being Vietnamese." For instance, this piece of "Vietnamese" land was centered in the Red River Delta, where "national" notions such as of the An Nam state (especially in relationship to the Chinese empire) and the

²⁴ G. Tyler Miller and Scott Spoolman, *Living in the Environment: Principles, Connections, and Solutions*, 17th ed. (Belmont, CA: Brooks/Cole, 2012), 58.

Dai Viet kingdom had long existed and evolved before the fifteenth century. As the Le rulers, who hailed from Thanh Hoa (south of the Red River Delta), declared a new dynasty in Thang Long (modern Hanoi) in the mid-fifteenth century, they continued to identify themselves as members of this An Nam/Dai Viet state. Furthermore, what I have called "the same piece of land," in which we are observing the interactions between Vietnamese people and their environment, refers to a territory with constantly mutable boundaries. In the next section concerning the Red River Delta, we will discuss this issue in more detail.

Besides the concept of a "Vietnamese environment," this dissertation is also concerned with the division of regions within Vietnam. Over the last few decades, historians have shown an interest in how different parts of Vietnam were historically different, be that on the economic, political, social or cultural level. There have been two main efforts to engage in regional analysis in the field of premodern Vietnamese history; each evolves a relatively separate camp of scholars and pursues a different goal. The first effort became prominent in Vietnamese studies in Japan in the 1980s. Led by Sakurai Yumio, Japanese scholars illustrated that early Vietnamese dynasties did not obtain the full power and control of a centralized state. Specifically, Sakurai compellingly argued that the first long-lasting dynasty of Vietnam, the Ly dynasty, "was only the leader of a confederated state of local native powers." According to Sakurai, this pattern of power distribution was evident throughout the period between the tenth and thirteenth centuries.

²⁵ In the 1980s, Sakurai Yumio published a series of articles on land reclamation in the Red River Delta during the period between 900 and 1400 with a focus on the impact on rice cultivation. However, since most of his studies were published in Japanese, scholars who do not read Japanese depend only on the English abstracts of Sakurai's articles and on some references to his works available in a few articles published in English.

²⁶ Sakurai Yumio, "Ri chōki (1010-1225) beni kawa deruta kaitaku shiron: deruta kaitaku niokeru nōgaku teki tekiō no shūmatsu 李朝期(1010-1225)紅河デルタ開拓試論: デルタ開拓における農学的適応の終末 [The Red River Delta during Ly Dynasty (1010-1225)]," *Tonan Ajia Kenkyu (Southeast Asian Studies)* 18 (1980): 297–98. Quoted in Keith W. Taylor, "Authority and Legitimacy in 11th Century Vietnam," in *Southeast Asia in the 9th to 14th Centuries*, ed. David G. Marr and A. C. Milner (Singapore: ISEAS—Yusof Ishak Institute, 1986), 140.

He also suggested that the existence of these political local powers corresponded to the different technologies of farming developed in each of the areas where a certain power occupied.²⁷

An implication of this analysis is that transformations in agricultural technologies, including the increasing degree to which a polity adapted to environmental conditions, could affect the rise and fall of a local power. Hence, as an agriculture-related technology, the Red River dike system, which we examine in detail in Chapter 4, had a profound significance in Sakurai's analysis. Not only did Sakurai argue that this dike project was made possible by new engineering methods to reclaim the Red River Delta starting from the thirteenth century, but he also implied that this development occurred in tandem with the emergence of a centralized state.²⁸

The second effort to undertake a regional analysis emerged as a reaction against the anachronistic use of the nation-state as a frame of analysis in the study of premodern Vietnam. In this approach, scholars have been strongly critical of scholarship that represents the past as the story of an uninterrupted lineage of a homogeneous ethnic group, which would eventually evolve into the people of the modern state of Vietnam. Specifically, the language of "regionalism" started to prevail in the 1990s. Australian historian Nola Cooke is probably the first historian who forcefully highlighted the regionalism thesis in the field. Although it was not until her article on seventeenth-century Dang Trong (lit., "Inner Realm," i.e., modern Central Vietnam) that Cooke spelled out the concept of regionalism, her earlier articles on Confucianism in

²⁷ Sakurai Yumio, "10 seiki beni kawa deruta kaitaku shiron 10 世紀紅河デルタ開拓試論 [The Red River Delta in the Tenth Century]," *Tonan Ajia Kenkyu (Southeast Asian Studies)* 17 (1980): 597–98.

²⁸ Sakurai Yumio, "Chin chōki beni kawa deruta kaitaku shiron 1: nishi hanran hara no kaitaku 陳朝期紅河デルタ開拓試論 1: 西氾濫原の開拓 [=The Red River Delta in the Tran Dynasty(1225-1440) I]," *Tonan Ajia Kenkyu (Southeast Asian Studies)* 27 (1989): 275–300. English-speaking historians of Vietnam not long after started to accept Sakurai's argument. Taylor, "Authority and Legitimacy"; John K. Whitmore, "The Rise of the Coast: Trade, State and Culture in Early Đại Việt," *Journal of Southeast Asian Studies* 37, no. 1 (2006): 103–22; Li Tana, "Eastern Red River Delta."

nineteenth-century Vietnam had clearly demonstrated this scholar's sustained efforts to take into consideration the regional dimensions of the Vietnamese past. Cooke worked closely with another Australian-based historian, Li Tana, in the 1990s, and both made significant contributions to our understanding of central and southern Vietnam during the period from 1500 to 1800.

The areas of what are today central and southern Vietnam are regions that were more recently settled by Vietnamese than the northern area. The history of these areas convinced Li Tana of the need to reconstruct "an alternative Vietnam" that possessed features distinct from its counterparts in the North.²⁹ In the same line of argument, Nola Cooke demonstrates the emergence of a "localized Dang Trong regionalism" or a "southern regionalism" starting in the seventeenth century.³⁰ For both scholars, regionalism in this recent past of Vietnam was enabled by the efforts that new Vietnamese settlers in the south made in order to differentiate themselves from the northerners.³¹ The rivalry between the northern and southern regions was not reconciled even when the Nguyen kings proclaimed their solitary rule over both regions in the nineteenth century.³² While Li and Cooke extensively examined the materials on the southern regions, studies of the northern part of Vietnam have not emphasized the North-South division. That said,

²⁹ Li Tana, "An Alternative Vietnam? The Nguyen Kingdom in the Seventeenth and Eighteenth Centuries," *Journal of Southeast Asian Studies* 29, no. 1 (1998): 111–21.

³⁰ Nola Cooke, "Nineteenth-Century Vietnamese Confucianization in Historical Perspective: Evidence from the Palace Examinations (1463-1883)," *Journal of Southeast Asian Studies* 25, no. 2 (1994): 270–312; Nola Cooke, "Regionalism and the Nature of Nguyen Rule in Seventeenth-Century Dang Trong (Cochinchina)," *Journal of Southeast Asian Studies* 29, no. 1 (1998): 122–61.

³¹ In the seventeenth and eighteenth centuries, the *de facto* rulers in northern Vietnam were the Trinh clan. However, Qing China only recognized the legitimacy of the Le kings, technically mandating that both the Trinh clan in Thang Long (modern Hanoi) and the Nguyen clan in Quang Nam (central Vietnam) maintain allegiance to this endorsed royal family. However, historians such as Li Tana and Nola Cooke have argued that the realpolitik of Vietnam suggests a different picture.

³² Nola Cooke, "The Composition of the Nineteenth-Century Political Elite of Pre-Colonial Nguyen Vietnam (1802–1883)," *Modern Asian Studies* 29, no. 4 (1995): 741–764.

the little that has been written on this topic demonstrates that the political atmosphere in the Le court revealed a regional conflict between those who were native to the capital city in Thang Long (modern Hanoi) and its surrounding regions and those who hailed from the southern frontiers of the Red River Delta like Thanh Hoa and Nghe An provinces.³³

When confronting the nationalistic narrative in favor of a view of multiple Vietnamese voices from the past, noted historian Keith Taylor casts a different light on the question of regionalism. In an article published in 1998, he offered the possibility that national and regional narratives could be "cofigured" or represented in tandem.³⁴ In order to experiment with this idea. he created a framework of analysis in which the history of Vietnam was viewed as the existence of many correlational, albeit incoherent, "surface orientations." He believes that after understanding the particularity of each surface or particular event, one can start to see a national history, which represents the repeated characteristics revealed in these surface events. Such a program is promising and it opens up many questions for further work. One question is how a surface could be defined. Another question is whether it is feasible that the cause and effect of one surface to another can be reduced to correlations. In any case, Taylor's samples of spatialtemporal surfaces include Dong Kinh (modern Hanoi and its surrounding regions), Thanh-Nghe (the Thanh Hoa and Nghe An areas, the homeland of the Le kings)—these first two surfaces are associated with fifteenth- and sixteenth-century Vietnamese experiences, Thuan-Quang (the base of the Nguyen clan in the seventeenth and eighteenth centuries and the center of the Nguyen

³³ Keith W. Taylor, "Surface Orientations in Vietnam: Beyond Histories of Nation and Region," *The Journal of Asian Studies* 57, no. 4 (1998): 955–58. This is also a critical theme in Taylor's recent book, *A History of the Vietnamese* (2013).

³⁴ Taylor, "Surface Orientations," 949.

dynasty in the nineteenth century), Binh Dinh (the base of the Tay Son dynasty), and Nam Bo (the Mekong plain in modern South Vietnam).³⁵

My analysis in this dissertation focuses on the northern part of Vietnam in the fifteenth century. While I am aware that I have not yet carried out a genuine regional analysis of premodern Vietnam, as the next two chapters will show, this present research aims to highlight the particular way that the authorities residing in the central capital of Thang Long (modern Hanoi, or Tonkin/ Dong Kinh/ Tongking in many English-speaking publications) perceived different regions in the land they controlled. In other words, taking an environmental approach has dictated that part of my present research is dedicated to an examination of how people in the fifteenth century perceived and represented their spatial environment.

Location(s) of the Red River and the Red River Delta

Up to the fifteenth century, the Vietnamese people mainly resided in the lowlands that modern geographers have conceptualized as the "Red River Delta." In using this term to refer to the heartland of the Vietnamese people prior to 1800, I emphasize that the Red River Delta is not a geographically natural region but a geographical model of analysis, one that French colonial geographers like Pierre Gourou initially proposed in the 1930s.³⁶ While this model has rarely

³⁵ The topic of regionalism in the premodern history of Vietnam became static after the 1990s. Historians of Vietnamese history have instead moved into two main directions. Scholars who are interested in southern Vietnam have focused on the Cham peoples and their impact in Vietnamese history while those who read the materials relating to northern Vietnam have turned to examine the Vietnamese experiences of being a southern frontier of Chinese empires.

³⁶ Pierre Gourou, *The Peasants of the Tonkin Delta - A Study of Human Geography [Orig. Pub. as "Les Paysans Du Delta Tonkinois. Etude de Geopgraphie Humanine" in 1936]*, trans. Richard R. Miller, vol. 1, Behavior Science Translations (New Haven: Human Relations Area Files, 1955), 7–11; Dany Bréelle, "The Regional Discourse of French Geography in the Context of Indochina: The Theses of Charles Robequain and Pierre Gourou" (Flinders University, 2003), 99–107, https://tel.archives-ouvertes.fr/tel-00363032.

been questioned, people have actually conceptualized the "Red River" in at least three different ways. This body of water can be understood as a transnational river that starts in Yunnan (China),³⁷ as a national river that runs across northern Vietnam in a northwest-southeast direction, or as a regional river that originates at the Bach Hac confluence (modern Viet Tri).

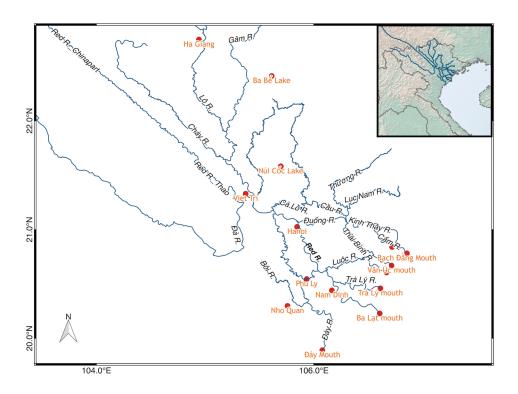


Figure 1.1. A Sketch of the Current Red River Network in Northern Vietnam

As a transnational river, the Red River has been recently studied mainly by geologists and geographers, who have attempted to understand the formation of this river basin at its very initial phase, dating back to million years ago. Studies of the transnational Red River in its recent past have remained limited. In contrast, much of the literature about the Red River in the early

19

³⁷ This part of the Red River in China is known as the Yuanjiang (元江). A good map that visualizes this identification of the Red River can be found in WLE Greater Mekong, "Dams in the Red River Basin: Commissioned, Under Construction and Planned Dams in April 2016" (Vientiane: CGIAR Research Program on Water, Land and Ecosystems - Greater Mekong, 2016), https://wle-mekong.cgiar.org/wp-content/uploads/Red_A0_2016_Final.pdf.

twentieth century regarded this body of water at a national level. When Gourou wrote about the Tonkin Delta (i.e., an alternative name of the Red River Delta) in the 1930s, he in fact followed the common narrative of the Red River at his time. Accordingly, he identified the Red River as one identical to the local perception of the *Sông Cå* (lit., the "main river," other spellings in non-Vietnamese maps include Song-koi or Song-ka). That said, Gourou's study of the Tonkin Delta only focused on the *lower* part of the Red River. This conception is apparently the antecedent to textbook knowledge of this body of water in modern Vietnam.

This textbook knowledge takes the regional level in its observation of the Red River. In this identification, the upper Red River that runs from the Sino-Vietnamese border to the Bach Hac confluence (modern Viet Tri) is called the Thao River. At the Bach Hac confluence, the Thao River converges with the Da and the Lo³⁹ (which used to be labeled as the Rivière Noire and the Rivière Claire, respectively, in French maps) in order to make the main stream of the Song Hong or Red River. During the period starting from around the fifteenth and sixteenth centuries to the nineteenth century, this section of the Red River was known instead as the Nhi Ha (珥河 Nhĩ Hà) or sometimes the "Big River" (大河 Đại Hà). This river used to pass by Hanoi in its recent history, but it now crosses through this capital city due to changes in administrative demarcations in the last two decades. Some distributaries of this river are considered as significant rivers. Some examples are the Day (historically also known as the Hat River), the Duong, and the Luoc rivers. While the first plays an important role in the water routes that connect the inland region with the Gulf of Tonkin, the latter two are significant links to the Thai Binh river system (note, this name has nothing to do with modern Thai Binh province).

-

³⁸ Gourou, *The Peasants of the Tonkin Delta*, 1:76.

³⁹ This river name does not refer to a section of the pre-fifteenth-century Red River, though both waterways are recorded using the same Sino-Vietnamese word, Lô (瀘).

In short, in both historical sources and modern literature on the Red River, writers are not unanimous in their definition of this body of water. While each of the above-mentioned three perspectives can be valuable depending on what research question is asked with regard to the Red River, this dissertation chooses to use the regional observation of the Red River; that is, the term "Red River" mainly refers to the watercourse that flows down from Viet Tri to Hanoi and that eventually empties itself into the southeastern coast of northern Vietnam. I have made this choice mainly because many relevant historical sources and historical analysis have focused heavily on this part of the river. The term "Red River network" will, however, be used in order to refer to the entire riverine network of which the main stream is the extended Red River. Finally, this dissertation will generally use the term "Red River Delta" to refer to the heartland of the Vietnamese people.

Adoption of Confucianism in Fifteenth-Century Vietnam

A characteristic that makes the fifteenth century significant in Vietnamese historiography is the increasing adoption of Confucianism. Having studied the Ming occupation of Annam, John K. Whitmore argued that one of the key impacts of the Ming period in fifteenth-century Vietnam was the fact that Neo-Confucianism eventually took hold in Vietnamese society. 40 Recently, in a study on the utility of paperwork as an innovative factor that helped consolidate the Le power in the second half of the fifteenth century, Whitmore recapitulated his points concerning this bureaucratic transformation, that is, a process that helped the Le authorities more effectively

21

⁴⁰ Whitmore, "Chiao-Chih and Neo-Confucianism," 70–72.

_

manipulate the flow of information in their kingdom.⁴¹ He argued that a new generation of scholar-officials gradually emerged in the Le court after the first reign of the Le dynasty, King Thai To's reign (1428-1433). In Whitmore's argument, these new people differed from the old elites in two important ways; they favored the Ming style of politics and culture, and they came from Thanh Hoa province, meaning they had little connection with the earlier tradition of the elites of the Red River Delta.

A theme such as the rise of Neo-Confucianism is both maintained and highlighted in the chapters on the Le dynasty in Keith W. Taylor's monograph, *A History of the Vietnamese*. The discussion here will only focus on Taylor's analysis of the connection between Neo-Confucianism and the fifteenth-century Vietnamese perception of natural disasters. For instance, Taylor cited events such as insect infestations, famines and droughts as evidence for the failing governance of the Le statesmen during King Nhan Tong's reign (1442-1459). Here, his interpretation is in agreement with Whitmore's characterization of Neo-Confucianism as a dominant ideology of the court. Hence, Taylor attributes the reason why rulers and officials at the Le court worried about natural disasters to their submission to Confucian ideas. However, Taylor at times does not make a similar connection. In his analysis of King Thanh Tong's reign (1460-1497), a period often credited as the high time of Confucianism in Vietnam, Taylor takes

_

⁴¹ John K. Whitmore, "Paperwork: The Rise of the New Literati and Ministerial Power and the Effort toward Legibility in Đại Việt," in *Southeast Asia in the Fifteenth Century: The China Factor*, ed. Geoff Wade and Sun Laichen (Singapore: NUS Press, 2010), 107–13. See also his early version of this argument in John K. Whitmore, "The Development of Lê Government in Fifteenth Century Vietnam" (PhD diss., Cornell University, 1968).

⁴² Keith W. Taylor, A History of the Vietnamese (Cambridge: Cambridge University Press, 2013), 202–3.

natural disasters like droughts as evidence of how the government "paid closer attention to village life than any previous regime."

Having shared no intellectual background with Whitmore and Taylor, two French scholars, Philippe Langlet and Thanh-Tam Quach, attempted to historicize pre-twentieth-century accounts of natural anomalies by trying to match some realistic information about rainfall variability to the historical records of droughts and floods. In doing so, their main goal was to correct a misconception that had regarded the recording of natural irregularities in the Vietnamese dynastic histories as evidence for premodern people's innocence. Having said that, Langlet and Quach came to a similar conclusion about the adoption of Confucianism in Vietnam as they eventually attributed the recording of many natural irregularities to a rhetorical political need for such information in the Confucian style of history writing.⁴⁴

Although natural anomalies would have concerned Vietnamese and Chinese peoples in a relatively similar way, historians of China such as Mark Elvin and Timothy Brook do not regard Confucianism as a predominant factor in shaping Chinese records of those natural phenomena. As an environmental historian of China, Mark Elvin has forcefully argued that Chinese people in historical times generated not one but many perceptions of their natural environment. Although Elvin's analysis is complex, he emphasizes "the styles of observation and conceptions of truth" that were manifest in Chinese ways of looking at what he calls "the world of superfauna." In doing so, Elvin suggests that although their conceptions of "fact" were either nonexistent or different in kind from that which became predominant in the Western intellectual tradition

⁴³ Taylor, A History of the Vietnamese, 218.

⁴⁴ Philippe Langlet and Thanh Tam Quach, "Note sur les phénomènes naturels extraordinaires au Tonkin sous la dynastie de Le (15e-18e siecles)," *Les Cahiers d'Outre-Mer* 48 (1995): 254, 256.

⁴⁵ Mark Elvin, *The Retreat of the Elephants: An Environmental History of China* (New Haven: Yale University Press, 2008), 369.

starting in the seventeenth century, Chinese people in historical times had many ways to explain and validate what they thought they had seen. In his *Troubled Empire*, historian of late imperial China Timothy Brook agrees with Mark Elvin's points about the historical values of those natural anomalies. Brook's main example of natural anomalies is the sighting of dragons. As Brook demonstrates, reports on the sightings of dragons could mean, metaphorically, the occurrence of extreme weather conditions. He further argues that, more importantly, "the emotive or psychological—and political—impact of seeing dragons" revealed that people at the time were expressing their sense of certain disturbances in the cosmos.⁴⁶

Closer to what Vietnamese historians have attributed to the influence of Confucian-style historiography is a Chinese perception that Mark Elvin terms "moral meteorology." By this term, Elvin refers to a phenomenon in Chinese thinking that sought to find moral judgments in the weather. Certainly, as Elvin points out, thinking correlatively about weather and human action was commonly practiced in different premodern societies and this way of thinking emerged almost at the dawn of Chinese history. However, in his focus on late imperial China, Elvin finds the manifestation of this moral meteorology unique because of the presence of what he calls "rationalized political opportunism." This opportunism means that the Chinese emperors believed in their ability to adjust the current political situation by carefully observing

⁴⁶ Timothy Brook, *The Troubled Empire: China in the Yuan and Ming Dynasties*, History of Imperial China (Cambridge, MA: Belknap Press of Harvard University Press, 2010), 20.

⁴⁷ Mark Elvin, "Who Was Responsible for the Weather? Moral Meteorology in Late Imperial China," *Osiris*, 2nd, 13 (January 1, 1998): 213–37.

⁴⁸ There are similar studies for earlier periods of China. See David W. Pankenier, "Heaven-Sent: Understanding Cosmic Disaster in Chinese Myth and History," in *Natural Catastrophes During Bronze Age Civilisations: Archaeological, Geological, Astronomical and Cultural Perspectives*, ed. Benny J. Peiser, Trevor Palmer, and Mark E. Bailey (Oxford: Archaeopress, 1998), 187–97; Rafe de Crespigny, *Portents of Protest in the Later Han Dynasty: The Memorials of Hsiang Kai to Emporor Huan in 166 A.D.*, Oriental Monograph Series 19 (Canberra: Faculty of Asian Studies in association with Australian National University Press, 1976).

⁴⁹ Elvin, "Who Was Responsible for the Weather?," 214.

and successfully reacting to meteorological portents. Since these emperors took natural disasters as moral tests of their governance, not only did they develop a sophisticated system to ascribe a moral cause to meteorology, they also meticulously *validated* each meteorological portent.

In essence, there is no doubt that Chinese intellectual traditions, especially Confucianism in later periods, in one way or another influenced Vietnamese ways of seeing and interpreting their relationships with the natural environment. However, as the following chapters show, to characterize these influences is challenging and this task must continue to be undertaken in future work. In this dissertation, I will propose that the fifteenth-century Vietnamese state did not fully model itself after Neo-Confucian political doctrines. Instead, various Chinese and Confucian ideas were constantly being mingled with the legacies that the Le rulers inherited from the previous Vietnamese rulers as well as with the understandings that they obtained by interacting with the land and water specific to Vietnam.

The Sources

The main sources used in this dissertation were all produced by members of state agencies such as dynastic historians and scholar-officials who worked attentively in the royal court. In particular, two written sources that I pay special attention to are the *Treatise on the Land* (輿地志 *Du Địa Chi*) and the *Complete Book of the Historical Records of the Dai Viet* (大

⁵⁰ For instance, my preliminary research has showed that although eighteenth-century Vietnamese rulers submitted to a similar doctrine of "moral meteorology" that Elvin characterized for seventeenth-century China, the discrepancies in the Vietnamese landscape and environment seem to undermine the argument about political opportunism. As I have argued, because eighteenth-century Vietnamese rulers and officials were repeatedly confronted by severe climatic conditions, they tended to instead express anxiety about the conformist morality of the ruling power. Hieu Phung, "Recording Natural Anomalies in Eighteenth-Century Vietnam: A Particular Application of the 'Chinese' Moral Approach to Environment" (The 2nd Young Scholars' Forum in Chinese Studies, Hong Kong, 2015).

越史記全書 Đại Việt Sử Ký Toàn Thư). Information from a map collection entitled the Hong Duc Atlas (洪德版圖 Hồng Đức Bản Đồ) and some other relevant sources that I was able to access have also been used. These sources not only focused on events that related to the royal court and its governance but also emphasized the perception that the central government had concerning those events.

I have chosen these types of sources to begin my research on the environmental history of Vietnam for three reasons. First, these state documents reflect an overall picture of the government in the past, though the information within them might not always be detailed. In fact, almost any research on premodern Vietnam must refer, more or less, to sources such as dynastic histories. Second, these documents are some of the easiest sources to access for the study of fifteenth-century Vietnam. By "access," I mean not merely their availability in the library archives but also the fact that I have carried out textual studies of these texts during the process of researching and writing my dissertation. Third, although the sources used in this dissertation are familiar to many historians of premodern Vietnam, I have attempted to approach them from a new perspective that focuses on environmental history. For instance, readers of the chronicles of the Le dynasty in the *Complete Book* often do not pay attention to the actions the royal court undertook during a drought. As Chapter 5 will show, such hitherto understudied events provide us with information to look at fifteenth-century Vietnam in new ways, considering that scholars have discussed this historical period at length from the political, social, and cultural perspectives.

Although some primary sources used in this dissertation were reproduced in modern print versions, and there are Vietnamese translations of those texts, I have persisted in citing the

original archival versions. ⁵¹ There is no doubt that these reproduced versions and translations have been tremendously helpful for my reading of the primary sources. However, my work experience has demonstrated that going back to the archival sources is always useful. Because most of the sources I am working with in this dissertation are extant to date with different versions, comparing these versions is necessary to define which version can be used as the main reference. Moreover, citing the archival versions is more helpful for researchers who want to carry out future work on the same source. For instance, according to my observation, when citing the *Complete Book*, different scholars have cited different versions, depending on what has been accessible to them. While several versions of the *Complete Book* are available to date, it is relatively safe to conclude that the contents of the dynastic chronicles that cover the period from the beginning of Vietnamese history to the year of 1675 in these versions are relatively similar. ⁵² That is to say, one can use any reliable version that she or he has as long as they cite the chapter and page of the archival text. In reading of certain details in this type of primary source, it is also

⁵¹ Without question, reading premodern Vietnamese texts in their orignal sources in classcial Chinese is a must for any historian of premodern Vietnam. Yet, it is equally important to give credit for many Vietnamese translations of premodern Vietnamese texts produced in classical Chinese. For instance, for a Vietnamese translation of the *Complete Book*, see Cao Huy Giu, trans., *Dai Viet Su Ky Toan Thu [The Complete Book of Historical Records of the Dai Viet]* (Hanoi: Khoa Hoc Xa Hoi, 1968); Ngo Duc Tho, Hoang Van Lau, Ngo The Long, et al., trans., *Dai Viet Su Ky Toan Thu: Ban In Noi Cac Quan Ban [The Complete Book of Historical Records of the Dai Viet: Official Print Version of the Grand Secretariat]* (Hanoi: Khoa Hoc Xa Hoi, 1983).

bebates over the earliest version of the Complete Book are copious. There are two issues central to these debates. One issue concerns the differences between two original versions, each of which derives from a different library in the pre-1800 period. The two versions are often known as the "Official Version of the Grand Secretariat" (內閣官本 Nội Các Quan Bản) and the "Version Preserved in the Imperial School" (國子監藏板 Quốc Tử Giám Tàng Bản). Another issue concerns several different versions of those chronicles that cover the historical period from 1600 to 1643. For this literature, see Chingho Chen, On the Various Editions of the Dai-Viet Su-Ky Toan-Thu (Hong Kong: Center for East Asian Studies, Chinese University of Hong Kong, 1976); Ngo Duc Tho, Hoang Van Lau, Ngo The Long, et al., Complete Book of the Grand Secretariat, 9–63; Ngo The Long, "Ve Ban Dai Viet Su Ky Toan Thu In Van Go Cua Pham Cong Tru Moi Tim Thay [On the Newly Discovered Woodblock Version of the Complete Book of the Historical Records of the Dai Viet Edited by Pham Cong Tru]," Tap Chi Han Nom 4, no. 1 (1988), http://hannom.org.vn/web/tchn/data/8801.htm.

necessary at times to make cross-references to the same information in several different versions.⁵³

The two chapters following the Introduction of this dissertation are mainly based on a text commonly known as Nguyen Trai's *Treatise on the Land*. Because of the complicated nature of this source, a detailed survey of this text is presented in Appendixes B, C, and D. The discussion here only emphasizes two key points concerning the usage of this source. First, the *Treatise on the Land* is a text that consists of many layers of content, stretching from the fifteenth to eighteenth centuries, though all of the extant versions of this text are dated from the nineteenth century. In terms of its contents, the *Treatise on the Land* is comprised of the main text, the exegesis of the main text, and other supplementary texts. Evidence so far suggests that the main text and some of the commentaries on this main text can be dated to the fifteenth century. Those contents will form the basis of my analyses in Chapters 2 and 3. Secondly, the main text has been attributed to a famous scholar-official named Nguyen Trai (1380-1442) while the commentaries that I have used for the two chapters that follow this Introduction are often attributed to Nguyen Thien Tung (?-?) and Ly Tu Tan (?-?).

In addition to an examination of the *Treatise on the Land*, part of the analysis in Chapter 2 focuses on two old Le dynasty maps. The original versions of these maps are no longer extant. A text entitled the *Hong Duc Atlas* preserves reproductions of these two maps. The *Hong Duc Atlas* is itself a complicated text. Like the *Treatise on the Land*, it contains many layers of

⁵³ I have suggested this point because for those who want to cite a reproduced version like the noted Chen Chingho version, it is important to cite not only the page number of this reference but also the referential information of the original text of the *Complete Book*. Chingho Chen, ed., *Daietsu Shiki Zensho: Kōgōbon 《大越 史記全書》: 校合本 [Textual Annotations of the Complete Book of the Historical Records of the Dai Viet]*, Chen Chingho (Tokyo: Tokyo University, 1984).

contents that were compiled at different times between 1490 and the late seventeenth century.⁵⁴ As I will demonstrate in Chapter 2, the original versions of these maps can be dated back to the fifteenth century.⁵⁵

While the focus of my analysis does not the cartographical features of these maps, I have chosen these maps to facilitate my discussion of the fifteenth-century Vietnamese landscape, a topic that is broached in the discussion of the *Treatise on the Land*. Based on my preliminary research, these two maps are the only ones that display the entire territory of Vietnam at the time they were made. Up to the late eighteenth century, other maps produced on a similar scale were all derived from these two fifteenth-century maps. Thus, studying these maps can provide a glimpse of one perception of the landscape that not only was generated in the fifteenth century but that also had a lasting impact on the way people in later periods looked at the land of the Le dynasty.

For the analyses in Chapters 4 and 5, the chronicles of the Le dynasty in the above-mentioned *Complete Book* will be used as the main source. As these chapters will show, an environmental approach to reading this familiar source has helped to bring hitherto obscure or overlooked information to the fore. For example, by tracing information about the summer-harvest rice crop in the dynastic histories, Chapter 4 illustrates a transformation that occurred in the cropping system in fifteenth-century Vietnam. Likewise, Chapter 5 focuses on information concerning climatic events such as droughts, rainfall, thunder, and strong winds. Although the

⁵⁴ I have based my understanding of the dating of the *Hong Duc Atlas* on Truong Buu Lam's textual analysis. See Truong Buu Lam, "Loi gioi thieu [Introduction]," in *Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas]*, trans. Buu Cam, Do Van Anh, Pham Huy Thuy, et al. (Saigon: Bo Quoc-gia Giao-duc, 1962), viii—xv.

⁵⁵ My opinion of dating one of the two maps, the An Nam map—as I will call it in Chapter 2, is different from previous scholars such as Truong Buu Lam. I believe that this map was a Ming production and it should have dated from the 1410s. Truong Buu Lam has suggested that this map should have been produced in the Hong Duc period, that is, between 1470 and 1497. See Truong Buu Lam, "Loi gioi thieu [Introduction]," xi.

recent trend in Southeast Asian climate history has encouraged some scholars to glean the same information from the dynastic histories of the Le dynasty that I will analyze in Chapter 5, it is necessary to note the difference between these scholars' approach and mine. In an attempt to reconstruct the climatic conditions of mainland Southeast Asia over the past millennium, historians who are interested in climate history have traced climate-related information in historical sources and compared it with the tree ring records of the region. While this kind of study pays attention to patterns that can be conceptualized by the observation of climate change over a millennium-scale period, my study is concerned with the degree to which decades-scale climatic events intervened in human activities in the last three quarters of the fifteenth century. Emphasis on this smaller scale has allowed me to focus on the politico-social contexts in which the contemporary government addressed and acted upon climatic events.

Moreover, while scholars have suggested that the decline of the Khmer empire at Angkor was plausibly linked to a dry period stretching from the fourteenth to sixteenth centuries, information from the *Complete Book* has been used to demonstrate that northern Vietnam experienced the same dry spell.⁵⁷ This issue raises an interesting question concerning the fifteenth century in Vietnamese historiography. If the above-mentioned Angkor drought had a similar impact on northern Vietnam, it appears that fifteenth-century Vietnamese rulers successfully responded to the negative effects of these weather extremities. If so, how did they achieve this success? Although the analysis in Chapter 5 will not directly address this question, I propose that the Vietnamese state indeed attentively put forth a routinized system of managing

⁵⁶ Brendan M. Buckley, Roland Fletcher, Shi-Yu Simon Wang, et al., "Monsoon Extremes and Society over the Past Millennium on Mainland Southeast Asia," *Quaternary Science Reviews* 95 (July 2014): 1–19, doi:10.1016/j.quascirev.2014.04.022.

⁵⁷ Buckley, Fletcher, Wang, et al., "Monsoon Extremes," 11.

natural disasters such as droughts in the period under examination, especially in the late fifteenth century. Further research in this area can help to shed more light on the large-scale ramification of the Angkor dry-spell.

The Argument and the Structure of the Dissertation

While humans are often believed to be the active partner in their interactions with the natural environment, the present research will show that the environment can be proactive. In the story cited at the beginning of this Introduction, the royal court was triggered to action not by volcanic activities or forest-related events but by drought and rain. As the following chapters will show, fifteenth-century Vietnamese expressed dismay over these water-related events because of a particular concern over the security of the rice harvests. Although this dissertation will not fully pursue the question of why food crops later introduced to Vietnam such as corn and wheat did not replace rice, I attempt to understand how rice farming, to which Vietnamese people devoted their efforts, shaped human-nature interactions in the fifteenth century.

Overall, this dissertation argues that when rice was the only fundamental food crop, land and water became the two environmental factors most predominant in the eyes of fifteenth-century rulers and writers. These environmental aspects significantly contributed to the shaping of Vietnamese self-perceptions as the Le dynasty was rebuilding the Vietnamese kingdom in the fifteenth century. Furthermore, it should be noted that by the fifteenth century, the Le rulers were building their kingdom in an area that was by no means an empty, uninhabited land. Hence, my dissertation also attempts to show that the Vietnamese self-perception that emerged in the fifteenth century reflected not only the interactions of the Le regime with a particular

environment but also the accumulated knowledge of this environment that this new ruling house inherited from previous rulers of the land.

In particular, the first two chapters that follow this Introduction will be grounded in the theme of "land history." Chapter 2 discusses a regional layout that fifteenth-century administrators and writers assigned to their environment. That chapter argues that fifteenth-century Vietnamese paid attention to local mountains, rivers and some other topographical features when they attempted to divide their land for administrative purpose. Chapter 3 examines a fifteenth-century description of regional soils, cultivated fields, and local products. While that chapter attempts to understand how the central state managed to put different regional lands in use, it will also demonstrate that those environmental aspects helped to reinforce the state's understanding of the spatial organization of its land. Moreover, as I will demonstrate, while the Le rulers made a strong commitment to farming rice, the spatial organization that they devised mirrored the distribution of the rice farming zones.

Since water is the most critical ecological factor for the growth of rice, rice farming functions as a transition in the analysis of this dissertation from a focus on "land history" to one on "water history." Chapter 4 will examine how Vietnamese people in the past attempted to control water through a dike system while Chapter 5 focuses on environmental factors that also relate to water but that were often beyond human control. The main issue in Chapter 5 includes the impacts of drought, rainfall and to some extent, tropical cyclones in the last three quarters of the fifteenth century. Here I focus not on the "impact" of natural disasters in a modern sense, which pays attention to material loss and the affected population. Instead, my analysis attempts to show how natural disasters such as droughts and rainfall could be a driving force in many historical episodes in the early history of the Le dynasty.

CHAPTER 2. DOCUMENTATION OF LANDSCAPE

In 1434, an eleven-year-old prince was crowned as the second king of the Le dynasty. The boy's name was Le Nguyen Long, and later he was known as King Thai Tong (r. 1434-1442). As a child-king, King Thai Tong was scheduled to study under the supervision of several Confucian instructors including the influential scholar-official Nguyen Trai (1380-1442). The mentormentee relationship between the king and Nguyen Trai appears to have been strong. At one time, the king consulted this senior official with a difficult issue in the royal court and Nguyen Trai offered advice to the king with a brief lecture about how a ruler should apply Confucian values such as "benevolence and righteousness" (仁義 nhân nghĩa/renyi).⁵⁸

As a teacher of the king, Nguyen Trai's life-long devotion to learning Confucianism as well as his own political career must have provided him with a wide range of materials to devise a comprehensive royal curriculum. Moreover, if Nguyen Trai believed that the core of this curriculum included lessons about how to wisely rule a kingdom, he should also have held that knowledge about the history and the land of the kingdom was no less important. For that reason, he wrote two essays, later subsumed into a text entitled *Treatise on the Land* (興地志 *Du Địa Chí*), and he presented them to the king in 1435 (See Appendixes B, C, and D for textual

sentence seven young recidivists to death but to kill so many youngsters at the same time worried many people in the court. The young king turned to one of his senior officials named Nguyen Trai for advice. In this case, Nguyen Trai instructed the king to consider a critical value offered by Confucianism, "benevolence and righteousness" (仁義 nhân nghĩa/renyi). He cited the Confucian Classics in order to argue that a good ruler must learn how to "know to reside in" (知止 tri chi/zhizhi) those Confucian values. He explained, "If you think about your palace as the place where your reside, then you might go out at times. But all places outside are not where you will reside. You need to return to your palace and then to be able to reside in it. The same can be said about how a king acquires benevolence and righteousness. He needs to place benevolence and righteousness in his heart-and-mind. He might need to express his awe-inspiring anger at times but he eventually cannot reside there." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/25b-26a.

information of this text). In the first essay, Nguyen Trai delivered a brief account of the history of his kingdom from its antiquity to the Le dynasty. The essay mentioned the earliest demarcation of the territory of the kingdom, its successive rulers, and the demographic changes in the kingdom over the course of history. The second essay comprised a list of names that had been used to address the kingdom as well as information concerning where historic capitals had been located. It also included concise descriptions of fifteen regions in the kingdom of the Le dynasty; each of these accounts described the geographical features and local products of a particular region.

Therefore, as Nguyen Trai would have believed, the knowledge that a king was expected to learn about his kingdom was twofold—the history of the land that came under the control of those rulers in a definable lineage, and the component regions that comprised the temporal kingdom. By the late fifteenth century, the development of dynastic histories clearly attests to the first branch in Nguyen Trai's idea about the royal education while the second branch can be seen in the production of official maps.

In order to examine how fifteenth-century Vietnamese rulers and writers viewed the landscape of their kingdom, this chapter will take the information about the fifteenth regions from the second essay as a departure point of analysis. Moreover, information from official maps produced in the period between 1467 and 1490 will be discussed to supplement the textual description of the landscape in the *Treatise on the Land*. As a part of a project on environmental history, this chapter argues that as fifteenth-century Vietnamese administrators and writers generated their self-perception of rulership, they accustomed themselves to the land where they were building their dynasty. In other words, through documenting the landscape, they made a particular land their home.

Treatise on the Land

As mentioned in the Introduction, there are needed qualifications for the attribution of the two essays in the *Treatise on the Land* to Nguyen Trai. ⁵⁹ Although Nguyen Trai might have produced certain geographical texts in his lifetime, the second essay, the one about the regional divisions of the kingdom of the Le dynasty, is necessarily understood as a redacted text or even an "invented" text made by writers in the late fifteenth century. For convenience, I will nonetheless continue refer to Nguyen Trai as the author of this essay.

It is unclear how Nguyen Trai's essays were subsumed into a text that was then entitled *Treatise on the Land*. However, there was good reason why Nguyen Trai's texts, especially his descriptions of the fifteenth regions of the Le dynasty, came to be titled as such. "Treatise on the Land," or *du dia chi* in Vietnamese and *yudizhi* in Chinese, is in fact a phrase that refers to a genre of writing. Many scholars have translated this phrase into English as "gazetteer." By adopting this genre, writers often produced records on behalf of a state-connected authority and their records were aimed at reporting on the historical and geographical information about the area that the authority ruled over. By the Tang-Song period (c. 600-1300), there were two important types of records in this genre, comprehensive gazetteers and local gazetteers. While the central state often produced comprehensive gazetteers to cover the information about every

⁵⁹ Nguyen Trai, "Du Dia Chi 興地志 [Treatise on the Land]," in *Uc Trai Tuong Cong Di Tap Du Dia Chi* [A Translation of Nguyen Trai's Treatise on the Land], trans. Tran Tuan Khai (Saigon: Nha Van Hoa, 1966); Nam Quoc Vu Cong 南國禹貢 [The Southern Kingdom's Tribute of Yu], A.830, n.d.; An Nam Vu Cong 安南禹貢 [Annam's Tribute of Yu], A.2251, n.d.; Nam Viet Dia Du Chi 南越地興志 [Treatise on the Land of Nam Viet], A.1900, n.d.; Le Trieu Cong Phap 黎朝貢法 [Tributary Regulations of the Le Dynasty], A.53, n.d.; Uc Trai Tap 抑 齋集 [Anthology of Nguyen Trai Whose Penname Is Uc Trai], Phuc Khe print, n.d.

provincial unit in its kingdom, local gazetteers kept the records of a specific area and were privately produced by local elites, but often with the patronage of the local authority.⁶⁰

In Vietnam, although Nguyen Trai's account of the fifteen regions in the Le dynasty was very limited in scope (only about 850 words in length), it clearly took the format specific to a comprehensive gazetteer. This characteristic makes his work significantly important for understanding the early Vietnamese perception of the landscape, especially when considering that similarly comprehensive records of Vietnamese geography were apparently not compiled until the late eighteenth century. 61 As seen in Nguyen Trai's descriptions, each regional account first identifies a region by mentioning some significant landmarks it contains, such as a mountain, a river and/or the sea. It then reports on the characteristics of the soil and the presence of local products, which ranged from handcrafts and agricultural products to wild plants and animals. This chapter discusses how Nguyen Trai's account located a particular region in a geographic area. Information about local products will be the focus of the next chapter, which deals with the Vietnamese rulers' perception of putting the land to use. For a quick reference, Table 2.1 presents a list of the fifteen regions in the order they appear in Nguyen Trai's text. The names of the local landmarks that Nguyen Trai associated with each region are introduced in the corresponding column.

_

⁶⁰ Ruth Mostern, "Historical Gazetteers: An Experiential Perspective, with Examples from Chinese History," *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 41, no. 1 (2008): 41.

⁶¹ Examples of these records are found Le Quy Don, Kien Van Tieu Luc 見聞小錄 [Records of What Were Heard and Seen], Paris.SA.HM.2174, c. 1700s; Phan Huy Chu, Lich Trieu Hien Chuong Loai Chi 歷朝憲章類誌 [Treaties of the Successive Dynasties], Paris.SA.HM.2126, 1821.

Table 2.1. Local Landmarks of Regional Units in the Treatise on the Land

Regions	Local Landmarks
1. The Capital 上京	
2. Hai Duong 海陽	The Sea (海), Luc Dau River (六頭), and the Yen Tu mountain (安子)
3. Son Tay 山西	Da Duong River (沱陽) and Mount Tan Vien (傘圓)
4. Son Nam 山南	Nong Ky River (農岐), Mount Doi (隊) and Mount Diep (壘)
5. Kinh Bac 京北	Thien Duc River (天德) and Mount Ve Linh (衛靈)
6. An Bang 安邦	Van Cu River (雲渠), the Golden Landmark (金標) and
	the Phan Mao mountain (分茅)
7. Hung Hoa 興化	Thao River (洮) and the Lich Mountain (歷)
8. Tuyen Quang 宣光	The Le Hoa Mountain (犁華) and Lo River (瀘)
9. Thanh Hoa 清華	The Na mountain (那), the Tung mountain (松) and Luong River (梁)
10. Nghe An 乂安	The Ky Lan mountain(s) (麒麟) and Lam River (藍)
11. Thuan Hoa 順化	The Sea (海), the Van Pass (雲), and Linh River (靈)
12. Nam Gioi (Southern	The Immortal Lady mountain (仙女), the Phu and Ha
Borderlands) 南界	estuaries (富河)
13. Thai Nguyen 太原	Luong Giang River (良江) and the Nghien mountain (研)
14. Lang Son 諒山	Khau La River (邱驢) and the Waiting-for-Husband
	mountain (望夫)
15. Cao Bang 高平	The Bo mountain (蒲) and Hoa An River (華安)

Note: Although the territories that many names in this list represent have been reshaped over time, most of them remain the names of modern provinces except the following cases. Son Tay was turned into the name of a small town that belonged to Ha Tay province in the second half of the twentieth century, and then to Hanoi in the last decade. Kinh Bac could be approximately traced to Bac Ninh province. The names of Son Nam and Thuan Hoa were no longer in use after the early nineteenth century and Hung Hoa after the late nineteenth century. An Bang was renamed as An Quang in the late sixteenth century and this name and the adminstrative unite it presented were entirely changed in the nineteenth century.



Figure 2.1. A Representation of the Approximate Locations of the Fifteen Regions in Fifteenth-Century Vietnam

- 1. The Royal Capital Thang Long (modern Hanoi)
- 2. Hai Duong
- 3. Son Tay
- 4. Son Nam
- 5. Kinh Bac
- 6. An Bang
- 7. Hung Hoa

- 8. Tuyen Quang
- 9. Thanh Hoa
- 10. Nghe An
- 11. Thuan Hoa
- 12. Nam Gioi (Southern Borderland)
- 13. Thai Nguyen
- 14. Lang Son
- 15. Cao Bang

Before any further analysis can be carried out, it is important to note how provincial names were changed and how these changes are not often traceable in historical sources. An examination of these issues helps us to manage the anachronisms that appear in the *Treatise on the Land*. Many scholars have reasonably pointed out that four names of provincial units in the above-mentioned list—Hai Duong, Son Nam, Son Tay and Kinh Bac—were only first employed in the reigns of King Thanh Tong or the period from 1460 to 1497, that is, several decades after Nguyen Trai reportedly completed these regional descriptions in 1435. While writing a preface for a Vietnamese translation of the *Treatise on the Land* in 1976, the noted Vietnamese scholar, Dao Duy Anh, pointed to these anachronisms and he posited that later editors must have added these place names in Nguyen Trai's text.⁶²

So far, the main sources that support Dao Duy Anh's point are two records in the dynastic histories. In one record dated to 1466, King Thanh Tong reportedly established thirteen provincial units including a superior prefecture where the royal capital was located. None of the four regions that Dao Duy Anh pointed out appeared in this record. Another record, dated to 1469, however, mentioned these regional names as it recounted that in that year King Thanh Tong issued official maps of his kingdom, which covered thirteen regional units. In my opinion, although the number of regional units in the Le kingdom did not change between 1466 and 1469, the fact that King Thanh Tong decided to change the names of some provinces suggests certain transformations not merely in nomenclature but also in territorial and administrative terms. Thus, the regions mentioned in the record of 1466 may not have been exact antecedents of the ones in the record of 1469, although the total of number of regions remained the same. The following are

_

⁶² Dao Duy Anh and Van Tan, eds., *Nguyen Trai Toan Tap [The Comprehensive Anthology of Nguyen Trai]*, 2nd ed. (Hanoi: Khoa Hoc Xa Hoi, 1976), 210.

⁶³ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/25a, 51a.

the regional names that were changed between 1466 and 1469: Nam Sach => Hai Duong, Quoc Oai => Son Tay, Thien Truong => Son Nam; Bac Giang => Kinh Bac, Thai Nguyen => Ninh Soc, and the superior prefecture Trung Do (lit., "Central Capital) => Phung Thien (lit., "Honoring the Sky/Heaven).

Besides the renaming of the capital and the four regions pointed out by Dao Duy Anh, the case of Thai Nguyen changing to Ninh Soc can be explained as follows. If place names such as Hai Duong, Son Tay, Son Nam, Kinh Bac (that appeared in the *Treatise on the Land*) were actually post-1469 additions, this might not be the case with Thai Nguyen. Based on information from the dynastic histories, modern scholars have suggested that the provincial name Ninh Soc was only used during the period from 1469 to 1490. This idea seems to be based on a piece of information in a cartographical text, which also dates from that year. This cartographical text is often known as the *Hong Duc Atlas* (see the Introduction for further information about this source) and it includes fourteen regional maps that depicted the landscape of the Le dynasty. In this collection, one of the regional maps was dedicated to the region in question and the map was indeed labeled as Thai Nguyen, instead of Ninh Soc. There is a possibility that we can date these maps to 1490 because a preface attached to them was dated to this year. In this regard, Ninh Soc took the name of Thai Nguyen again in 1490.⁶⁴ If this dating is acceptable, the regional essay in the *Treatise on the Land* should have been an edition that was dated to the post-1490 period.

Having said that, tracing the anachronisms in the *Treatise on the Land* in order to date this text proves problematic. In the first place, it was common for editors of the Le dynasty to not make a note when they changed the names of provincial units to match their contemporary

⁶⁴ Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas], A.2499 (Microfilm R.141 University of Hawaii at Manoa), c. 15th to 17th Centuries. For other versions of this map collection, see Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas], Hiroshima University 98846, c. 15th to 17th Centuries; Buu Cam, Do Van Anh, Pham Huy Thuy, et al., trans., Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas] (Saigon: Bo Quoc-gia Giao-duc, 1962).

names. We can see that many records in the dynastic chronicles contradict the common assumption that Ninh Soc was the name used between 1469 and 1490. For instance, the dynastic chronicles refer to this province as Ninh Soc, instead of Thai Nguyen, in an event in 1467 while another record of an event in 1473 labels it as Thai Nguyen instead of Ninh Soc. In the second place, if the place names in the *Treatise on the Land* reflected some editing work that occurred after 1490, this position does not explain the existence of names such as Nam Gioi, discussed below.

Nam Gioi or the "Southern Borderland" and Cao Bang are yet other problematic place names in the *Treatise on the Land*, as they do not appear to have been regions like the other units in this text, but instead, to have referred to borderlands; one was in the southernmost area and another in the northernmost. It appears that for Nguyen Trai the Southern Borderland was a grey area located between his kingdom and Champa to the south. A scholar who translated the *Treatise on the Land* into modern Vietnamese, Ha Van Tan, pointed out decades ago that Nam Gioi should not be taken as a proper name. He suggested reading the term as a common noun, which generally referred to the southern borderland. 66

So, what was the place that Nguyen Trai called the Southern Borderland? In the early fifteenth century, a southernmost area came under Vietnamese rule and this area was called Thăng Hoa (not mistaken with Thanh Hoá, the name of a province in north-central modern

65 Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 12/29a, 13/3a. An extented examination can further support this point. For instance, a random check of the dynastic histories written by Le Quy Don in the eighteenth century shows that the name of Ninh Soc was used even in 1585. Le Quy Don, *Dai Viet Thong Su 大越通史 [Comprehensive History of Dai Viet]*, A.1389, Late 18th Century, 33/26a.

⁶⁶ See Ha Van Tan's annotations of the *Treatise on the Land* in Dao Duy Anh and Van Tan, *Nguyen Trai Toan Tap*, 550.

Vietnam). Some decades later, after King Thanh Tong of the Le dynasty sacked the capital of Champa in 1471, forcing Champa to yield three prefectures to his kingdom, the land of these prefectures was then made to be a new Vietnamese province under the name of Quang Nam. The exact locations of these prefectures are unknown. But when King Thanh Tong ordered the establishment of Quang Nam province, a subsidiary unit of this new region was given the name of the above-mentioned Thang Hoa. It seems that the description of the Southern Borderland in Nguyen Trai's text was based on the information about Thang Hoa, and when Quang Nam was established in 1471, people would have merged what they had known about Thang Hoa into the knowledge about Quang Nam.

Like Thang Hoa, Cao Bang was the name of a subsidiary unit for a long period before it was made to be a separate prefecture or a first-ranked administrative region until the seventeenth century. There is no doubt that the label of Cao Bang was an anachronism that later editors placed into in Nguyen Trai's text. However, what is more important is to read the information underneath this anachronism. The dynastic histories recorded a campaign that King Thai To (a.k.a. Le Loi, founding king of the Le dynasty, r.1427-1433) launched over the active areas of two Tay-Thai leaders whose names were recorded in Vietnamese dynastic histories as Be Khac Thieu and Nong Dac Thai. This military campaign took place in 1431. A commentator of Nguyen Trai's account on Cao Bang recalled this event and he noted that King Thai To wrote a poem when he was marching to this area. The poem did address the target land of this campaign

⁶⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 8/passim.

⁶⁸ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/65b.

⁶⁹ The Historiography Insitute of the Nguyen Dynasty, *Dai Nam Nhat Thong Chi 大南一統志* [Comprehensive Gazetteer of Dai Nam], A.69, 1800s, 42/2a.

⁷⁰ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 10/73a.

as the "borderland" (邊防 *biên phương*).⁷¹ Recently, some Vietnamese researchers have been able to locate the cliff in modern Cao Bang on which this poem was carved.⁷² Therefore, when Nguyen Trai wrote the fifteen regional descriptions in 1435, the area that later became known as Cao Bang was a frontier of the Vietnamese kingdom.

Information from some commentaries on Nguyen Trai's account also reveals that this land had been relatively isolated and self-reliant both in political and environmental terms for several centuries. As one commentator highlighted, "officials sent by the central court often cannot take hold of their post in Cao Bang for a long time even though this is an area rich in rare products."⁷³ Because of this reason, the same commentator added, the central court often let the commissioner of Thai Nguyen, a northern region apart from the central capital by the immediate region of Kinh Bac, to concurrently govern Cao Bang. This administrative tactic generally means that the central court used local people to rule the area and/or that Cao Bang was made to be a dependent unit of Thai Nguyen. The self-reliance of Cao Bang can be further speculated from the fact that the Mac clan, the *de facto* rulers of Vietnam from 1527 to 1593, was able to occupy Cao Bang for the first three quarters of the seventeenth century after they were driven from the central capital (modern Hanoi). Hence, while the title of Cao Bang might not have appeared until a later period, the notion that a description of this remote northern frontier can be dated to 1435 is justifiable. In what follows, for the sake of convenience I will continue to refer to the northernmost region as Cao Bang. However, it must be recognized that Nguyen Trai did not use

⁷¹ Nguyen Trai, "Treatise on the Land," 116 (Han). (This book includes two parts, the Vietnamese translation and the "Han" or "original Classical Chinese" text; the first page of each part is numbered from 1. The term "Han" in the brackets indicates the section of which the page is cited.)

⁷² Dinh Khac Thuan, "Bai Tho Khac Da Cua Vua Le Loi O Vung Nui Tinh Cao Bang [On King Thai To's Poem Carved on a Cliff in Cao Bang]," *Tap Chi Han Nom* 1, no. 110 (2012): 46–49.

⁷³ Nguyen Trai, "Treatise on the Land," 116–7 (Han).

this particular term. Instead, he talked about a remote frontier in the north, which in one way or another had a connection with the Vietnamese realm.

In short, although it appears that Nguyen Trai was writing about fifteen regional units, I argue that two of these descriptions, those of Cao Bang and Nam Gioi, concerned instead the northern and southern borderlands. It is likely that their inclusion in the Le dynasty realm corresponds to the way that Vietnamese rulers at that time viewed these areas. On the one hand, they perceived these areas as part of the Vietnamese landscape. On the other hand, they either had not fully imposed administrative control and named these regions or had temporarily lost control over them to the neighboring authorities. In addition, there is not enough information to be certain about what terms Nguyen Trai employed when he discussed regions such as Hai Duong, Kinh Bac, Son Tay, Son Nam and Thai Nguyen if these place names only emerged after 1469. Just like the case of Cao Bang, these regions will be also referred to here as how they appear in the *Treatise on the Land*. Overall, this situation leads us to question why Nguyen Trai perceived the Vietnamese landscape in 1435 as consisting of fifteen regional units. To answer this question, it is critical to be aware of how Nguyen Trai would have thought about a region.

Regional Landmarks and Demarcated Regions

The way Nguyen Trai recognized a region of his kingdom is different from the demarcation of regions in modern geography. Whereas a modern regional name represents a piece of land that is enclosed by definable boundaries, this understanding is not applicable to explain Nguyen Trai's regional descriptions. Although premodern people had a variety of ways to discuss territorial borders and land marking, it was not until the late nineteenth century that the

practice of boundary lines started to be applied for the production of maps in Vietnam.⁷⁴ Nguyen Trai's way to identify a region was also not one of the most common practices in Chinese and Vietnamese spatial organization. It was common for Chinese and Vietnamese people to report on the size of a region by calculating the number of its subsidiary units. For example, during their occupation of Vietnam between 1407 and 1427, the Ming officials who produced a gazetteer of Giao Chi (i.e., a name that the Ming rulers used to call fifteenth-century Vietnam with the implication that it had lost status an autonomous kingdom) made a list of twenty-two prefectural units. There was no reference to the territorial size but the authors of this gazetteer carefully recorded the number of the units subordinate to each of these prefectures.⁷⁵ Dynastic historians of the Le dynasty used the same method in their reports on the jurisdictions established during the Hong Duc period (1469-1497).⁷⁶

It is also worth paying attention to the fact that the following notion, which is now taken for granted, did not exist in premodern times. It is an idea that the total territory of all subsidiary units would exactly fit in the boundaries of the region to which they belong. In other words, the connection between a province-like region and its subordinate units was not the relationship between a whole and constituents but one in hierarchy.⁷⁷ Moreover, there were often different types of subsidiary units in each level of the spatial organization. For example, while the basic

⁷⁴ An example of the emergence of boundary lines in the production of Vietnamese maps can be found in the provincial maps in a collection entitled *Dai Nam Toan Do* 大南全圖 [Comprehensive Maps of the Dai Nam State], A.2959, n.d..

⁷⁵ E. Gaspardone, ed., "An Nam Chi (Nguyen) 安南志原 [Records of Annam]," in *Ngan-Nan Tche Yuan: Texte Chinois Édité et Publié Sous La Direction de Léonard Aurousseau* (Hanoi: Imprimerie d'Extrême-Orient, 1932), 34–40, 84–103.

⁷⁶ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/51a.

⁷⁷ For any future work on Vietnamese spatial organization, Ruth Mostern's work on the spatial organization of Song China is a critical reference. See Ruth Mostern, "Dividing the Realm in Order to Govern": The Spatial Organization of the Song State (960-1276 CE) (Cambridge, MA: Harvard University Press, 2011), 73–90.

unit in the administrative hierarchy in premodern Vietnam is often known as village (社 $x\tilde{a}$ in Sino-Vietnamese or $l\grave{a}ng$ in venarcular Vietnamese), there existed a variety of village-liked units such as huong 鄉, $phu\grave{o}ng$ 坊, $th\^{o}n$ 村, trang 莊, $s\acute{a}ch$ 冊, $d\^{o}ng$ 洞, $nguy\^{e}n$ 源, and $tru\grave{o}ng$ 場. Normally, the size of the population, the settlement location (whether being in the lowlands or in the highlands), and sometimes the economic function were the important determinants that distinguished these village-like units from one to another. 78

In any case, Nguyen Trai chose a different way to report on regions. In his way, each of the regional units (except the royal capital) was defined by its connections with some topographical features; they were often mountains and rivers. A reason why Nguyen Trai did this was that he employed the most ancient way of representing landscape in traditional China, namely, the spatial representation in a venerated chapter in one of the Confucian Classics, the "Tribute of Yu" (禹貢 Yugong) chapter in the Book of Documents. Supposedly having been written down in the fourth century B.C.E., the "Tribute of Yu" related the myth of how Yu the Great transformed the lands and determined the high mountains and great rivers in order to demarcate the nine regions (九州 jiuzhou/ ciru châu) of the known civilized world. A noted historian of the Qin-Han periods notes that "[t]he overarching theme of the text is how these nine regions were united into a single state by the travels of the sage Yu and by the sending of each region's unique products as tribute to the capital." However, the "Tribute of Yu" became so exemplary mainly because of its legacy in successive Chinese dynasties. In many monographs on

.

 $^{^{78}}$ Truong Buu Lam, "Loi gioi thieu [Introduction]," xix.

⁷⁹ Mark Edward Lewis, *The Early Chinese Empires: Qin and Han*, History of Imperial China (Cambridge, MA: Belknap Press of Harvard University Press, 2007), 11. By contrast, Chinese historians tend to read the text as early evidence of a Chinese perception of water control. This reading clearly focuses on another critical theme of the text; that is, how Yu channeled the waterways so that they could properly flow along the mountains in each region.

the land (地理志 *dilizhi*) included in dynastic histories, historians from the Han dynasty onwards located their contemporary administrative units in the topographical layers of the ancient nine regions, which had been initially set by the writer of the "Tribute of Yu." Thus, Chinese geographical thought not only maintained a tradition of seeking to understand the "bidirectional relationship between past and present," to use the words of the historian of Song China, H. De Weerdt, but also expressed the urge to legitimate the contemporary overlay of spatial divisions with "a foundation layer of Antiquity."⁸⁰

If the prestige of the "Tribute of Yu" was a good reason for Nguyen Trai to apply its model of describing regions to his regional accounts, the Le rulers could apparently took it as a standard for viewing the landscape of their kingdom. As demonstrated later in this chapter, that regional layout endured for centuries in the minds of the Le administrators and scholars. Some existing copies of the *Treatise on the Land* are transmitted under titles such as *Tributary Regulations of the Le dynasty* (黎朝貢法 *Lê Triều Cống Pháp*), the *Southern Kingdom's Tribute of Yu* (南國禹貢 *Nam Quốc Vũ Cống*), or *Annam's Tribute of Yu* (安南禹貢 *An Nam Vũ Cống*) because of that precise reason. 81

To some extent, one can argue that the use of topographical features such as mountains and rivers in Nguyen Trai's text was similar to that in the "Tribute of Yu." As some research in

⁸⁰ Hilde De Weerdt, "Maps and Memory: Readings of Cartography in Twelfth- and Thirteenth-Century Song China," *Imago Mundi* 61, no. 2 (2009): 145–167.

⁸¹ See different versions of *Treatise on the Land* such as manuscripts A.53, A.830 and A.2251.

⁸² Similar to the accounts of the nine Chinese ancient regions in the "Tribute of Yu," the Vietnamese description was written in the following pattern: "Certain natural features/ landmarks + 惟 + the name of the region." For instance, compare a description in the "Tribute of Yu" that reads "濟河惟兗州" with an account in the *Treatise on the Land* that reads "海及六頭安子惟海陽." Note, one should not think of this mimicry in a negative way because the capability to manifest the classical style in one's writing was highly valued in the Classical Chinese writing tradition.

Chinese history shows, the "Tribute of Yu" referred to many rivers, mountains and the sea as the natural borders of some ancient regions. To some extent, one can find this way of explanation applicable to some regional descriptions in Nguyen Trai's text. The best example is An Bang, a region that adjoined Hai Duong in the eastern sphere of the kingdom. The *Treatise on the Land* describes An Bang by three landmarks, Van Cu, Kim Tieu and Phan Mao. According to an annotation attached to Nguyen Trai's text, Van Cu was a nickname of the Bach Dang River while Kim Tieu, or the "Golden Landmark," referred to the noted Bronze Pillar, which was located on the Phan Mao mountain. Both the Bach Dang River and the Bronze Pillar carried profound meanings in Sino-Vietnamese history. The Bach Dang River was twice a battleground between local people and attackers from outsiders (i.e., from Chinese forces). As the same annotation reminds us, a leader by the name of Ngo Quyen (r. 939-944) defeated troops sent by the Southern Han dynasty, a dynastic house based on the southern coast of China in the tenth century. In the thirteenth century, this river again witnessed a battle led by Prince Hung Dao of the Tran dynasty in his fight against the attack of the Yuan/Mongol army.

While the Bach Dang River presented a natural landmark through which one could easily enter the Vietnamese realm by water routes, the Bronze Pillar was significant in a different way. It is believed that the Bronze Pillar was first built in the Han dynasty period and rebuilt in the Tang dynasty period in order to demarcate the borders between the Chinese empire and the Vietnamese kingdom. Although this landmark was human-made, their ancient origins must have endowed it with a sense of being as permanent as any other natural objects. It should be noted that except for a comprehensive map dated from 1490, to be discussed below, other extant maps

_

⁸³ Starting from the early thirteenth century, if not earlier, Song scholars produced maps that represented the nine regions of the "Tribute of Yu" with demarcated borderlines. See the Song map in 1201 cited by Mostern, *Dividing the Realm in Order to Govern*, 68.

did not present the Golden Landmark and the Phan Mao mountain. The reason for this can be understood from a later commentary in the *Treatise on the Land*. According to this commentary, the land of the An Bang area was reduced when the Vietnamese government yielded some counties to the Chinese empire one time in the sixteenth century and another time in the eighteenth century. Thus, the Phan Mao mountain and the Golden Landmark were no longer the furthest reach of the Vietnamese territory from the 1500s onward.

Although the case of An Bang shows that the local mountains and rivers in Nguyen

Trai's text can be interpreted as the natural borders of regions, the account of Son Tay strongly challenges the above assumption. Based on information provided by the commentaries in the

Treatise on the Land, the local mountains and rivers that Nguyen Trai mentioned in his
description of Son Tay did not serve as regional borders. The focus was instead on the
geographical and cultural significance of the natural landmarks. Here, Son Tay was defined by
the presence of the Da Duong River (i.e., the Da River) and Mount Tan Vien. The significance of
Mount Tan Vien lies in the sacredness of this mountain. The dynastic chronicles reveal that
Vietnamese rulers offered royal sacrifices to the deity of Mount Tan Vien as early as the eleventh
century and that this ritual ceremony was practiced as late as the fifteenth century.

Here, Son Tay was defined by
the presence of the Da Duong River (i.e., the Da River) and Mount Tan Vien as early as the eleventh
vietnamese rulers offered royal sacrifices to the deity of Mount Tan Vien as early as the eleventh
century and that this ritual ceremony was practiced as late as the fifteenth century.

Here, Son Tay was defined by
the presence of the Da Duong River (i.e., the Da River) and Mount Tan Vien as early as the eleventh
century and that this ritual ceremony was practiced as late as the fifteenth century.

Here, Son Tay strongly and the presence of the natural landmarks. Here, Son Tay was defined by
the presence of the Land, the local mountain the Da River sate of the natural landmarks. Here, Son Tay was defined by
the presence of the Land, the local mountain the Da River sate of the local mountain the Da

⁸⁴ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 3/6b, 11/78b, passim.

River to battle with Son Tinh. 85 Furthermore, because Mount Tan Vien was deemed sacred, as the dynastic histories show, Vietnamese rulers in the post-1500 period paid great attention to any landslides that occurred on this mountain. 86 By the eighteenth century, a dynastic historian would therefore confirm that Tan Vien was "the primordial mountain of our Southern Kingdom" (我南 國祖山 ngã Nam quốc tổ sơn). 87

In effect, while the topographical features mentioned in Nguyen Trai's text were not necessarily natural boundaries, they were identified and endowed with the ability to represent a local area largely because they carried some historical and cultural connections. That someone like Nguyen Trai was aware of these connections was because these topographical features were familiar to the ruling elite, and that in turn is because they had an administrative presence in the areas where these topographical features were located. In what follows, I will demonstrate that the attribution of historical information to the local mountains and rivers mentioned in Nguyen Trai's text implies the presence of Vietnamese authorities in the land surrounding these landmarks.

A Capital-Centric Perception of Territory

It is no coincidence that the first regional unit Nguyen Trai mentioned was the royal capital. In fact, while using certain local mountains and rivers to identify the locations of regions,

⁸⁵ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, NK 1/4a-5a.

⁸⁶ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 14/34a, 18/8a, 20/12a; The Historiography Insitute of the Nguyen Dynasty, *Kham Dinh Viet Su Thong Giam Cuong Muc 欽定越史* 通鑑綱目 [Imperially Commissioned Outlines and Details of the Comprehensive Mirror of Viet History], Taiwanese Reproduction 1969, 1884, CB 41/16a, 46/2a.

⁸⁷ Nguyen Trai, "Treatise on the Land," 50 (Han).

Nguyen Trai perceived them as those in which the power of the state was embedded, regardless of the fact that this power was physically located in the royal capital. As his arrangement of the other regional descriptions shows. Nguyen Trai was arguing that the locations of the remaining regions of the kingdom should be identified by their directional relationship with this capital city. The fact that Nguyen Trai did not suggest any mountains or rivers to be the landmarks of this special location further supports the idea that he was taking the royal capital as the utmost referential markers for other regions in the kingdom. Thus, for fifteenth-century administrators and scholars like Nguyen Trai, the royal capital possessed a power of control just by being located in the center of the landscape. It is clear that while a centric notion of landscape was very important for fifteenth-century Vietnamese rulers and administrators, this way of viewing the land is completely unfamiliar to modern Vietnamese. For instance, Nguyen Trai's regional descriptions did not lead the reader to view the land in a north-south direction, as is the norm today. Unlike the modern observer, Nguyen Trai did not mention the contrast in elevation between the areas of higher altitude towards the western inland and the areas of lower elevation towards the eastern coast.

Nguyen Trai's descriptions reveal a highly imaginative mind map of the landscape. According to this mind map, one should read the landscape of the Vietnamese kingdom by tracing two circles of regions that circumnavigated the royal capital. The more inner circle included four regions, including Hai Duong, Son Tay, Kinh Bac, and Son Nam and they were respectively situated in the four cardinal directions in comparison with the capital city.⁸⁸ The

_

⁸⁸ Although the names of these regions are likely to have been coined in the post-1435 period, the fact that these names were identified with the four cardinal directions suggests that the capital-centric perspective of land became conventional from at least the fifteenth century. Considering the toponyms of these four regions, Hai Duong (海陽) is a phrase that combines the term for "sea" with the term for "sun." It is my guess that the term *duong* (陽) in this phrase referred to the sun. If this conjecture is accepted, Hai Duong should have implied the east, where the

remaining regions formed the more outer circle and they were arranged in the same way by applying the practice of four cardinal directions. Furthermore, to trace the locations of the inner regions, Nguyen Trai instructed his readers to move their view neither clockwise nor counter clockwise. The prescriptive mind map to do so is instead to follow the east-west-south-north sequence of the cardinal directions. The same sequence of the cardinal directions was applied to the outer regions. For that reason, one would turn one's view to the western regions after learning about the eastern regions, to the southern regions after investigating the northern regions.

More evidence for this capital-centric perspective of the landscape can be found in some later annotations attached to Nguyen Trai's text. According to these annotations, these four regional units were considered as "the four strategic safeguards that protected the central capital" (四京鎮 tứ kinh trấn). They were also known as the Four Internal Safeguards (四內鎮 tứ nội $tr\hat{a}n$) or Four Safeguards (四鎮 $t\dot{u}$ $tr\hat{a}n$) in later periods. In this study, when these four regions are mentioned together, I will call them the Four Safeguards.

By way of such an intellectual demarcation of the landscape, while the Four Safeguards could be perceived together as an internal circle of regions, the regions in each cardinal direction likely constituted a separate inter-region. In other words, besides a demarcation between the Four Safeguards and the external circle of regions, there were also delineations between the eastern, western, northern and southern spheres. Such delineations reveal how fifteenth-century administrators understood the connections between the central capital and other regions in the kingdom. The connection of the central capital with regions in the sphere outside of the Four Safeguards was indirect because the Four Safeguards served as mediators. Essentially, these

sun rises. As for three other names, Son Tay (山西) implies Mountain and the West, Kinh Bac (京北) the Capital and the North, and Son Nam (山南) Mountain and the South. One might even argue that these names also reflected some sort of topographical sense. For instance, these names suggest that more mountains occurred in the western and southern areas while the sea was located in the east.

outer regions were each connected to a region from the inner circle of the Four Safeguards to form four separate inter-regions that also corresponded with the four cardinal directions.

The discrepancy between the internal and external regions can be seen in Nguyen Trai's selection of the mountains and rivers to serve as local landmarks. One can find ample historical information about the antecedents of the Le dynasty that could be associated with the mountains and rivers in the Four Safeguards. In addition to the above-mentioned western Safeguard of Son Tay, the Yen Tu mountain is mentioned in the account of the eastern Safeguard of Hai Duong. This mountain was famous for being the homeland of a thirteenth-century Zen school, to which many kings of the Tran dynasty (1225-1400) devoted themselves. An annotation of Nguyen Trai's account of Hai Duong highlighted this history. 89 Likewise, information from another annotation links Mount Ve Linh with the northern Safeguard of Kinh Bac because this mountain gave rise to a regional cult. In this cult, it is believed that a heroic spirit, the Dong Heavenly King, had ascended to Heaven from the top of this mountain. 90 Finally, Mount Doi and Mount Diep were exemplary for the southern Safeguard of Son Nam largely because they were the places where the royal family of the Ly dynasty (1010-1225) used to visit. A comment of Nguyen Trai's text reported that many kings of this dynasty used to build their royal travelling lodges (行 宮 hành cung) there. 91 An interesting fact from a nineteenth-century text recounts that the fourth king of the Ly dynasty, King Nhan Tong (r. 1073-1129), built a stūpa called the Stūpa of Devotion to Good Deeds in order to Achieve Longevity (崇善延齡塔 Sùng Thiên Diên Linh tháp)

_

⁸⁹ Nguyen Trai, "Treatise on the Land," 42 (Han).

⁹⁰ Nguyen Trai, "Treatise on the Land," 58 (Han).

⁹¹ Nguyen Trai, "Treatise on the Land," 52 (Han).

on the top of Mount Doi. During the period of occupation, the Ming destroyed the tower but King Thai To of the Le dynasty (i.e., Le Loi) rebuilt this monument. 92

While the closer to the center an area was, the more specific knowledge of this given area would have been available to someone who resided in the center like Nguyen Trai, this pattern was not entirely applied to the selection of natural landmarks in some of the furthest frontiers, especially those adjacent to Chinese territory. In fact, the natural landmarks in these regions were associated with enough specific historical information. The commentaries of Nguyen Trai's accounts on An Bang, Lang Son and Tuyen Quang attest to this point. Note that the most marginal region in the northern frontier in Nguyen Trai's regional layout was an area that would be known as Cao Bang in later periods. However, as I discussed above, this account seems to be dedicated to a northern borderland similar to how the southern borderland was called as Nam Gioi. Hence, by the time Nguyen Trai wrote these regional descriptions, An Bang served as an exit to the East, Lang Son to the North and Tuyen Quang to the West. Considering that natural features like mountains and rivers were commonly taken as a means of way-finding, these landmarks were stable in the premodern observer's mind map of landscape as long as his central court maintained its strong ability to control the routes that crossed them.

The historical information associated with the landmarks in regions such as An Bang,
Lang Son and Tuyen Quang therefore indicates a recognizable imposition of government control
in those remote regions of the kingdom. In the case of the easternmost region of An Bang, the
Bach Dang River and the Golden Landmark were significant not only because they could be
viewed as border markers but also because these landmarks were endowed with the ability to
testify to Vietnamese control. This same line of reasoning helps to expain why a mountain called

⁹² Phan Huy Chu, Lich Trieu, Paris.SA.HM.2126, 2/64b.

the Looking-Out-For-Her-Husband was connected with the northernmost region of Lang Son. To explain this connection, an annotation of Nguyen Trai's text recounts a story about a certain Lady To (蘇氏 Tô Thị), who was the wife of a general named Dau Thao (竇韜 Đậu Thao). Based on the names of this general and his wife, scholars today know that this story comes from a pre-fifteenth-century Chinese source. In the Chinese version, while Dou Tao/Dau Thao was sent into exile, Lady Su/To made a piece of brocade in which she wove a reversible poem. All of its words were arranged in a circle in order to express her lovesickness for her husband. 93 It is clear that this story was localized in the Vietnamese context. The general named Dau Thao was said to have hailed from Nam Sach, the former name of the western Safeguard of Son Tay. Instead of being exiled, the general was said to have joined the army of Ngo Quyen, the noted leader who defeated the invasion of the Southern Han in the tenth century. Significantly, the Lang Son story emphasized that Dau Thao was sent to guard the borders. This detail seems to reflect a perception that connected Lang Son with a borderland of the Vietnamese kingdom. Moreover, an important twist in the Vietnamese version of the Lady To story helps to link it with a mountain in Lang Son. In this version, the Vietnamese Lady To also wove a poem onto a piece of brocade. However, having waited for her husband for ten years, she eventually killed herself by jumping off the mountain, which later became known as the mountain of Looking-Out-For-Her-Husband (望夫 vong phu). 94 The fact that a story associated with people from the central regions (both Ngo Quyen and Dau Thao of the Vietnamese version came from the areas of the Four Safeguards) was used to explain the origins of a local mountain highly suggests the early

⁹³ See, for instance, Fang Xuanling, "Doutao Qi Su Shi 竇滔妻蘇氏 [The Tale of Lady To, Wife of Doutao]," in *Jinshu 晉書 [History of the Jin Dynasty]*, vol. 96, c.600s. In the Vietnamese text, the term Tao/Thao in the general's name is written as 韜, a homophone of 滔.

⁹⁴ Nguyen Trai, "Treatise on the Land," 109–110 (Han).

presence of the Vietnamese central court in the area where this mountain was located. Likewise, the association of the westernmost region of Tuyen Quang with the Le Hoa mountain resulted from a significant historical event that occurred during Nguyen Trai's life-time. It is unclear where exactly this mountain was located. Nevertheless, according to an annotation of Nguyen Trai's text, Le Loi (i.e., King Thai To of the Le dynasty) made use of it to be a pass (*quan*) or a strategic point as he advanced some incursions against the Ming general Liu Sheng (?-1427, *Vns.* Lieu Thang) around 1427.

Nevertheless, these three furthermost regions were still viewed as external regions; that is, they were deemed remote and not favorable to access. Some commentaries of Nguyen Trai's text emphasized that An Bang was "perilous" (險惡 hiểm ác) and that it could be classified as "a far-flung prefecture" (遠州 viễn châu). ⁹⁶ Likewise, Tuyen Quang was marked as a region where "the customs are relatively close to those of the northern people (i.e., people who were viewed to belong to the Chinese empire)," and therefore, "many dynasties deemed the area infertile and neglected to take care of it." ⁹⁷

It appears that by the fifteenth century the southern regions remained a rather unfavorable frontier. Thus, the statements of a late-fourteenth-century official named Nguyen Nhu Thuyet were cited in a commentary of Nguyen Trai's description of Thanh Hoa, an external region in the south. This commentary is attributed to Ly Tu Tan, a scholar-official who lived in the same period as Nguyen Trai. Ly Tu Tan's citation matches a record in the dynastic chronicles, which reported that Nguyen Nhu Thuyet attempted to convince Ho Quy Ly, the man who would soon

⁹⁵ Nguyen Trai, "Treatise on the Land," 72–73 (Han).

^{96 &}quot;安邦險惡, 謂之遠州." Nguyen Trai, "Treatise on the Land," 65 (Han).

^{97 &}quot;宣路之俗大抵略同北客, 歷朝以荒, 忽待之." Nguyen Trai, "Treatise on the Land," 74 (Han).

overthrow the Tran throne in 1400, not to move the capital from Thang Long (modern Hanoi) to Thanh Hoa. He argued that the land of Thanh Hoa was too narrow. "Because the land is locked between the high mountains and the lower reaches of regional rivers," he explained, "this area becomes advantageous during wartime but does not during peacetime." Although Thanh Hoa was the homeland of the Le royal family, it is intriguing that Ly Tu Tan, an official of the Le dynasty, followed Nguyen Nhu Thuyet to reinforce the view that condemned the homeland of the Le as a difficult terrain to control. In fact, both Nguyen Nhu Thuyet and Ly Tu Tan must have looked at this southern land as one in juxtaposition with Thang Long, the long-established and the current capital of the Vietnamese state in the fifteenth century. Hence, there seems to have been a strong need to reinforce the irrefutable position of Thang Long as the kingdom's capital in Nguyen Trai's and Ly Tu Tan's time, given that Ho Quy Ly did end up relocating the capital to Thanh Hoa and that the Le court maintained another capital in that same region, mainly for purposes of ancestor worship.

The referential mountains and rivers which identified the other southern regions, Nghe An and Thuan Hoa, were not given any historical associations. Like in the case of Thanh Hoa, Ly Tu Tan's comments on these regions focused instead on their political significances. Nghe An was said to be a place where the central government could manipulate local people in order to control the barbaric tribes in the southwestern borderland. In Thuan Hoa, local people were used to confront Champa because their customs had maintained the old ways of the Cham people, which, from the fifteenth-century perspective, made them "aggressive and able to endure

_

⁹⁸ "清華之地, 水尾山頭, 狹小湫隘, 得其亂而不得其治." Nguyen Trai, "Treatise on the Land," 81 (Han). See also Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 8/28b-29a.

hardship."⁹⁹ No clear Vietnamese presence in Nam Gioi or the Southern Borderland can be inferred from the references of its natural landmarks either. The reference to a regional mountain called Tien Nu or Immortal Lady cannot be corroborated in any later historical sources. So were the reference to Phu and Ha, two estuaries in Nam Gioi. ¹⁰⁰

While the lands outside of the Four Safeguards were generally deemed remote and unfavorable to access, the fifteenth-century discourse on the regions that are often known as the northern and northwestern mountainous areas of Vietnam provides for a more intricate understanding of the interregional relations in the kingdom of the Le dynasty. For people in the mid-fifteenth century like Nguyen Trai and Ly Tu Tan, these mountainous regions were full of fearful forces. As Ly Tu Tan wrote,

Tuyen Quang, Hung Hoa, Thai Nguyen, Lang Son and Cao Bang are five regions in the upper reaches (上游 thượng du) and they can be self-reliant due to their treacherous location. [In these regions,] poisonous snakes and human-faced beasts can bring about many chimeras while wicked waterways and evil plants can obstruct human penetration. Yet, local men practice the phu đạo custom and they do not violate regulations of subordinate subjects (藩臣 phiên thần). If they only depend on the local mountains and forests, hardly could they lack anything. That said, one thing they do lack is salt. If it was not due to this reason, would not such [wicked] waters and [malevolent] soil of the

⁹⁹ Nghe An: "道路悠長, 水土常習, 歷代以之禦西南夷"; Thuan Hoa: "其民染占舊俗, 性悍耐, 故先朝以之禦占." Nguyen Trai, "Treatise on the Land," 92, 98 (Han).

¹⁰⁰ A compiler of the nineteenth-century *Comprehensive Gazetteer of Dai Nam* cited Nguyen Trai's text and noted that these old places were no longer identifiable. The Historiography Insitute of the Nguyen Dynasty, *Dai Nam Nhat Thong Chi 大南一統志 [Comprehensive Gazetteer of Dai Nam]*, Paris.SA.HM.2128, 1800s, Quang Nam, 1b.

^{101 &}quot;Phụ đạo" (父道) is a Sinitic term that attempted to transcribe a term for the social system of the tribal peoples in the mountainous area in what is now southwestern China and northwestern Vietnam. Many Vietnamese writers including recorders of standard chronicles prior to the twentieth century, however, tended to understand this system from the meaning of the Han Chinese term, which connotes a patriarchal social practice. Taking up this meaning of the term, fifteenth-century scholars like Mr. Ly should have believed that the custom of mountainous peoples should not be too different from what they maintained in the lower land. There was indeed an attempt to twist the term from a transcription of "父道" into that of "輔導" in later centuries. These terms are identical in their Sino-Vietnamese pronunciation but the latter tends to imply a social system subordinate to the central government.

regions be thorny predicaments to the central government, ¹⁰² especially given that the people in the central routes (i.e., the capital and Four Safeguards) do not have much understanding of the upper reaches? ¹⁰³

As seen here, while there was a clear awareness of the differences between the Four Safeguards and the upper lands in the kingdom, the connection between these two realms was strong due to the trade of salt. The recognition that the upland regions had abundant resources in regional mountains and forests indicates that the people of the lowlands had a great need for the resources of the uplands.

In effect, Nguyen Trai's regional accounts show that there were two key referential factors to identify a region. One factor was the directional relationship between a certain region and the royal capital that defined the center of the Vietnamese landscape. Another factor was the significant landmarks, which often included local mountains, rivers, the sea and some other topographical features. The selection of these landmarks often revealed the degree to which the central government in the royal capital exerted its power of control in the corresponding areas. That said, there is not enough information to understand how Nguyen Trai came up with a regional layout of those fifteen regional units. What is clear to us is, nevertheless, the way the Vietnamese landscape was conceptualized underwent many transformations during the fifteenth century. Using some cartographical information dated to the late fifteenth century, the following section attempts to show that the regional layout as seen in Nguyen Trai's descriptions reflected an aspect of these transformations.

¹⁰² "The central court" is a loose translation of $trung qu\acute{o}c$ (中國, lit., "the middle state"). In the context of this text, this term has nothing to do with the Chinese empire.

^{103 &}quot;宣、興、太、諒、高平上游五路, 險阻足憑. 蛇虺螭魅, 能為人怪, 水木惡暴, 能為人梗. 而男子父道, 罔失藩臣之禮. 良由山林之間, 何物不有, 而民間日用所乏者一鹽, 不然其地水土, 京路人民不諳, 豈不為中國之梗乎." Nguyen Trai, "Treatise on the Land," 71 (Han).

Cartographical Documentation of Landscape

According to Cordell D. K. Yee, an expert on premodern Chinese maps, pairing maps with texts has been a critical characteristic of traditional Chinese cartography since the fourteenth and fifteenth centuries. He has also suggested that Chinese maps were made under an assumption that readers were required to have obtained significant background knowledge of them by reading the corresponding textual information. ¹⁰⁴ A similar assumption of how to make and read a map existed in premodern Vietnam. However, except for itineraries (a kind of map that focused on drawing the routes from one place to another), most pre-1800 Vietnamese maps fall into categories such as comprehensive maps (those which aimed at representing the overall territory of the kingdom) and regional maps (those which focused on a specific local area) and do not have any supplementary textual information. ¹⁰⁵ The goal of this section is to understand, in a cartographical sense, how the Le court represented the divisions of the land they controlled and to compare this understanding with what was presented in Nguyen Trai's regional layout. For that purpose, this discussion focuses on two comprehensive maps that are arguably the only such comprehensive maps of the Vietnamese land prior to the nineteenth century.

-

¹⁰⁴ Cordell D. K. Yee, "Reinterpreting Traditional Chinese Geographical Maps," in *The History of Cartography. Vol. 2, Book 2. Cartography in the Traditional East and Southeast Asian Societies*, ed. J. B. Harley and David Woodward (Chicago; London: The University of Chicago Press, 1994), 57–60.

¹⁰⁵ It is unlikely that there are maps of other types such as city plans, riverine maps for hydraulic engineering, and cosmological/astrological maps in Vietnam. Some Vietnamese family genealogies and geomantic books might preserve certain "topographical" graphs of the land that aimed at prognosticating the right location for ancestral burials. These types of cartographical sources definitely deserve a separate study.

The literature on old Vietnamese maps so far remains limited. ¹⁰⁶ In 1994, historian John K. Whitmore wrote a chapter on premodern Vietnamese cartography, which was probably the first, and is still the only, attempt in English to survey premodern Vietnamese maps. That chapter is a comprehensive synthesis of Whitmore's own research with the received scholarship on the subject available in Vietnamese and French at the time. ¹⁰⁷ According to Whitmore, most of the old Vietnamese maps were not printed but were produced in manuscript form. The copies of extant maps are often dated not earlier than the seventeenth century but many of them represent the territory under the rule of the Le dynasty from an earlier time. This being said, "the tradition of the Le atlas remained a strong one in Vietnamese history," as he puts. ¹⁰⁸

While he does not make references to Whitmore's survey, a 2016 article by Niu Junkai focused on a particular type of map, the itinerary map. Without any intent to make a discussion of this type of map in this chapter, I will only note that even though their approaches are relatively different, the studies of both Whitmore and Niu similarly reveal that it is not easy to read these itinerary maps as road-finders. This probably explains why the itineraries drew Whitmore's attention less to the routes *per se* but more to the pictorial information of the distinct

¹⁰⁶ In recent years, Vietnamese scholars have shown an interest in studying maps. However, most of the published studies have been driven by the political dispute of the South China Sea. Hence, studying maps in Vietnam has focused on finding evidence to prove the sovereignty (*chū quyền*) of Vietnam over this marine area.

¹⁰⁷ John K. Whitmore, "Cartography in Vietnam," in *The History of Cartography. Vol. 2, Book 2. Cartography in the Traditional East and Southeast Asian Societies*, ed. J. B. Harley and David Woodward (Chicago; London: The University of Chicago Press, 1994), 478–508.

¹⁰⁸ Whitmore, "Cartography in Vietnam," 490.

¹⁰⁹ Niu Junkai, "Cong 'zheng Zhan' dao 'ping Nan': 15-18 shiji Yuenan nanxing lucheng tu yanjiu 从'征占'到'平南': 15~18 世纪越南'南行路程图'研究 [From 'Conquering Champa' to 'Pacifying the South' Vietnamese Maps of the Southern Advance, 15th-18th Centuries]," *Guojia hanghai (National Maritime Research)*, no. 1 (2016): 82−100.

features of the environment such as rivers, canals, estuaries, inns, bridges, temples, and so on. Likewise, Niu studies the maps but he turns to textual information when discussing the routes. 111

The tension between what the mapmakers seem to have put more effort into representing (the pictographic information) and what modern historians want to see (the routes) suggests an interesting question of how we can further study these maps. In an introductory survey of traditional Chinese maps, Cordell D. K. Yee provides many great insights that can be applied to the case of premodern Vietnam. An important point relevant to the current discussion is a warning to avoid reading old maps from a quantitative perspective. Ample evidence in traditional Chinese cartography shows that mapmakers had knowledge of scale and grid but many maps were not produced based on a scale or mathematic measurements. Yee thus encourages the reader of traditional maps to appreciate the "intellectual value" possessed by each map. "A 'good' cartographic image did not necessarily tell how far it was from one point to another," he explains, but it can "tell us about such things as power, duty, and emotion." Hence, instead of discussing how old maps often show inaccuracies in their spatial representations, it is more productive to begin questioning what specific function each map was meant to serve.

A few sources preserve the comprehensive maps of pre-nineteenth-century Vietnam but almost all of them can be traced to two maps. The originals of these maps were lost; we therefore can only obtain some ideas about them through their reproductions. One map, which I will call the "An Nam map," probably dates from the 1410s but underwent significant revisions after

¹¹⁰ Whitmore, "Cartography in Vietnam," 490–97.

¹¹¹ Niu Junkai, "Maps of the Southern Advance," 87–96.

¹¹² Yee, "Reinterpreting Traditional Chinese Geographical Maps," 67.

¹¹³ The analysis here is based on my own reading of the premodern Vietnamese cartographical sources. John K. Whitmore also discusses some versions of these two maps. See Whitmore, "Cartography in Vietnam," 489–90, 494–96.

1500. The version introduced below was a reproduction that Pham Dinh Ho (1768-1839), a prolific writer and a retired official of the Le dynasty, made in 1783 (See Figure 2.2). The other map will be called the "Hong Duc map" since the map collection to which this map belongs has been called so, that is, the *Hong Duc Atlas*. Since a preface to this collection dates from 1490, the original version of this map was probably also dated to that year. Here, "Hong Duc" was the title of a period in the reign of King Thanh Tong of the Le dynasty, which lasted from 1470 to 1497 (See Figure 2.3).

Before proceeding to the discussion of these two maps, a crucial note about the dating of the An Nam map needs to be emphasized here. I am suggesting that this map might have been based on a version originally produced in the 1410s, that is, during the Ming occupation of northern Vietnam. The main evidence on which I have based my viewpoint is a note left on Pham Dinh Ho's copy of this map (see below). However, it is clear that this map included elements that must have been added or modified in later periods. Examples of these elements include provincial names such as Hai Duong, Kinh Bac, Son Tay, Son Nam. As previously mentioned in the discussion on the anachronisms of the *Treatise on the Land*, these place names likely emerged after 1469. Similarly, details of the royal capital areas in the An Nam map were also dated from the post-1469 period. They include the name of the superior prefecture where the royal capital was located, Phung Thien (奉天) and the names of two districts that belonged to this prefecture, Tho Xuong (壽昌) and Quang Duc (廣德). However, there is a more difficult

¹¹⁴ Based on my reading, other versions of this map do not contain this dating information. Whitmore does not mention the version introduced here, and he believes that the map was a sixteenth-century production. See Whitmore, "Cartography in Vietnam," 482–85.

¹¹⁵ Hong Duc Atlas, A.2499.

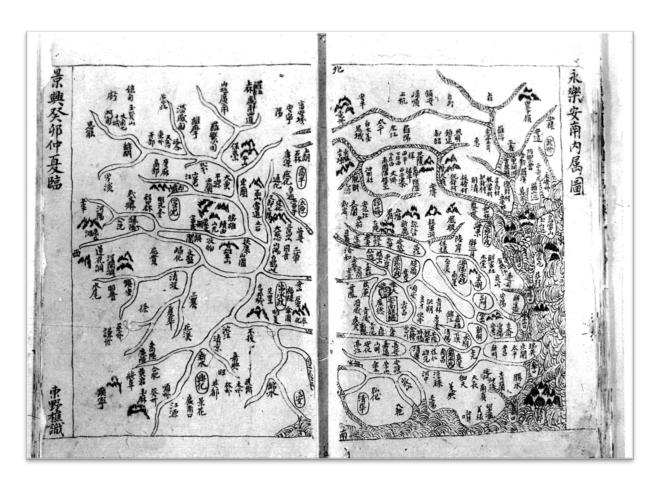


Figure 2.2. The An Nam Map

The line on the right margin of the map reads "The Map of the Dependent Annam under the (Ming) Yongle's era" (永樂安南內屬圖 Vĩnh Lạc An Nam nội thuộc đồ) and the line on the left margin reads "Recopied by Dong Da Tieu (i.e., Pham Dinh Ho's penname) in the Middle Month of Summer (i.e., the seventh lunar month) of the Qui-Mao year in the Canh Hung's era (1783)" (景興癸卯仲夏臨 —東野樵識 Cảnh Hưng Quí Mão Trọng Hạ lâm—Đông Dã Tiều thức). North is the top. Source: Pham Dinh Ho, ed., Can Khon Nhat Lam 乾坤一覽 [Inquiry into Heaven and Earth], A.414, Late 18th Century.

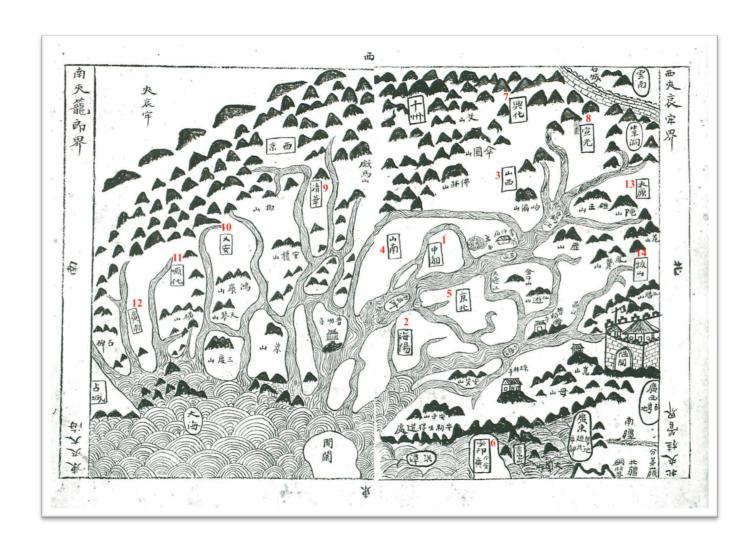


Figure 2.3. The Hong Duc Map

North is on the right. The map presented here comes from a version of the Hong Duc Atlas provided by Ueda Shinya at Osaka University. This version bears a Hiroshima University call number of 98846, and is a copy of other versions archived in Vietnam such as A.2499.

issue for understanding the exact date of this map. There is an extant list of twenty-two prefectures in northern Vietnam that the Ming authorities established in the period from 1407 to 1427. This list clearly does not match the place names found in the An Nam map.

The brevity of information in this map suggests two hypotheses. At one extreme, if Pham Dinh Ho was accurate that the An Nam map was indeed produced during the 1410s, the absence of many names of prefectures established during the Ming occupation suggests that the map had been fundamentally modified. It is possible that all coastlines, lines representing bodies of waters, and symbols representing mountains had been persevered as they were in the original version in the 1410s. However, most of the labels of administrative units were modified in order to reflect contemporary spatial organization. At the other extreme, if information provided by Pham Dinh Ho was inaccurate, this map was likely made in the sixteenth century. I suggest this date because there exists a reproduced version of this map in a text compiled by a Ming official named Li Wenfeng in 1540. The text is entitled the Book of the Mountainous Land of Viet (越嶠書 Yue Oiao Shu/ Việt Kiệu Thư) and most of the references that Li Wenfeng used for his books were apparently those having been archived in China at the time. 117 The map reproduced in this text is more detailed than the version introduced here. Thus, in either way, it is safe to suggest that the An Nam map under examination was made prior to 1540. I speculate that the Annam map has a "Chinese" origin in one way or another. At least, Chinese intellectuals would have been more familiar with this Vietnamese map. This characteristic, as I argue below, makes it different significantly from the Hong Duc map. In the following analysis, I follow the first theory of dating this An Nam map, taking it as one that derived from a map produced in the 1410s.

-

¹¹⁶ See Gaspardone, "An Nam Chi (Nguyen)."

¹¹⁷ Li Wenfeng, Yue Qiao Shu/ Viet Kieu Thu 越嶠書 [Book of the Mountainous Land of Viet], Paris.HM.2154, c.1500s.

When it was made, the An Nam map should have reflected a perception of the land as a part of the Chinese empire. This notion is clearly articulated in its title as "The Map of the Dependent An Nam under the (Ming) Yongle's era" (永樂安南內屬圖 Vīnh Lạc An Nam nội thuộc đồ). Hence, the author of this map should have been a Chinese official or at least a Vietnamese collaborator in the Ming regime in the early fifteenth century. As seen in this map, at the center of the Vietnamese land there was a walled city labeled as "Long Bien of An Nam." Long Bien is the term that Chinese officials from the Han to the Tang used to refer to their administrative center in this region. During the period of the subsequent Ly and Tran dynasties, the Vietnamese capital was labeled Thang Long (modern Hanoi). Hence, the term "Long Bien" here again points to Chinese usage. Meanwhile, it is clear that the author of the Hong Duc map labeled the same location "Trung Do" (中都, lit., "Central Capital"). In other words, the Hong Duc map and the label of Trung Do reflected a spatial perception that dated at least from the reign of King Thanh Tong of the Le dynasty (1460-97).

If An Nam was a concept often associated with the Sino-Vietnamese relationship, it should be noted that at least one reproduction of what we are calling the Hong Duc map is in fact entitled the "An Nam" map (See manuscript A.3034). Moreover, the same title also appears in the above-mentioned list of the main prefectures, which dates back to 1490 (See manuscript A.2499). Scholars have not yet addressed these discrepancies, but my preliminary response to this matter is that the term "An Nam" was put in the particular copy for a specific purpose that

¹¹⁸ Having taken northern Vietnam, the Yongle emperor of the Ming dynasty (r. 1402-24) ordered that this land be renamed as Giao Chi (Jiaozhi or Chiao-chih). In other words, he overrode the presence of the An Nam state, a political entity that had been continuously recognized by Chinese empires since the late eleventh century. It is unclear whether the original version of this map was entitled Giao Chi or An Nam, but An Nam seems to have become a critical term for both Chinese and Vietnamese authorities when the Sino-Vietnamese relationship was mentioned.

¹¹⁹ Tran Quoc Vuong, "Dia Ly Lich Su Mien Ha Noi (Truoc The Ky XI) [A Historical Geography of the Hanoi Region, prior to the Eleventh Century], Part 1," *Nghien Cuu Lich Su* 15 (1960): 48–50.

the copier of the map was pursuing. It is not likely that King Thanh Tong of the Le dynasty would use the term "An Nam" in a map of his kingdom. There is enough evidence that demonstrates the popularity of other names for the Vietnamese kingdom in the late fifteenth century such as Dai Viet (lit., "the Great Viet") or even Thien Nam (lit., "the Heavenly South).

More importantly, two following points support the argument that the An Nam map was a map of a dependent territory of the Chinese empire while the Hong Duc map was a representation of an autonomous land; one is the boundary marker and another is the degree of detail. In the first place, the An Nam map shows no indicators of any "borders" between the Vietnamese land and its neighboring kingdoms. Such indicators, however, were clearly represented in the Hong Duc map. Those indicators include a defensive wall that separated the Vietnamese land from Yunnan province of China to the west and a citadel at the northern pass through which Vietnamese envoys used to set off on their tributary itinerary. In addition, the images of many mountains and a textual note indicate the southwestern area where Vietnam bordered with Ai Lao (i.e., the area supposedly corresponding to parts of modern Laos). Champa is marked as a kingdom to the south of the landscape captured in this Hong Duc map, with the southernmost reach of the Vietnamese realm, Thach Bi (lit., "Stone Stele") mountain, just to its north. Although modern scholars have debated about the precise location of Thach Bi, pretwentieth-century writings often refer to this mountain as a landmark that started to be used in 1471 to demarcate the boundary between the territories of the Vietnamese and the Cham peoples.

In the second place, the Hong Duc map is clearly less detailed than the An Nam map. A preface attached to the Hong Duc map helps explain this issue. According to this preface, the map in question "only features thirteen provinces and some famous mountains and great

rivers."¹²⁰ The mapmakers believed that it was not necessary to include in such a comprehensive map the details of districts and counties because the reader could look for this kind of information in the attached regional maps. In other words, although both the An Nam and Hong Duc maps represented almost the same landscape, the former is more detailed because it attempted to project all of the desired information of the land in one take. By contrast, the latter, and the regional maps attached to it, demonstrate a more hierarchical perspective toward the land. As a comprehensive map, the Hong Duc map presents a macro view of the land through which the authorities could trace the locations of their central capital and other state-level regions.¹²¹

In 1490 the kingdom of the Le dynasty was comprised of thirteen regional units and they were all marked in the Hong Duc map. Except for the absence of Cao Bang (or the "northern borderland" as I have suggested) and the replacement of Nam Gioi (the Southern Borderland) with Quang Nam (a Vietnamese jurisdiction in this region since 1471), thirteen other regions including the central capital presented in the Hong Duc map matched Nguyen Trai's regional descriptions. Moreover, there are other elements featured in this map. They include some places possessing significant political meanings (the Bronze Pillar appeared in the bottom-left corner), some religious and historical places that were likely to have been sanctioned by the state (the Western Capital which served as the place to worship the ancestors of the royal family of the Le dynasty, the temple of Ly Ong Trong—an important hero from antiquity—near the central capital, several Buddhist temples, and even a Daoist center in the famous Yen Tu mountain), and

^{120 &}quot;茲止載十三道及名山大川, 其各府縣州社備在圖籍內, 不必盡述." Hong Duc Atlas, A.2499. See also An Nam Hinh Thang Do 安南形勝圖 [=The Contours of An Nam], A.3034, n.d., 3b.

¹²¹ A reference to the history of Chinese cartography sheds interesting light on this issue. The comprehensive map of the Ming dynasty is similarly less detailed. One therefore can surmise that fifteenth-century Vietnamese mapmaking embraced an up-to-date style in reference to the cartographical fashion of the Ming dynasty.

some natural elements (rivers, mountains, and the sea). ¹²² Interestingly, except for natural elements, these other features did not appear in the An Nam map. Such a discrepancy suggests that the producer of the An Nam map primarily focused on the administrative functions; his map largely aimed at showcasing the multitude of districts and counties in the mapped land. For the mapmaker of the Hong Duc map, political, historic and cultural features were no less important to represent the landscape than the administrative information.

In short, I have suggested that the An Nam map and the Hong Duc map represented two different ways that people in the past spatially conceptualized the Vietnamese landscape. Future research on the details of each map, especially on the toponyms of districts represented in the An Nam map, is crucial to revise our current understanding of the dating issues of these maps. As far as the current analysis is concerned, the discrepancies between the An Nam map and the Hong Duc map at least suggest that starting from the late fifteenth century, Vietnamese authorities would use comprehensive maps to represent their rulership over the land of their kingdom.

Future research is also needed in order to gain some understanding of certain connections between the regional layout as described in Nguyen Trai's text and the counterparts as presented in the Hong Duc map. Based on what have shown so far in this chapter, if Nguyen Trai devoted his regional descriptions to help a young king obtain an overview of the landscape of his kingdom, the Hong Duc map presents a different way to document this landscape. Although Nguyen Trai's account did not explain the underlying reasons for each landmark that he used to identify the fifteen territorial units in his regional layout, many commentaries attached to his text

_

¹²² For the Bronze Pillar, see the above discussion of An Bang. Anachronisms seem to exist in the Hong Duc map. Take, the lable of "Ten Prefectures" (十州 thập châu), for instance. This toponym refers to an administrative sub-unit in Hung Hoa region, An Tay, which became a disputed area between the Ming-Qing governments and the Vietnamese authorities throughout the eighteenth and early nineteenth centuries. The political meaning underneath such a presentation seems to reflect the territorial dispute during that period.

in the *Treatise on the Land* suggest that the selected landmarks often revealed the extent to which the central state, from its base in the royal capital, could exert its power of control over the other regions. With the emergence of such a comprehensive map as the Hong Duc map, Vietnamese rulers were equipped with a different way of manifesting their power of control over the land. The comprehensive map, being drawn on a piece of paper, helped them to see the locations of their central capital and of all other regions in their kingdom in one take. This type of map also enabled topographical features such as rivers, mountains, the sea, and certain historic or religious places to be presented in a manner that embedded them in a comprehensive landscape of the kingdom. Nonetheless, the regional layout having been set by Nguyen Trai in 1435 was apparently transferred with no challenge into the Hong Duc map.

Conclusion

The land that the Le rulers had extended their control over in the fifteenth century witnessed both division and reintegration during the sixteenth and seventeenth centuries. Nevertheless, the spatial organization established in the fifteenth century, as seen in Nguyen Trai's *Treatise on the Land* and in the Hong Duc map remained relatively applicable to the territory of the Le dynasty in the eighteenth century. A quick reference to an early-nineteenth century account can attest to this point. In the early nineteenth century, Phan Huy Chu (1782-1840) accomplished a draft that topically examined the governmental institutions and regulations of the previous dynasties, the *Treatises of the Successive Dynasties* (歷朝憲章類誌 *Lịch Triều Hiến Chương Loại Chí*). ¹²³ Much of his work discussed the administrative system of the Le

¹²³ Phan Huy Chu, *Lich Trieu, Paris.SA.HM.2126*.

dynasty. A section in this work was also entitled the "Treatise on the Land" and the main part of this section was dedicated to examining "the differences of the land and customs of various regions" (諸道風土之別 *chu đạo phong thổ chi biệt*). Here, Phan Huy Chu's examined regions were similar to those described in the fifteenth century with three important differences. First, the royal capital was not mentioned. The reason for this must have had to do with the fact that at the time Phan Huy Chu compiled this work, the royal capital was no longer located in Thang Long (modern Hanoi). After the Nguyen rulers came to power in 1802, the royal capital of the Vietnamese dynasty was moved to Thuan Hoa (modern Hue). Second, Cao Bang was listed as a prefecture under the jurisdiction of Thai Nguyen provincial region. Third, the southern frontier not only included Quang Nam but also some other lands that were newly integrated into the Vietnamese land in the early nineteenth century.

In short, the administrators and the writers in the fifteenth century placed great focus on the royal capital in their mental map of landscape. This capital-centric notion of territory means that regions such as the Four Safeguards were considered very important to the state. While the dynastic rulers in later periods emphasized the critical role that the southern frontier played in territorial expansion, the fifteenth century discourse on regional differences viewed all of the frontiers as remote and difficult to access. The western and northern frontiers were more interconnected to each another, largely due to their shared upland locales. Although being the smallest sphere, the eastern frontier seems quite separate and so was the southern frontier. What might have made the southern frontier different from the others was the perception that the land in the south had yet to be "closed." It was not until 1471 when King Thanh Tong launched a comprehensive attack against Champa that the Le dynasty consequently promoted a clear idea of a landmark for the "border" between Dai Viet and Champa. Such a border landmark was

symbolized in the form of a stone stele allegedly erected by King Thanh Tong, as represented in the Hong Duc map.

If the fifteenth century has been unquestionably considered a turning point in Vietnamese historiography, this chapter has argued that this idea is strongly testified in the way that rulers and writers connected their power and knowledge with the land where they resided. Having addressed the question of how fifteenth-century administrators set up a regional layout to understand their landscape, the next chapter will continue the theme of "land history" by conducting a survey on the utility of different soils.

CHAPTER 3. INVESTIGATION OF SOILS

When the Vice Grand Councilor of King Thai Tong's court, Nguyen Trai, wrote about the Vietnamese land in 1435, he believed that any ruler of the kingdom must have good knowledge of its land. Moreover, this knowledge was not to be merely limited to the geographical locations of the constituent regions of the kingdom. More importantly, understanding land divisions based on other factors such as soil types and local resources would empower the ruler to determine proper taxes and tribute. This chapter continues to take Nguyen Trai's regional descriptions as the core of its analysis. It will focus on accounts concerning the types of soils, the quality of fields and specialty products, that is, the type of information that the central government recorded for taxation purposes. However, it is by no means an economic history or an institutional history of the tax system of premodern Vietnam.

Dedicated to the theme of "land history," the present chapter will show how fifteenth-century Vietnamese rulers and scholars characterized the local resources as well as how they viewed the distribution of critical products in their kingdom. In doing so, they recognized the diversity of local resources in various regions while the land resources captured their greater attention. This is because the Vietnamese people placed great importance on the cultivation of rice, and for that, a sophisticated understanding of different soil types was essential. While the fact that rice cultivation was historically important for the Vietnamese is not in doubt, this chapter will nonetheless attempt to provide historical evidence that documents the importance of a rice monoculture in the Vietnamese past.

Classifying Regional Soils and Ranking the Quality of Fields

The soil accounts examined here come from the same regional accounts that Nguyen Trai produced in 1435. Since Nguyen Trai's text was modeled after the "Tribute of Yu" chapter (see Chapter 2), some of the terminology Nguyen Trai used in his account of regional soils also came from that classic chapter. While historians of China have produced much research on the soil descriptions in the "Tribute of Yu," very little is known about how Nguyen Trai attempted to reproduce this soil knowledge in fifteenth-century Vietnam. To do so, one must examine not only the relevant information in the "Tribute of Yu" but also how people read that ancient chapter in Vietnam in the early fifteenth century. Although both of these challenging tasks cannot be fully solved in this chapter, enough evidence exists to show that Nguyen Trai did not necessarily read the "Tribute of Yu" in tandem with the most influential interpretation of the Confucian Classics in the Ming period, namely, those of the Cheng-Zhu school or Song Neo-Confucianism. 124 Hence, while some of the commentaries and annotations of the "Tribute of Yu" are helpful for understanding Nguyen Trai's soil descriptions, no system of interpretation of the former entirely shaped the way those soil terms were adapted in the latter. Thus, the internal factors of Nguyen Trai's text are of paramount importance in an examination of those fifteenthcentury Vietnamese soil descriptions.

¹²⁴ Although this issue merits further research, the Cheng-Zhu school was clearly not welcome in the Vietnamese court at the turn of the fifteenth century. The fact that Nguyen Trai passed the civil service exam in the reign of the Ho dynasty (1399-1407) suggests that he did not necessarily subscribe to the Cheng-Zhu school. Following the fall of the Ho regime is the period during which the Vietnamese land became a part of the Ming empire (1407-1427). By that time, the Ming court had legitimated the Cheng-Zhu school. It also made this teaching the core of the state curriculum. Specifically, the Ming government sponsored a series of commentaries entitled the *Complete Meaning* (大全 *Daquan/Đại toàn*) in the early 1400s. This massive compilation was essentially a collection of the interpretations of the Confucian Classics produced by scholars of the Cheng-Zhu school. Hence, while it is not clear what specific commentaries Nguyen Trai would have read, one knows that the ideas of the Cheng-Zhu school were officially studied in Vietnam in the first two decades of the fifteenth century.

Table 3.1. Information of Regional Soils & Field Ranks according to the Treatise on the Land (1435)

Regions	Type of Soil		Field Rank	
1. The Capital	黄壤	yellow, mellow	上中	II
2. Hai Duong	白壤	white, mellow	上上 ^(a)	I
3. Son Tay	白壤	white, mellow	上中	II
4. Son Nam	赤埴墳, 青黎	red, sticky, rich & greyish green, light	上下 ^(b)	III
5. Kinh Bac	白壤	white, mellow	上上	I
6. An Bang	黑壤	black, mellow	下下	IX
7. Hung Hoa	赤埴墳	red, sticky, rich	上下	III
8. Tuyen Quang	黑墳	black, rich	下下	IX
9. Thanh Hoa	黑壤 ^(c)	black, mellow	上中	II
10. Nghe An	黑壤 ^(d)	black, mellow	上中	II
11. Thuan Hoa	黑墳	black, rich	中中	V
12. Nam Gioi (Southern Frontiers)	黑墳	black, rich	下下	IX
13. Thai Nguyen	赤埴墳	red, sticky, rich	下下	IX
14. Lang Son	黑墳	black, rich	下下	IX
15. Cao Bang	赤埴墳 ^(e)	red, sticky, rich	下下	IX

Note: *The information in this Table is largely based on the reproduction of a manuscript attached to the translation of Tran Tuan Khai (Nha Van Hoa: Tong Bo Van Hoa Xa Hoi, 1966). (a) A.1900 reads "上下" (Rank III) instead. (b) Information of the field rank of Son Nam varies from one version to another. Three versions (Phuc Khe print version, A.1900 and A.53) read "上上" (Rank I) while another version (A.2251) reads "上中" (Rank II). (c) Three other versions (Phuc Khe, A.1900 and A.53) read "黑墳" (black, rich) instead. (d) Other versions (Phuc Khe and A.53) read "壤" (mellow) instead of "黑壤" (black, mellow). (e) The Tran Tuan Khai version drops the term "埴" (sticky). **For further information of different versions of the *Treatise on the Land*, see Appendix B.

Quite similar to a description of a soil in the "Tribute of Yu," each soil in Nguyen Trai's accounts was characterized by two aspects: soil color and what commentators of the "Tribute of Yu" termed as the "nature" (性 *xing*) of a soil. Here, the concepts of soil color and nature appear to reflect the qualities that one was able to perceive by sight and touch, respectively. As it is said in the "Tribute of Yu," the descriptive colors of soil included white, black, red, yellow and greyish green (or greyish blue), while the nature of soil was defined by properties given names such as the quality of being mellow, rich, clayey (or sticky), miry, thin, and light. Almost all of these terms appear in Nguyen Trai's soil descriptions, as presented in Table 3.1.

In consistence with the capital-centric notion of the territory, the soil qualities in the central capital were taken as a primary point for comparison with their counterparts in other regions. According to Nguyen Trai, only the soil in the central capital had the color yellow, and as discussed below, this information denotes a type of brown soil. If the commentaries of the "Tribute of Yu" claimed that yellow/brown soil provided the best condition for cultivation, 126 Nguyen Trai probably identified this particular color with the soil of the central capital for a slightly different reason.

As for the remaining soil descriptions, there are discrepancies between the soils that existed in the four immediate regions surrounding the central capital or the Four Safeguards (Hai Duong, Son Tay, Son Nam, and Kinh Bac) and those that were in the external regions. Except

¹²⁵ To translate these terms, I follow James Legge's (1815-97) translation. In recent years, free copies of James Legge's English translations of Chinese Classics can be easily found online. In his research on soil science of traditional China, Joseph Needham produces a more technical translation. See Joseph Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Biology and Biological Technology: Botany*, vol. 6, part 1, Science and Civilisation in China (Cambridge; New York: Cambridge University Press, 1986), 83–91.

^{126 &}quot;黄者, 土之正色. 林氏曰: 物得其常性者最貴." [Yellow/Brown is the innate color of soil. Mr. Lin said that everything would achieve its best condition in its innate form.] Cai Shen, *Shu Jizhuan 書集傳* [=Commentaries on The Book of Documents] (The Chinese Text Project site), 2/19a, accessed March 21, 2017, http://ctext.org/library.pl?if=gb&file=5115&page=3.

for Son Nam, wherein two different types of soil were identified, some soils including the black-mellow, black-rich, and red-sticky-rich types were completely absent in the Safeguard regions and were only present in the external regions. Likewise, the mellow soil (埃 rang/nhuỡng) was distributed in some particular regions. The brown mellow soil was only found in the central capital, whereas the whitish mellow soil could be found in three Safeguards (Hai Duong, Son Tay and Kinh Bac) and the black mellow soil in three coastal regions in the eastern and southern frontiers (An Bang, Thanh Hoa and Nghe An). If, as some commentaries of the "Tribute of Yu" indicate, the quality of being mellow is meant to describe any fine sediment, or "a soft soil that did not contain clods," the mellow soil in the Vietnamese case must have referred to the alluvial soil that was present in the Red River Delta. Consequently, one can see that most of the regions associated with the mellow soil in Nguyen Trai's text were situated within the modern geographical boundary of the Red River Delta, with the exception of Son Nam. Outside the Safeguards, the mellow soil in An Bang, Thanh Hoa and Nghe An should have been associated with the sediments of local rivers and/or of the coast.

Moreover, as Nguyen Trai's descriptions show, any region that did not have mellow soil tended to be identified as one possessing rich soil (墳 fen/phần). The terminology of rich soil presents some difficulties in interpretation. Traditional commentaries of the "Tribute of Yu" address two different interpretations for this type of soil. The fen/phần soil could be considered as a type of fertile soil or a soil that occurred in a place where "the vein of the land would rise up" (脈墳起 mai fen qi/ mach phần khởi), namely, hilly areas. 128

.

^{127 &}quot;漢孔氏曰: 無塊曰壤. 顏氏曰: 柔土曰壤." Gu Jiegang and Liu Qiyu, Shangshu Jiaoshi Yilun 尚書校釋譯論 [Textual Annotation and Criticism of the Book of Documents] (Beijing: Zhonghua shuju, 2005), 535–36.

¹²⁸ Gu Jiegang and Liu Qiyu, *Shangshu Jiaoshi Yilun*, 558–59.

Table 3.2. Types of Soil Reported in the Treatise on the Land

Type of Soil	Region	Location
yellow/brown-mellow 黄壤	Central Capital	
white-mellow 白壤	Hai Duong, Kinh Bac, Son Tay	immediate regions (or Safeguards)
black-mellow 黑壤	An Bang, Thanh Hoa, Nghe An	external regions (easternmost & southern)
black-rich (non-sticky) 黑墳	Tuyen Quang, Lang Son, Thuan Hoa, Nam Gioi	external regions (westernmost, northernmost & southernmost)
red-sticky-rich 赤埴墳	Hung Hoa, Thai Nguyen, Cao Bang	external regions (western & northern)
red-sticky-rich & gray-green light 青黎	Son Nam	immediate region (southern Safeguard)

Like the compiler of the "Tribute of Yu," Nguyen Trai also distinguished the types of fen-rich soil that contained, or lacked, an abundance of clay. Sticky-rich soils (墳墳 zhi fen/ thực phần) existed in several external regions west of and north of the central capital (Hung Hoa, Thai Nguyen and Cao Bang). With the soils in Tuyen Quang and Lang Son, regions in the northern and western frontiers being identified with the normal rich soil, we have a picture in that rich soil, regardless of whether it was sticky or not, was present in all the mountainous regions in the northern and western frontiers. The same non-sticky rich soil was also assigned to the two southernmost regions, Thuan Hoa and Nam Gioi (i.e., the Southern Frontier, supposedly Quang Nam). As shown below, these rich soils were all associated with the color black, indicating a high content of humus in the soil. In modern pedology, soil scientists often take this feature as an indicator of the soil present in forested areas. If this assumption is applicable to explain the soils in Tuyen Quang and Lang Son, regions in the northern and western frontiers, the identification of the rich soil in Thuan Hoa and Nam Gioi suggests that these areas might have been also heavily forested in the fifteenth century.

Making sense of the soil account in the *Treatise on the Land* is a thorny issue just as it has been with the case of the "Tribute of Yu."¹²⁹ While the representation of colors can vary from one culture to another, both the "Tribute of Yu" and Nguyen Trai's text use only the five basic colors in the traditional Chinese color system. According to this system, the term for the color yellow (黄 *huang*) can represent close hues such as brown or tawny. Likewise, the term for the color white (白 *bai*) can imply a pale shade while the term for the color black (黑 *hei*) can mean a dark shade. ¹³⁰

In his research on the soil colors of the "Tribute of Yu," Joseph Needham pays attention not only to the soil color of each region but also to the contrasts between them. He suggests that the yellow mellow soil could be taken as a generic name for the loess along the ancient course of the Yellow River in China. Following this line of thought, the light color of the same loess, which held high contents of carbonate and saline, accounted for the description of the white-mellow soil. Since the "Tribute of Yu" described two different types of white soil (i.e., white mellow soil and white rich soil), Needham adds that a description of a white soil could also represent the condition of a soil that had been cultivated for a long time. By contrast, the description of a black rich soil reflects a high content of dark humus in the topsoil that must have been the result of the presence of thick forest in the corresponding area. ¹³¹

Three decades ago, the noted historian of science Joseph Needham carefully examined the literature on soil terminology in ancient China. The majority of soil scientists and historians of science, including Needham himself, have meticulously sought for one or another way to syncretize the ancient soil descriptions with modern soil maps. Undoubtedly, a prerequisite to this approach is accessibility to abundant data of modern soil conditions in China. But even when such data is available, there is not a direct way to establish a genealogy between premodern descriptions of regional soils and modern soil data. Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Botany*, 6, part 1:56–103.

¹³⁰ I would like to thank Professor David McCraw at the University of Hawai'i at Mānoa for his classroom insights that helped me to better understand the color system in traditional China.

¹³¹ Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Botany*, 6, part 1:95–96.

Although the alluvial soil of the Red River by no means has a similar color to the loess or the predominant sediments in the Yellow River, Nguyen Trai used the same yellow color to describe it. If one applies Needham's reasoning in the case of fifteenth-century Vietnam, the yellow soil should have been a generic name for the bright brown alluvial soil in the Red River Delta. While the notion that a certain degree of salinity occurring in soil does not seem to apply for all regions that the white soil was present, the explanation that the soil might have been under cultivation for a long time is plausible. As Nguyen Trai attributed the whitish or paler color to the soils in three Safeguard regions—Hai Duong, Son Tay, Kinh Bac, he largely viewed the alluvial soil of these regions as having been used intensively for agricultural purposes. As such, the idea of "white soil" or "soil in pale color" refers here to a type of soil in which many of the nutrients in the soil were reduced. Following the same line of argument, the black or dark soil should have been associated with the areas where the land had not been heavily cultivated. That is to say, as Needham suggests in the Chinese cases, either the land remained forested or the forest had only been cleared recently for cultivation. ¹³² One might think of the soils in Tuyen Quang, Lang Son, Thuan Hoa, and Nam Gioi as examples of the former interpretation while An Bang, Thanh Hoa, and Nghe An as examples of the latter.

The soils in Son Nam were unique because of the existence of both the red-sticky-rich soil and the greyish/green-light soil. The existence of these two types of soil in this region was likely related to topographical features; the former referred to the type of sticky and rich soil found in hilly areas while the latter indicated the soil in the floodplains. Needham and other soil scientists generally view red soil as terra rossa, or a type of soil that often develops on

¹³² Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Botany*, 6, part 1:96.

limestone. 133 In fact, Son Nam shared this soil with other mountainous provinces in the north (Thai Nguyen, Cao Bang) and the west (Hung Hoa). Beside terra rossa, the distribution of the red soil in these areas of Vietnam can also suggest a reference to the predominance of ferrasols or the brownish-red soil (đất đỏ vàng) in the Vietnamese taxonomy. 134 Like in the case of the "Tribute of Yu," the description of the second type of soil in Son Nam similarly leads to several different interpretations. According to some commentators of the "Tribute of Yu," the first word in this soil nomenclature, li/lê (黎), referred to a light-textured soil. A commentator explained this word as "being a little loose." 135 In other words, this soil type was characterized not only with a grayish-green color but also with a light texture. Another interpretation of this soil nomenclature held that both words in this term meant the color "grayish-green" and that therefore, the term qingli/thanh lê (青黎) simply referred to the grayish green color of a soil. In any case, the grayish-green color of the Son Nam soil seems to match the gleyic alluvial in modern taxonomies, that is, a type of wet soil often saturated with water for a long period of time.

Like the *Tribute of the Yu*, Nguyen Trai's text described regional differences not only in terms of soil but also in terms of the cultivated fields ($\boxplus tian/di\hat{e}n$) in each region. The compilers of both texts attempted to rate their qualities. As the author of the "Tribute of Yu" divided his land into nine domains, the quality of fields in each of these domains was ranked from first to last by using a nine-rank system. This ranking system consisted three large groups including the Upper ($\pm shang/thuong$), Middle ($\pm zhong/trung$) and Lower ($\mp xia/ha$) categories. Each category was then divided into three smaller groups to form nine ranks. For instance, there were

¹³³ Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Botany*, 6, part 1:97.

¹³⁴ Vu Tu Lap, Vietnam: Geographical Data (Hanoi: Foreign Languages PubHouse, 1979), 98.

^{135 &}quot;馬融曰: 黎, 小疏也." Gu Jiegang and Liu Oiyu, Shangshu Jiaoshi Yilun, 724.

the Upper-Upper, Upper-Middle and Upper-Lower ranks in the Upper category, and three such ranks in the Middle and Lower categories, respectively. Thus, no two regions contained fields of the same rank.

Yet, Nguyen Trai did not fully apply the model in the "Tribute of Yu," nor did he immerse himself in the debates of various commentaries on that ancient Chinese text. For instance, the nine-rank system was used differently in Nguyen Trai's work. As Table 3.1 shows, Nguyen Trai took the nine-class ranking as a continuum to rank the regional fields in his land. Hence, one finds that the fields of several regions mentioned in Nguyen Trai's text shared the same rank because they were assessed as being the same. Moreover, some commentators of the "Tribute of Yu" attempted to examine the relationship between the soil type and the field rank. They believed that the high quality of the cultivated field might be reflected in the color of the regional soil. This is how they explained why the regional field in the region of Yong (強州 *Yongzhou*), where the yellow soil predominated, was ranked first among the fields of the nine ancient regions. ¹³⁶ As mentioned earlier, many commentators believed that yellow was the authentic color of soil, and that therefore the field cultivated on such a soil must be the best.

This concern does not seem to have had much influence on Nguyen Trai's narrative. Although the central capital of the Le kingdom was the only area where Nguyen Trai identified yellow/brown soil, the fields in this area were not ranked first but second. This point suggests that the soil color in Nguyen Trai's narrative was not necessarily assigned in correspondence with the quality of the fields, as was the case in the "Tribute of Yu." What factors defined the variance in the value of the fields in different regions? Modern agronomists argue that variance in fields can be due to aspects such as the types of soil, the types of crops, the climate conditions,

^{136 &}quot;雍州之土黄壤, 故其田非他州所及." Cai Shen, Shu Jizhuan, 2/19a.

irrigation and other aspects of farming technology. In the case of premodern Vietnam, the ranking discrepancies of the regional fields seem to be based on a different factor.

To understand this, it is worth paying attention to a contrast between the values of the fields in the central capital and the Safeguard regions with those in the external regions. This discrepancy resonates with the capital-centric perspective of landscape (see Chapter 2) as well as the aforementioned distribution of regional soils. In particular, the cultivated fields of almost all of the furthermost regions were similarly ranked at the last of the nine classes. These areas included the easternmost region (An Bang), the westernmost region (Tuyen Quang), the southernmost region (Nam Gioi), and all three external regions of the north (Thai Nguyen, Lang Son and Cao Bang). By contrast, the fields of the best value were located in two of the Four Safeguards, Hai Duong and Kinh Bac. The other two Safeguards and the capital were reported to have fields that were nonetheless at the Upper ranks.

Hence, it can be argued that the ranks of the regional fields reflected the degree to which they were important to the central capital. There was a similar discrepancy between the field ranks of external regions such as Hung Hoa in the west, Thanh Hoa, Nghe An and even Thuan Hoa in the south and the rest of the external regions. The case of Hung Hoa can be explained by a conjecture that it was a strategic frontier in the west with its location on the upper reaches of the Red River network, the main inland waterway of the Le kingdom. As for the southern frontier, the fields of both Thanh Hoa and Nghe An were ranked second and those of Thuan Hoa fifth. These rankings indicate that the fields in the southern frontier were generally considered more valuable than those in the northern frontier. Such a north-south divergence poses an interesting question concerning the important connection between the central capital and many regions in the southern frontier. This connection is likely related to the fact that Thanh Hoa and

Nghe An were once the active areas of Le Loi's (later King Thai To) troops during their resistance to the Ming authorities prior to 1427. Further, Thanh Hoa was the homeland of the Le royal family. Although the Le rulers resided in their capital in Thang Long (modern Hanoi), they frequently visited their homeland. Routes that connected the capital to Thanh Hoa must have been significantly improved in the early period of the Le dynasty.

Identifying Local products

In addition to regional soils and fields, the fifteenth-century government would have utilized the land it controlled by collecting specific products that each region produced. In Nguyen Trai's text, the specialty products in the kingdom of the Le dynasty were regionally located and listed in each of the regional descriptions. Moreover, the location associated with the reported products was at times specified as a county, a village, or even a non-administrative unit such as a local riverbank or a regional mountain. This feature seems to reflect a perspective of the land at the time when the administrative organization had not yet fully developed at the local level as it later did in the late fifteenth century.

Support for this perception is the fact that some commentaries on Nguyen Trai's text frequently put notes to pinpoint the administrative units to which a certain village or a natural landmark belonged. For instance, the record of the western Safeguard of Son Tay contains a report about a species of fish that modern scientists have named the *Semilabeo notabilis*. ¹³⁷ In the

85

_

¹³⁷ V. Huckstorf, "Semilabeo Notabilis," *The IUCN Red List of Threatened Species*, 2012, http://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T166903A1150009.en.

text, the fish is known as the "parrot fish" (鸚鵡魚 anh vũ ngu/yingyu yu)¹³⁸, which has a Vietnamese equivalent as $c\acute{a}$ $anh v\~{u}$ with only the replacement of the Vietnamese word for fish, $c\acute{a}$, for the Sinitic word ngu/yu (魚). ¹³⁹ While Nguyen Trai identified this fish as a specialty of the Hat River (喝江 $H\acute{a}t$ giang), a commentary on his text added that this river belonged to Phuc Loc county. Since the Hat River flowed across several counties, this type of fish should have been found in different counties along the banks of the river. However, it seems that this fish gradually became a rarity, and as noted by this commentator, the central state accordingly appointed a specific local authority with the duty to provide this kind of fish. While legends and the writings of this type of fish are rich enough to form a separate discussion, a noticeable fact is that the fish was deemed precious not only because of its unique taste but also because of its scarcity. For that reason, in later periods these fish were in demand as an offering in state ceremonies. ¹⁴⁰

Although Nguyen Trai's records of local products emphasized what the central court demanded, it is relatively safe to believe that the endorsement by the government would have been critical for certain products to thrive. Evidence from the record of the northern Safeguard, Kinh Bac, illustrates such an interaction between local choices and the central court's

¹³⁸ All terms of products discussed here will be given in both Sinitic-Vietnamese (placed first) and *pinyin*.

¹³⁹ It is suggested that this fish is found mostly in the freshwater in southern China and northern Vietnam. In modern taxonomy, this species belongs to an order different from the species having obtained an English name as the "parrotfish." Yet, the relevant sources written by both Vietnamese and Chinese writers reveal that this fish obtained its name in the same way that the parrotfish got its namesake; that is, it has a curved mouth comparable to a parrot's beak.

¹⁴⁰ Nguyen Trai, "Treatise on the Land," 52 (Han).

interests.¹⁴¹ According to the brief record of local products in Kinh Bac, "there are various goods in Bat Trang village, blackened cloth in Hue Cau village, sugarcane in Huu Lung county, and crossbows, arrows and colored limestone in Yen The county."¹⁴²

Up until the present, Bat Trang village (modern Bac Ninh province) has been famous for ceramics and a commentary on this passage in fact supports the significance of this traditional craft. Thus, although the text mentioned "various goods" in Bat Trang village, the inference might have been about ceramic products. The term for "blackened cloth" (黑布 hắc bố/ hei bu) in Hue Cau village is a reference to the craft of cloth dyeing, a local industry that only started to vanish about a half century ago. Local gazetteers of Bac Ninh province (i.e., Kinh Bac region) in the nineteenth century all report that cloth blackening was a traditional craft in Hue Cau village. He general technique of this craft was to dye the fabric first with indigo plant material, then with dyeing material prepared from the Dioscorea cirrhosa Lour plant (禹餘粮 vũ dư lương/ yu yu liang, a.k.a. củ nâu in vernacular Vietnamese), a tuber used also as a famine food in Vietnam. Some modern descriptions of this craft have claimed that the technique of cloth blackening in Hue Cau village is unique because of the use of mud in the dyeing process, which improves the endurance of the cloth. Although other villages also learned to make

¹⁴¹ Compared to other regions of the kingdom, Kinh Bac had the fewest products listed in the central court's list. The record of this region also differs from those of other regions because no product was described as a predominant item for the entire region.

¹⁴² "缽場什噐, 華梂黑布, 右隴甘蔗, 安世弩矢及色條石灰." Nguyen Trai, "Treatise on the Land," 62 (Han).

¹⁴³ Hue Cau was renamed as Xuan Cau in 1831. This village is believed to have been located where modern Nghia Tru canton (Van Giang county, Hung Yen province) is today.

¹⁴⁴ See, for instance, Bac Ninh Tinh Dia Du 北寧省地輿 [Local Gazetteer of Bac Ninh Province], A.590, Early 19th Century. "華梂社染作黑布."

¹⁴⁵ Le Quy Don, Van Dai Loai Ngu 芸臺類語 [The Catalogued Discourses of the Library], A.1258, 1773, 9/24b. "南國俗以布染蓝靛, 次染禹餘粮, 加膠少許, 杵搗曬乾, 謂之青葛衣."

blackened cloth, as seen in the late eighteenth century, the central court continued to recognize blackened cloth in Hue Cau and listed it as a regular tribute product. 146

In fact, the fifteenth-century central court kept a record of the products of Bat Trang and Hue Cau villages precisely because it needed these items for a specific purpose. According to a commentary on Nguyen Trai's record, when the central court had to pay tribute to the Chinese emperor, Bat Trang was responsible for contributing 70 porcelain bowls and Hue Cau 200 rolls of blackened cloth. The same commentary explained a similar reason for the making of the crossbows and arrows in Yen The county. It is because the government needed these products to defend against the enemy from the North (i.e., the Chinese) and the key feature of these weapons was the drug used to make poisonous arrowheads. 147

Overall, the Safeguard regions were often credited with more manufactured products whereas rarities like exotic plants and animals, and precious minerals tended to be associated with the frontier regions. As reported in Nguyen Trai's text, fiber crops and various types of fabric were largely concentrated in the four Safeguard regions. Fine hemp cloth (締布 hi bó/chi bu) was a widespread product in the southern Safeguard of Son Nam and people in some counties in the eastern Safeguard of Hai Duong were also keen on making this type of fabric. The western Safeguard of Son Tay was identified as having land that was particularly suited to grow mulberry trees, the leaves of which were fed to silkworms. The dominance of silk and hemp cloth in those internal regions meant that mulberry trees and hemp were critical textile fibers. While Son Tay tended to specialize in producing raw silk (生絹 sinh quyện/sheng

¹⁴⁶ Phan Huy Chu, *Lich Trieu*, *Paris.SA.HM.2126*, 16/105b.

¹⁴⁷ Nguyen Trai, "Treatise on the Land," 62 (Han).

¹⁴⁸ More research needs to be done on the use of cotton (綿 *miên*) in Vietnam.

juan), several counties in Son Nam were noted for weaving various types of silk such as fine thin silk (綺羅 ỷ la/ qi luo) and less delicate silk (絁帛 thi bạch/ shi bo). And as mentioned earlier, there were places in Kinh Bac where people depended on the craft of cloth dyeing. This is not to say that no fiber products were identified in the frontiers. But the small number of references to them in the records of the external regions suggests that the central court rather depended on the internal regions for the provision of cloth.

Although forestry might not be conceptualized as a field of the economy in fifteenth-century Vietnam, the exploitation of the forests was visible in the list of related products. This demonstrates that the central court at that time had also interests in the forests. Moreover, the first targeted forests to be exploited were those in the Safeguards. The product list of the eastern Safeguard of Hai Duong demonstrates that the central court depended on this region for a supply of timber. Important building materials like pine and cypress wood (松柏 tùng bách/songbo) were identified in this region. The products listed in the record of the western Safeguard of Son Tay similarly attest to the state's interests in forestry. A county in this region was known for its craft of extracting the sap of a wax tree, which is believed to be the *Rhus succedanea* L. in modern taxonomy. This sap is an important raw material in the lacquering of wooden manufactured products.

By contrast, although the frontiers in the north and west remained well forested by the fifteenth century, the forest products that were extracted from these regions were not timber but some rarities. For example, as a western frontier, Hung Hoa was reported to have had many big trees, but the noted forest products were instead spices (香料 *huong liệu/xiangliao*), honey (蜂

The Sinitic term for the lacquer tree in the text, 漆 $(t\acute{a}t)$, does not specify the type of the plant. Yet, a species traditionally used in Vietnam, bearing a name of "our lacquer tree" $(c\^{a}y \ son \ ta)$ is well known in this area.

蜜 phong mật/fengmi), and medicinal materials such as pilose antler (茸 nhung /rong), cinnamon bark (桂 qué/gui), and the sa nhân plant (砂仁 sa nhân/sharen, i.e., the Amomum hirsutum L.). 150 Apparently, the notion that medicinal products were specialties of external regions is an echo of the perception that the frontiers were full of chimeras (see Chapter 2). A type of plant called "submarine fish" (沉魚 trầm ngu/chenyu) in the eastern frontier of An Bang further illustrates this point. According to a commentary on Nguyen Trai's text, the name of this plant originated from the fact that this type of plant often grew in salty water, where various types of fish would pat their tails on those plants. Most importantly, the plant was deemed a rarity because local people believed that consuming the plant's stem could prevent them from experiencing the effects of miasmas. 151

There were several types of rare birds and fish in the Safeguard regions such as the aforementioned "parrot fish." But a larger number of terrestrial animals that were deemed valuable to the central court came from the external regions. In the southern frontiers, the rawhides (皮 bi/pi) of tigers (虎 ho/hu), panthers (豹 bao/bao), rhinoceros (犀 te/xi) and elephants (象 turong/xiang) were found in Thanh Hoa while teeth and hides of wild animals (齒 xi cach/chi ge) were provided by Nghe An. Further in the deep south, Thuan Hoa and Nam Gioi were the lands of exotic animals such as golden pheasants (黃雉 hoàng trī/huang zhi), a type of big fish bearing a name of "water lion" (水獅 thuy su/shui shi), and red sparrows (赤燕

¹⁵⁰ Pham Than Duat provided a description of the sa nhân plant in his book entitled Hung Hoa Ky Luoc. Pham Than Duat, "Hung Hoa Ky Luoc 興化記略 [Brief Record of Hung Hoa]," in Pham That Duat Toan Tap [The Comprehensive Anthology of Nguyen Trai], ed. Pham Dinh Nhan, trans. Ngo The Long (Hanoi: Van Hoa Thong Tin, 2000), 653.

¹⁵¹ "沉魚, 水(木)名, 生於鹹涯, 群魚皆以尾掉, 土人取服可消嵐瘴." Nguyen Trai, "Treatise on the Land," 66–67 (Han).

xích yến/chi yan). In the northern frontiers, Thai Nguyen was reported to have big pythons (蚺蛇 nhiêm xà/ranshe) and white gibbons (白猿 bạch viên/baiyuan) while Cao Bang provided rare rhinoceroses (特犀 đặc tê/te xi) and strong horses (良馬 lương mã/liang ma).

The distribution of mineral resources and some commercial crops does not present the same clear pattern of a contrast between the internal and external regions. According to Nguyen Trai, people in the coastal areas in Son Nam produced salt and so did people in some areas on the coast of Nghe An. Although humans were known to extract salt from many other sources such as lakes, underground water, soil and rocks, sea salt was the main type that Vietnamese depended on for centuries. As a result, Vietnamese historical records persistently emphasize the lack of salt in the mountainous areas. Tax policies from the early periods put a stress on the state control of both the production and the sale of salt. A tax regulation in 1013 underscored that salt ($\frac{1}{2} \frac{diem}{yan}$) and salted products ($\frac{1}{2} \frac{diem}{xian}$) must be inspected at border gates, salt fields and any inspection spots. 152

Having said that, the abundance of precious minerals compensated for the lack of salt in the mountainous regions such as Thai Nguyen, Lang Son, Cao Bang, Hung Hoa, and Tuyen Quang. Although little information is available to clearly map out the mining activities in Vietnam prior to the 1750s, 153 the meager relevant information reveals an interesting change in

¹⁵² I translate "監" as the salt fields. Some dictionaries like the *Hanyu Dacidian* suggest that all state-owned fields like those of metallurgy, of horse breeding, and of salt producing were called *jian* (監) from the Song dynasty (960-1279) onwards.

¹⁵³ Apparently, there is not yet a full study of this issue. According to Vu Duong Luan, the mining boom in the late eighteenth century was a result of the large-scale mining activities in Yunnan (China) and of the withdrawal of the East Asia trading companies from Vietnam. This probably explains why more extant records concern the mining activities in the late eighteenth and nineteenth centuries in Vietnam. See Vu Duong Luan, "The Politics of Frontier Mining: Local Chieftains, Chinese Miners, and Upland Society in the Nông Văn Vân Uprising in the Sino-Vietnamese Border Area, 1833–1835," *Cross-Currents: East Asian History and Culture Review* 11 (June 2014), https://cross-currents.berkeley.edu/e-journal/issue-11/vu.

the perception of how people should tap mineral resources. Evidence from the dynastic chronicles indicates that from the eleventh century onward the central court was capable of accumulating a large amount of silver, gold and bronze. The kings of both the Ly and Tran dynasties who ruled northern Vietnam from the eleventh to the fourteenth centuries periodically ordered the casting of large Buddhist statues and bells. ¹⁵⁴ It is reported that these metals largely came from the state reserves. In addition, copper, or more exactly, alloys of copper were primarily used in coinage. ¹⁵⁵ From an environmental perspective, this suggests that the government did not seem to lack access to mineral resources like copper and other similar coinage metals.

The Relationship between Commercial Crops and Food Crops

While Nguyen Trai's regional descriptions included information about a diverse range of products, no food crops were mentioned. When agricultural items were mentioned, they included various crops that can be classified as commercial crops such as sugarcane, tea, pepper, medicinal plants, oil, wax, and various fiber crops. The absence of food crops in those regional accounts has some implications for our understanding of Nguyen Trai's accounts of local products. First, these accounts did not aim to report all products that local farmers produced. They instead included only those products that were taxed or collected as tribute by the central government. Second, the references to the commercial crops in Nguyen Trai's text appear to

¹⁵⁴ See the *Complete Book* for the records of the years such as 1033, 1035, 1041, 1057, 1080, and 1256.

¹⁵⁵ Information in the dynastic chronicles does not indicate the exact material that the central court used to cast coins. Nevertheless, since dynastic historians tended to identify gold, silver, coins and silk cloth (金銀錢帛 kim ngân tiền bạch) as four different currency-like items of exchange, it can be deduced that the main metal for coinage was either bronze or some other alloys of copper.

have been associated with the information about the regional soils. As will be shown below, whereas crop types were not a criterion for classifying regional soils, there existed a notion that certain types of lands were suited to certain crops. Third, while enough evidence attests to the fact that by fifteenth century Vietnamese people took the rice crop as their main food crop, the absence of food crops in Nguyen Trai's lists of local products suggests us to revisit what Nguyen Trai was referring to in his accounts of the regional fields. It is highly plausible that when Nguyen Trai mentioned the regional fields, he largely meant rice fields. Before addressing the issue of rice fields, a brief analysis of some main commercial crops mentioned in Nguyen Trai's text. The purpose of this analysis is mainly to call in our attention to certain commercial crops that the fifteenth-century Le dynasty government deemed valuable.

Tea was arguably not a common beverage in fifteenth-century Vietnam. Nguyen Trai's Treatise on the Land only named two counties that were noted for producing tea. Tam Nong county in the western Safeguard of Son Tay was famous for its making of a type of tea called "cat-ear" (貓耳 miêu nhī/mao'er) while Sa Boi county in the southern frontier of Thuan Hoa made "sparrow-tongue" tea (雀舌 tước thiệt / queshe). 156 Both of these products either ceased to be produced at some point, or came to be referred to by other names, as there are no further traces of them in historical sources. For instance, according to an eighteenth-century account of the local products that Sa Boi county was required to provide as tribute to the central court, there was no mention of tea as a unique product in this area. 157 The absence of information in the records regarding tea likely suggests that the use of this beverage was not widespread. Therefore,

¹⁵⁶ Sparrow-tongue tea is a famous type of Chinese tea. The name of the tea does not really refer to a precise type of tea plant but the shape of the buds selected in a particular way to prepare the tea. The tea in Sa Boi probably had no relation to this Chinese tea.

¹⁵⁷ See this list of local products in Le Quy Don, *Phu Bien Tap Luc 撫邊雜錄 [Miscellaneous Records on the Pacified Borderland]*, Paris.SA.HM.2108, 1776, 4/2b-4b.

it perhaps makes more sense to think that the majority of commoners turned to betel quid and some sorts of smokes (as discussed below), even though this would not take the place of liquid.

Betel Palm was important to Vietnamese, as it was to many other peoples in Southeast Asia. According to Nguyen Trai's text, the betel palm was easily grown in Thanh Hoa, Nghe An and a part of Hai Duong. A commentary adds that none of the areca nuts produced in other areas were comparable to those from Dong Lai county in Hai Duong. The general practice of preparing a betel quid requires three key ingredients including areca nut, betel leaf, and lime. In Vietnamese historical sources, the areca nut or the seed of the areca catechu tree, also known as the "betel palm," was recorded more often than the betel leaf (from the *Piper betle* vine) and lime. While this aspect indicates that the central court's higher demand was for the areca nut, the demand for this type of seed must have been a result of the fact that it could be more easily preserved than the betel leaf. Research on the areca nut trade in premodern times also suggests that people would also consume dry areca nuts and that this practice lent impetus for this type of seed to become a commodity for export. ¹⁵⁸ In addition, the fact that it takes a much longer time for the areca catechu tree to begin to bear its first fruit (7-8 years) means that there is a conceivable reason for the plant to become a cash crop. By contrast, the easy frequency with which the betel vine sprouts new shoots suggests that this plant could have been readily grown in home gardens. By the fifteenth century, betel chewing was prevalent in Vietnamese daily life. Significantly, in 1473 King Thanh Tong of the Le dynasty passed a ban to prevent the spitting of the betel-quid juice in court meetings, indicating the popularity of betel chewing in Vietnam at

٠

area had been common since the Tang period. Anthony Reid, "From Betel-Chewing to Tobacco-Smoking in Indonesia," *The Journal of Asian Studies* 44, no. 3 (May 1985): 530. Li Tana shows that dry areca nuts were traded extensively between the central provinces of the Red River Delta and its outer provinces in the early nineteenth century. Li Tana, "Between Mountains and the Sea: Trades in Early Nineteenth-Century Northern Vietnam," *Journal of Vietnamese Studies* 7, no. 2 (2012): 70.

that time. 159 It is thus not surprising to find reports of the betel palm tree in the *Treatise on the Land* in 1435.

Medicinal Plants were also valued non-food crops. In Nguyen Trai's text, there was a reference to a type of product called the "fire drug" (火藥 hoā dược/ huo yao). The text reported that Hai Duong and two counties in Son Nam, Nam Chan and Chan Dinh, produced it. All of these regions were located near the coast. There are two possibilities to explain this record. One explanation is that "fire drug" means tobacco, and it seems conceivable that tobacco could have been present in those coastal areas due to the introduction of tobacco into Vietnam via the maritime trade. If so, this piece of information must have been added into Nguyen Trai's text in later periods as the text in question was written in 1435, before tobacco was introduced into Vietnam. Without recognizing this historical inaccuracy, a nineteenth-century source in fact contended that Nguyen Trai's reference to a fire drug meant the "smoke herb" (煙草 yên thảo/yancao), that is, a type of tobacco. 160 Another explanation is that the fire drug mentioned here

¹⁵⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, 13/3b.

¹⁶⁰ The nineteenth-century Comprehensive Gazetteer of Dai Nam claims that by "fire drug," Nguyen Trai would have mentioned the tobacco plant. This claim must have been made because the same term was used to refer to tobacco in a state ban on tobacco in 1665. The official record of this ban is lost but its fragments (or at least its summary) can be found in two eighteenth-century sources. The authors of both documents seem to independently read the official ban and come up with their discussions on tobacco separately. One document, the Mixed Record of a Mountain Hermit, cites the ban in 1665 to point out that people from the Ailao kingdom (i.e., Laos) had introduced tobacco into Vietnam in a canh ty year, supposedly 1660. The second document, the Catalogued Discourses in the Library, recorded the same event but confirmed its occurrence in 1660. If the Mixed Record accurately cited the official ban in 1665, literate people would have abided by the words in that document to believe that tobacco absolutely did not exist in the Vietnamese kingdom before 1660. However, this date contradicts the record of the "Lao drugs" in de Rhodes's Dictionarium, which predates it by almost a decade. In other words, the reference to the ban in 1665 should have implied an incident in which the state was officially heard about tobacco. The fact that the ban in 1665 referred to tobacco as a general name, the "fire drug," also suggests that the contemporary government did not have much knowledge of one of the most important commodities in the seventeenth-century global market. The Historiography Insitute of the Nguyen Dynasty, Dai Nam Nhat Thong Chi, A.69, Nam Dinh, "Tho San"; Dan Son (penname), Son Cu Tap Thuat 山居雜述 [Mixed Record of a Mountain Hermit], A.822, Late 18th and Early 19th Centuries, 37b-38a; Le Quy Don, Van Dai Loai Ngu, A.1258, 9/27b-28a; Alexandre de Rhodes, Tu Dien Annam-Lusitan-Latinh: Thuong Goi Tu Dien Viet-Bo-La [Dictionarium Annamiticum Lusitanum et Latinum, org. pub. 1651], trans. Thanh Lang, Hoang Xuan Viet, and Do Quang Chinh (Ho Chi Minh City: Khoa Hoc Xa Hoi, 1991), 226.

probably referred to a group of medicinal plants, which contemporary people might have associated with the effect of the heat or of the smoke, regardless of how the plant was consumed. This sense seems to be in line with how Nguyen Trai identified the presence of "mountain drugs" (山藥 son dược/shan yao) in Lang Son and "paper drugs" (紙藥 chỉ dược/zhi yao) in Thuan Hoa. 161

Black pepper (胡椒 hồ tiêu/ hujiao) or the Piper nigrum plant was mentioned in the Treatise on the Land as a species present in two southern frontier regions, Nghe An and Thuan Hoa. While the black pepper plant associated with Nghe An was a normal species, the record of Thuan Hoa seems to refer to a particular type of black pepper. A quick look at different redactions of the text shows that different characters were used to record the item in question. This indicates a certain degree of confusion that the copiers of the Treatise on the Land had in reading the earlier versions of the text. The copiers of the text managed to decide the correct term for the pepper plant, whether be it "pepper [of] western-barbarians" (椒菜 tiêu nhung/ jiao rong) or "pepper and fine cloth" (椒絨 tiêu nhung/ jiao rong). Both of these terms are difficult to decipher, but information from a Chinese source can provide support for the former interpretation. The New Edition of the Materia Medica, an official medicine book issued by the Tang court in 659, contains a note about the black pepper plant, indicating that this species

_

¹⁶¹ A commentator contributing to the *Treatise on the Land* explains the method to consume it by noting, "people would wrap some drug with a piece of paper and then burn it in order to eat (i.e., take) it." (紙藥: 以紙包藥, 以火燃而吃之也.) Nguyen Trai, "Treatise on the Land," 97 (Han).

originated from the land of Western barbarians. ¹⁶² Thus, it is likely that Nguyen Trai had used the term "pepper [of] western-barbarians" to indicate the origins of this plant. ¹⁶³

At any rate, a commentary contributed to Nguyen Trai's text explained why this commercial plant must have been highly valued in the fifteenth century. The pepper plant was a specialty product of Thuan Hoa because, the commentator noted, over the twenty years that the Ming dynasty occupied the region, Ming officials had required that local people in the northern areas submit young pepper trees as tribute. After that period, one therefore could only find pepper plants in the areas that had not earlier been affected by Ming rule. That said, this commentary seems to be misplaced because the favorable area to grow pepper plants that was reported in Nguyen Trai's text was not Thuan Hoa but two other southern regions, Thanh Hoa and Nghe An. Still, it can be speculated that for fifteenth-century administrators and writers of the Le dynasty, pepper was a specialty product best grown in the soil of the southern frontiers.

"Those that are Compatible with the Land"

While one can see that the central court's attempt to acquire local information was part of an enterprise to make local regions serve the state, rulers and writers in fifteenth-century. Vietnam should have also believed that the state needed to play a role in the management of local resources. As Nguyen Trai's text reveals, this belief was crystalized in the concept of

97

^{162 &}quot;胡椒: 生西戎." Li Shiji, Xin Xiu Bencao 新修本草 [The New Edition of the Materia Medica], The Chinese Text Project Site, 7th century, Vol.14, http://ctext.org/library.pl?if=en&file=31500&page=55&remap=gb.

¹⁶³ How to interpret this detail is indeed open for discussion. Certainly, it is not usual to read a Sinitic term in a Vietnamese word order. In any case, it is difficult to define the precise term that the original text recorded because the text under examination is so corrupted.

¹⁶⁴ Nguyen Trai, "Treatise on the Land," 97 (Han).

"compatibility" (宜 yi/nghi) or "products that are compatible with the land" (土宜 tuyi/thổ nghi).

A commentary on Nguyen Trai's text further explained, "Compatibility refers to that which is ideally suited to a region." 165

While the listing of all of the above-discussed local products was certainly based on the assumption of compatibility, it should be noted that Nguyen Trai mentioned certain products particularly in tandem with this notion. More specifically, four regional accounts contain such an explicit description as followed:

Hai Duong: The soil is white and mellow; it is compatible 厥土惟白壤, 宜火藥.

with the fire drug.

Son Tay: The soil is white and mellow; it is compatible [to 厥土惟白壤, 桑洲惟宜.

make] the mulberry land.

Nghe An: The soil is black and mellow; it is compatible 厥土惟黑壤, 宜檳榔.

with the betel palm.

Thuan Hoa: The soil is black and rich; it is compatible with 厥土惟黑墳, 宜紙藥及椒絨.

the paper drug and the black pepper plant.

At first glance, these "compatibility" descriptions seem to imply that the mentioned products were prevalent in a particular region because they somehow matched the regional soil. However, a difficult issue to interpret is whether Nguyen Trai was actually talking about "soil compatibility," that is, the degree to which a plant could be well grown owing to its compatibility with the soil. On the one hand, the descriptions seem to imply, for instance, that Nghe An was the place best suited for growing betel palms because its soil was black and mellow. On the other hand, regions like An Bang and Thanh Hoa were also associated with the same type of soil but a similar compatibility description was not assigned for these two regions. In my opinion, the compatibility of a product with a region as described in Nguyen Trai's text has little to no

^{165 &}quot;宜者一道之所宜也." Nguyen Trai, "Treatise on the Land," 46 (Han).

connection with the soil qualities. Since almost all of the listed "compatible" products were commercial crops, it is plausible that the notes about them mainly reflected an intention to highlight some important non-food items that certain regions could produce.

Such an interpretation is supported by an examination of the Chinese discourse on compatibility. Scholars have pointed out two early sources that give good evidence for this discourse. One source comes from a passage in a pre-Qin classical text, the Rituals of Zhou (Zhouli), and it is based on the idea of regionalism. In keeping with the description in the "Tribute of Yu" of the realm as rightfully divided into nine regions, this passage described the crops and agricultural products that were appropriate for cultivation in each of the nine regions. In her brief examination of this record, Francesca Bray finds it fascinating that the information matches quite well the geographical distribution of grain crops in modern China. This passage, she notes, "shows us that even then millet was the typical crop of Northwest China and rice predominated south of Huai, while a more mixed economy prevailed in the eastern plains and Shantung where millet, wheat and rice were all grown." ¹⁶⁶ In other words, the idea of local compatibility emphasizes that every region would act as a holistic ecology. This is why people could and sought to define the best-suited products for each region. It should also be noted that the ancient passage in question also listed some compatible products that were not grains, such as cattle and fowl.

Likewise, Joseph Needham points to a slightly later account, the *Record of the Investigation of Things* (ca. the third century), in which the compatibility of the crops was

_

¹⁶⁶ This passage comes from the chapter "The Office of Local Affairs" (職方氏 Zhifang zhi) of the Rituals of Zhou (周禮 Zhouli). Francesca Bray, Biology and Biological Technology: Agriculture, 2nd ed., vol. 6, part 2, Science and Civilisation in China (Cambridge: Cambridge University Press, 1986), 22–23.

viewed from the perspective of the soil types.¹⁶⁷ This source identified five basic types of soils and it posited a model of how to pair up the right crop with a particular soil type.

In regard to what is compatible with each of the five soil types, both yellow and white soils are good for [any] grains, the black-rich soil gives good yields for wheat and millet, the dark brownish red soil favors beans and yams (or taros), while the soil in low-level land is right for rice. If people take advantage of the compatible property of the soil, there will be profit a hundredfold. 168

The idea in this second account appears innovative and close to the modern mindset that argues for the practice of sustainable agriculture. However, what is important for our discussion here is that this source differs from the source from the *Rituals of Zhou* in that it does not consider regional differences. Because Nguyen Trai's text followed the "Tribute of Yu" in recording regional differentiations, it is more likely that the Vietnamese text tends to converge with the narrative of compatibility in tandem with regionalism as in the *Rituals of Zhou* source.

Having said that, if Chinese discourses of compatibility emphasized a variety of the cereal crops, this aspect was not present in Nguyen Trai's text. Nguyen Trai did not mention any grain crop at all, including rice. This difference clearly does not surprise any reader of Vietnamese history, who is so used to the perception of the predominance of a rice monoculture in Vietnam. In what follows, some historical evidence will demonstrate that the rice crop had undoubtedly become central to Vietnamese agricultural life by the time Nguyen Trai wrote his regional descriptions. Put differently, the fact that neither the rice crop nor the diversity of the cereal crops was mentioned reveals an important perception of the Vietnamese land; that is, that the rice crop could, or should, be compatible with the soil of any region in the kingdom.

¹⁶⁷ Needham, Lu Gwei-Djen, and Huang Hsing-Tsung, *Botany*, 6, part 1:47–48.

^{168 &}quot;五土所宜, 黄白宜種禾, 黑墳宜麥黍, 蒼赤宜菽芋, 下泉宜稻. 得其宜則利百倍." Zhang Hua, Bowu Zhi 博物志 [Record of the Investigation of Things], c.200s. I modify Needham's translation of this passage.

Some quick notes about the growing of mulberry trees in premodern Vietnam are relevant to our present discussion of land resources for the growing of rice. Throughout Vietnamese history, mulberry trees were planted mainly in order to harvest their leaves, which were then used to feed silkworms. Arguably, any reference to mulberry trees in Vietnamese historical sources means the ingredients for making silk. William Dampier, the English captain who visited the northern part of Vietnam in 1688, paid attention to this practice of local

_

¹⁶⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 2/6a. The term "châu" 州 in the word "tang châu" was sometimes written as 洲 by the dynastic histories.

¹⁷⁰ "Ky Thuat Trong Dau [Mulberry Planting Techniques]," *Vietnam Sericulture Research Center*, March 21, 2017, http://vietseri.vn/Chi-tiet-tin/Hoi-dap-ky-thuat-trong-dau/11555/ky-thuat-trong-dau.

Vietnamese.¹⁷¹ The local people did not grow mulberry trees for fruit, he explained, but instead they picked the leaves of the young trees to feed silkworms. After the leaves were picked, they would cut the young trees, leaving only the roots. Such a practice ensured that the trees would grow in time for the next season of raising silkworms.¹⁷²

Furthermore, the species of mulberry that is used in the silk industry is white mulberry (*Morus alba* L.). An ecological trait of this species explains its relationship to a rice-focused agriculture. In modern agronomy, the mulberry is defined as a moderately salt-tolerant species. ¹⁷³ By contrast, while rice can be also generally considered as a moderately salt-tolerant species, "no rice variety can withstand high salinity throughout its growth cycle." ¹⁷⁴ In other words, the discrepancy in salt tolerance of these two crops likely suggests that certain soils might not have been suited for growing rice but they could have been used to grow mulberry. This knowledge is in fact embedded in how Vietnamese in the past differentiated the "soil for fields" from "mulberry land." Besides the aforementioned 1013 tax regulation, a record for the year 1435 from the dynastic chronicles further attests to this differentiation. According to this record, in attempt to reduce taxes, the central court decided, "For those who live in mulberry lands and

¹⁷¹ William Dampier, *Voyages and Descriptions Vol. 2 or A Supplement of the Voyage Round the World*, 2nd ed. (London: Printed for James Knapton, at the Crown in St. Paul's Church-yard, 1700), 25.

¹⁷² Naturalists started to write about different subspecies of mulberry trees in the late eighteenth century. Pierre Daubenton (1703-1776), for instance, notes that the silkworms only ate the white mulberry leaves. The fruit of this species is, he points out, "uniformly sickly-sweet, insipid, and unpleasant to eat." This natural feature of the white mulberry tree must have been long known by cultivators and the white mulberry tree was consequently not grown for its fruits but leaves. See Pierre Daubenton, "Mulberry Tree [Originally Published as 'Murier' in Encyclopédie Ou Dictionnaire Raisonné Des Sciences, Des Arts et Des Métiers, 10:870–10:876 (Paris, 1765).]," trans. Ann-Marie Thornton, *The Encyclopedia of Diderot & d'Alembert - Collaborative Translation Project*, April 15, 2013, http://hdl.handle.net/2027/spo.did2222.0002.154.

¹⁷³ Kunjupillai Vijayan, "Approaches for Enhancing Salt Tolerance in Mulberry (Morus L) - A Review," *Plant OMICS* 2, no. 1 (2009): 41–59.

¹⁷⁴ Frans R. Moormann and N. van Breemen, *Rice: Soil, Water, Land* (Los Baños, Philippines: International Rice Research Institute, 1978), 121.

who [therefore] do not have lands for growing grains, they will be granted with five *sào* (i.e., a unit of area) to grow mulberry without having to pay taxes if they are soldiers, or four *sào* if they are commoners."¹⁷⁵

Although these tax-related records did not specifically mention the rice crop, some other sources support the notion that cultivated fields would have meant rice fields. Having made a description of Vietnamese local resources, a fourteenth-century author made reference to the same "soil for fields" category that the tax regulations in 1013 had mentioned and he emphasized that local people essentially cultivated rice. He further commented, "they grow sesame and millet in narrow pieces of land," but that "they do not have wheat or barley." ¹⁷⁶

Moreover, information about other recently introduced food crops can additionally confirm the idea that rice was the main crop grown on the so-called "soil for fields." For instance, a fifteenth-century Chinese text argued that the land in Vietnam did not tolerate the cultivation of wheat and barley, the two most common crops in northern China. Having served in Annam during the Ming occupation (1407-1427), a Ming official argued that local people "did not plant wheat." He recounted a historical precedent of a failed attempt to introduce wheat into Vietnam. According to this official, a "Tang Official of the Protectorate of [Giao Chi/ Jiaozhi] by the name of Trieu Xuong/ Zhao Chang instructed local people to grow wheat," and that "the wheat plant grew but did not produce seeds." In succeeding periods, rice remained the most critical crop to which farmers would invest their soil resources. While the introduction of new crops including

^{175 &}quot;其在桑洲無田穀者, 軍與桑地五高, 民與四高." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/29a.

^{176 &}quot;麻粟地狹. 種秈, 二麥無之." (The term "秈" means a specific type of wet rice. I take it as a general term that refers to the wet rice.) Le Trac, *An Nam Chi Luoc 安南志略 [Brief Records of Annam]*, Siku Quanshu (SKQS) (The Chinese Text Project site, c.1300s), 15/13a, http://ctext.org/library.pl?if=gb&res=5820&remap=gb.

^{177 &}quot;惟不解種麥. 唐都護趙昌嘗教種之, 秀而不實." Gaspardone, "An Nam Chi (Nguyen)," 63.

American starch crops deserves a separate study, some cursory thoughts will be noted here.

Ecologically and technologically, many factors enabled Vietnamese farmers to cultivate more than rice but new crops like sweet potatoes, maize and cassava never became as important as rice.

A way to look at this issue is to begin with an examination of Vietnamese classifications of starch crops in their own terms. When eighteenth-century Vietnamese intellectuals started to write about the plants that farmers grew, they often turned to China for records from older times. They faced a challenge. The most convenient script they could use to write by then was still Classical Chinese. However, most of the plants that were cultivated in the kingdom were commonly known by their Vietnamese names. Tracing various accounts of Vietnamese writers' attempts to record the names of different food crops prior to the twentieth century leads to an interesting finding. The concept of rice always ranked first in Vietnamese perceptions of their diet while the later-introduced cereal crops like barley and millet were at times considered as food crops under the rubric of rice. Even maize was initially given a name as a type of rice. ¹⁷⁸

The rice plant or $l\acute{u}a$ in Vietnamese is often understood as an equivalent to the Oryza $sativa\ L$. species. Vietnamese have called the grain harvested from this food plant $th\acute{o}c$ and the husked rice grain ready to $cook\ gao$. Although all three main terms relating to rice have their Chinese equivalents, the connotations of these Chinese terms were changed in order to denote more closely the Vietnamese concepts. For instance, the Chinese term $\frac{1}{N}(gu/c\acute{o}c)$ is a generic name of many basic food crops such as wheat, millet, barley, rice and soybean. Yet, when it is used in the Vietnamese context, the term is frequently combined with a word referring to the rice

¹⁷⁸ Le Quy Don recorded the term of "吳禾" (ngô hoà, lit., "a type of rice named "ngô") as a Vietnamese rendering that referred to maize. In his Sinitic-Vietnamese dictionary, Pham Dinh Ho recorded the Vietnamese term "穭吳" lúa ngô (written in Nom script) as a translation of the Sinitic word for maize, 蜀黍 (shushu/ thực thử). Le Quy Don, Van Dai Loai Ngu, A.1258, 9/39b; Pham Dinh Ho, Nhat Dung Thuong Dam 日用常談 [Frequent Words for Daily Use], Paris.SA.CC.973, 1827, 11/28a.

species like 稻 (đạo) or 禾 (hoà). An early-nineteenth-century bilingual lexicon of Classical Chinese and old Vietnamese renders it with $th\acute{o}c$ (i.e., the Vietnamese term of the unhusked rice grain). The same lexicon also provides another Chinese term for $th\acute{o}c$, 粟 ($su/t\acute{u}c$). ¹⁷⁹ Both this term and the aforementioned $gu/c\acute{o}c$ are often taken instead as generic names of any unhusked grain. That is to say, Chinese generic names for staple crops were narrowed in meaning to become specific terms for rice in the Vietnamese context.

Vietnamese term referring to the *Oryza sativa L*. species, as a generic name of many cereal crops which belong to the *Poaceae* family, a family including many grassy plants. ¹⁸⁰ Thus, cereal crops such as wheat, barley and millet, having been adopted in Vietnam relatively late, were named as different types of *lúa*. ¹⁸¹ The existence of such a perception tends to explain why Vietnamese farmers were not very attracted by the new crops, which could have served as alternatives to rice. It can be surmised that when farmers viewed a new crop as a variant of rice, a shift towards the new species would not likely occur if there were not significant constraints on the existing system of cultivation. Truong Quoc Dung (1797-1864) provided an example of this in the early nineteenth century. Writing about millet (梁), barley (大麥) and wheat (小麥), he notes that although some of these plants were grown only in several local areas and some others

¹⁷⁹ Pham Dinh Ho, *Nhat Dung Thuong Dam, Paris.SA.CC.973*, 11/28a.

¹⁸⁰ United States Department of Agriculture, "Family Poaceae," *USDA Natural Resources Conservation Service*, accessed May 22, 2016, http://plants.usda.gov/java/ClassificationServlet?source=display&classid=Poaceae.

¹⁸¹ The Vietnamese terms for these crops are *lúa mì*, *lúa mạch*, and *lúa kê*. Note, the modified element always follows the main noun in a compound word. The *Dictionarium* compiled by a French Jesuit, Alexandre de Rhodes (1591-1660), and published in 1651 is probably the first written text that records the Vietnamese term for millet, *kê*. See Rhodes, *Dictionarium Annamiticum*, 123. Subsequently, a dictionary in the late nineteenth century provides evidence that Vietnamese would classify millet and wheat under the rubrics of *lúa* since the text includes entries for *lúa kê* and *lúa mì*. Although the same dictionary distinguishes rice from barley, it indicates that the latter was very similar to the former. See Huinh-Tinh Paul Cua, *Dai Nam Quac Am Tu Vi [Dictionaire Annamite]* (Saigon: Imprimerie REY, CUROL & Cie. 4, rue d'Adran, 4, 1895), I.469, II.6, II.32.

could be found everywhere in the kingdom, they were "rarely used because people did not consider them as staple crops." 182

One might attribute the Vietnamese preference for rice over other cereal crops, especially barley and wheat, to the climatic conditions for the cultivation of these food plants. But even when new crops were highly adapted to Vietnamese soil, it took a long time for people to adjust their entrenched perception of staple foods. For instance, Vietnamese people considered growing corn to be less labor-intensive, compared at least with the cultivation of rice. In the late eighteenth century, scholar-official Le Quy Don wrote about the method of growing corn and pointed out its simplicity. He notes, the grower "would use a knife to bore in the soil and then sow the seeds inside." In the same account, Le Quy Don gives credit for maize as a crop that can feed the population of an entire prefecture. However, the tone of his statement overall reveals that people would only consider corn as a second-rate food when rice was not available.

The categorization of sweet potato in the Vietnamese nomenclature of food crops equally suggests that people deemed this American crop to be a secondary staple food. Sweet potato was considered as a member in a group of edible tubers sharing a generic name of *khoai* or $c\vec{u}$. Le Quy Don in the eighteenth century and modern scientists alike have well understood that this is a somewhat strange category. For pre-twentieth-century writers, staple plants like sweet potatoes were not akin to rice but they could "accompany grains." Le Quy Don felt the need to explain the Vietnamese term $c\vec{u}$ while he was writing about different root plants in the Han Chinese

^{182 &}quot;然少用, 由人不以為粮也." Truong Quoc Dung, *Thoai Thuc Ky Van 退食記聞 (A.k.a. Cong Ha Ky Van 公暇記聞) [Records After Official Hours]*, A.45, Early 19th Century, "Vat Loai," 12b.

^{183 &}quot;以刀穿地布種." Le Quy Don, Van Dai Loai Ngu, A.1258, 9/39b.

^{184 &}quot;以佐穀." Truong Quoc Dung, *Thoai Thuc Ky Van, A.45*, "Vat Loai," 14a. Having taken the task to record the natural resources and agricultural products of the kingdom, nineteenth-century officials of the Nguyen dynasty eventually classified tuberous crops under the category of vegetables. See The Historiography Insitute of the Nguyen Dynasty, *Dai Nam Nhat Thong Chi, A.69*, vol.1.

language. "According to the custom of our kingdom," he writes, "any herbaceous plant having edible roots is called $c\dot{u}$ (tuber)." ¹⁸⁵

The term *khoai* seems to appear later in the Vietnamese language, perhaps along with the introduction of certain tuberous plants. But eighteenth- and nineteenth-century accounts tend to view these two terms as exchangeable. In modern Vietnamese, people more often use the former term as a reference to the tuber part of the plant while the latter term is considered as a generic name for many edible tuberous plants that belong to various families. Some examples include sweet potato (*khoai lang*) in the *Convolvulaceae* family, various variants of taro (*khoai môn*, *khoai sọ* and *khoai nước*) in the *Araceae* family, and potato (*khoai tây*) in the *Solanaceae* family. Since various tuberous plants existed before the arrival of the sweet potato in the early seventeenth century, ¹⁸⁶ this America food crop was accepted into the Vietnamese diet as yet another edible tuber.

Fertile Soil for the Rice Crop

If what Nguyen Trai referred to as "cultivated fields" meant rice fields, his regional descriptions indicated that the royal capital and the Safeguard regions were the main areas for rice cultivation. As an urban center, the capital Thang Long was the place for the imperial palace and many other royal edifices, public warehouses, schools, craftsmen's workshops and guilds

¹⁸⁵ "國俗凡草根可食名曰矩." Note, the character 矩 in this sentence is a Vietnamese word (written in Nom script); it takes no connotation of the same character in Chinese. Le Quy Don, *Van Dai Loai Ngu, A.1258*, 9/49b.

¹⁸⁶ Alexandre de Rhodes's *Dictionarium Annnamiticum* in 1651 recorded the name of the sweet potato in the Vietnamese language. See Rhodes, *Dictionarium Annamiticum*, 127. Le Quy Don mentioned that Vietnamese people often called this tuber "*cū lang*." He believed that this species came from Luzon (Philippines) and he must have read this information from Chinese sources. Yet, no account seems to exist in order to date and map the route in which the sweet potato was first introduced in Vietnam. Le Quy Don, *Van Dai Loai Ngu*, *A.1258*, 9/49b-50a.

and markets.¹⁸⁷ Although cultivated land was always attached to human settlements in premodern agricultural societies, most of the land in the central capital as it was delineated in the fifteenth century might not have served agricultural purposes. Such a feature can be seen in the description of local products that Nguyen Trai associated with the capital city. He wrote that the capital "stockpiles [products such as] swords, sedan chairs, armor, canes, offering appliances, shuttles for weaving, and parasols." This description showed that the capital tended to provide services and manufactured products. Further, a main function of the city was to stockpile goods. This latter characteristic importantly distinguished the capital city from all the other regions of the kingdom.

Hence, while agricultural production was not central to the capital, the matter that its soil was classified as yellow seems to be grounded on the notion that the soil retained its innate quality rather than being altered by cultivation. In this regard, it makes sense why Nguyen Trai, on the one hand, identified both Thang Long and three internal regions, Hai Duong, Kinh Bac and Son Tay, with a mellow soil; this soil should have referred to the predominant alluvial soil in the Red River Delta. On the other hand, the identification of the whitish mellow soil in Hai Duong, Kinh Bac and Son Tay would have reflected a perception of a soil that had long been put into use for the farming of the rice crop.

_

¹⁸⁷ While the nomenclature for modern Hanoi is used as an equivalent to Thang Long, one needs to be aware of their vast differences. The central capital of the Le kingdom in the fifteenth century was much smaller than the Safeguard regions surrounding it. To put it in perspective, the pre-nineteenth-century capital city was situated within an area of only about 30 to 40 square kilometers. Compared to the area of modern Hanoi at its smallest size during the period from 1991 to 2008, the old capital city was only a half the size of that core area, which covered 84.3 square kilometers. The remaining part of the capital city was considered as the periphery where agricultural activities remained active until modern times. The entire area of Hanoi during that time was 921.8 square kilometers. See Ngo Dang Tri and Do Thi Thanh Loan, "Bon Lan Dieu Chinh Dia Gioi Hanh Chinh Thanh Pho Ha Noi Thoi Ky 1954-2008 [The Administrative Bounderies of Hanoi Was Adjusted Four Times, 1954-2008]" (Phat Trien Ben Vung Thu Do Van Hien, Anh Hung, Vi Hoa Binh [Sustainable Development of Hanoi], Hanoi, 2010).

^{188 &}quot;藏: 劍轎、鎧仗、爼豆、輞椅、綺軸、蓋傘." Nguyen Trai, "Treatise on the Land," 41 (Han).

From an undated book entitled *Records of the Four Safeguards*, a passage that was cited as a commentary of Nguyen Trai's text identified the most fertile lands in the kingdom.

In terms of the most fertile lands, [the land in] Tam Dai prefecture ranks first and [that in] Khoai Chau prefecture ranks second. The most fertile lands [can also be found in] counties such as Tu Ky, Yen Lac, Yen Dung and Tay Chan (i.e., Nam Chan) in the eastern, western, northern, and southern regions, respectively. 189

A quick glance at this account reveals that most of the prefectures and counties mentioned here were located in the lowland parts of the four Safeguards. Both Tam Dai and Khoai Chau prefectures were located in strategic locations in the river networks in northern Vietnam. It looks as though these locations, together with the central capital—Thang Long, were important hubs along the main stream of the Red River Delta. By the fifteenth century, Tam Dai prefecture was a network of counties that were distributed around the Bach Hac confluence (i.e., the place where the Da, Thao and Lo rivers converge into the Red River).

Towards the lower reaches of the Red River, Khoai Chau (modern Hung Yen) stood right at the cross section where the Red River diverged into several branches before flowing to the sea. In the late eighteenth century, Phan Huy Chu described Khoai Chau as "a far-reaching land where rivers and streams meander and where no mountains and forests confine the space." Having pointed out that Xich Dang, a prefectural district, was located in Khoai Chau, Phan Huy Chu further commented that Xich Dang was "not only the granary of the successive dynasties but also a strategic spot." Interestingly, while Thang Long became an early urban center, Tam Dai and Khoai Chau focused on agricultural activities up to much later periods. It is not until the

^{189 &}quot;路府一三帶二快州, 數縣東岐西樂北勇南真, 最是肥饒之地." The Records of Four Safeguards 四鎮記 (Tứ Trấn Ký) in Nguyen Trai, "Treatise on the Land," 60 (Han).

¹⁹⁰ This citation and the previous one come from the same source. The texts read, "地勢廣邈, 江流旋繞, 無山林之限" and "赤藤州為歷代庫, 乃衝要管鑰之地." Phan Huy Chu, *Lich Trieu, Paris.SA.HM.2126*, 2/65a-b.

seventeenth and eighteenth centuries that Khoai Chau became famous for commercial activities with the rise of the port town of Pho Hien (modern Hung Yen).

Likewise, Tu Ky continued to be the most prosperous county in a developed sub-region in Hai Duong until the eighteenth century. ¹⁹¹ Early-twentieth-century sources depicted Yen Lac as a county where "there is only alluvial soil," implying the predominance of good arable land. ¹⁹² Tay Chan or Nam Chan (modern Nam Truc) was one of four counties, which belonged to Thien Truong prefecture. That Thien Truong used to be the hometown of the Tran kings in the thirteenth and fourteenth centuries suggests that Tay Chan might have been marked as a location of good arable land because a long tradition of cultivation occurred there.

The question why the soil in the southern Safeguard of Son Nam was deemed different from the soil of the other internal regions requires some explanation. While fifteenth-century administrators and writers perceived that fertile soils for wet rice tended to be distributed in the proximate regions surrounding the capital city, the differences between the soils in Son Nam and those in the three other Safeguards (Hai Duong, Kinh Bac, and Son Tay) seem to suggest a special attention to the soil condition of this southern Safeguard.

At first glance, the soil description of Son Nam as provided in the *Treatise on the Land* poses some challenges for interpretation. The predominance of the red-clay-rich soil in Son Nam only makes sense if we understand it as a type associated with the areas of ferralsols found on the left side of the Day River, stretching along the western edge of modern Ha Nam. ¹⁹³ That is to say,

¹⁹¹ "一府物力俱盛而四岐為優." Phan Huy Chu, Lich Trieu, Paris.SA.HM.2126, 3/85a.

¹⁹² Nha Hoc Chanh Vinh Yen, *Dia Chi Tinh Vinh Yen [Geocultural Records of Vinh Yen Province]* (Hanoi: Imprimerie Thuy-Ky 98, Rue du Chanvre, 1939), 12.

¹⁹³ For a soil map of modern Ha Nam, see Cong ty Tu van GeoViet, "Ban Do Dat Tinh Ha Nam [Soil Map of Ha Nam Province]," *Ban Do Mang Luoi Dat Lua Dong Bang Song Hong [An Online Map of Rice Soil in the Red River Delta]*, 2014, http://www.huongdancanhtaclua.com.vn/ban-do-chi-tiet/16.

the red soil was concentrated in a relatively small area in Son Nam. This poses a question as to why such a soil feature was not identified in other places where this type of soil was actually predominant. For instance, it has been well established by modern soil science that ferralsols are predominant in the area where the western Safeguard of Son Tay was located. Thus, it is still unclear why a soil description such as the red-clay-rich quality was attributed to the soil in Son Nam but not that in Son Tay. Eighteenth-century sources also pinpointed a type of red soil as a special feature in Mount Cau Lau in Thach That, a county of Son Tay. ¹⁹⁴ Modern geographer Le Ba Thao similarly has identified the red soil in this area as laterite, a product of the weathering process on an old alluvial terrace. He reminds us that local people seemed to have known about this type of soil for a long time, which is evident in a local tradition of making laterite bricks. ¹⁹⁵

In my opinion, such a counter-example of the red soil in Son Tay suggests that the soil descriptions provided in the *Treatise on the Land* were not comprehensive. In other words, the fifteenth-century observers of the soil should have based their descriptions on the understanding of the predominant soil in some certain areas that were significant to them. Therefore, the absence of the above-mentioned red soil in the Son Tay record can be explained by the less attention of the central court to those areas. Meanwhile, since the old Son Tay stretched from the middle to the upper reaches of the Red River, the lone identification of white soil in this region was a result of an observation of the alluvial-deposited land along the local rivers, where many settlements were concentrated at the time the *Treatise on the Land* was compiled.

While the description of the red soil in Son Nam poses some challenge for interpretation, the presence of the greyish-green soil in this region is relatively evident. Eighteenth-century

^{194&}quot;土壤皆赤." Phan Huy Chu, Lich Trieu, Paris.SA.HM.2126, 3/77b.

 $^{^{195}}$ Le Ba Thao, Thien nhien Viet Nam [The Natural Environment of Vietnam] (Hanoi: Khoa Hoc Ky Thuat, 1990), 136.

sources unanimously depict Son Nam as a wet region due to its location in a flat plain with a dense network of rivers and streams. The remarks of both Nguyen Tong Quai (a.k.a. Nguyen Tong Khue, 1692-1767) and Ngo Thi Si (1726-1780) at that time support this perception. According to Nguyen Tong Quai, Son Nam was an area where the central government put a special emphasis on the building of the dike system. ¹⁹⁶ In his remark, he acknowledged that the region was not only located in a wet zone where many rivers converge but also annually prone to seawater flooding. Hence, he believed that building dikes was indispensable to Son Nam because it helped farmers to secure the fifth-month rice. In other words, the building of dikes made it possible for the practice of double cropping in Son Nam (See more Chapter 4). Ngo Thi Si also emphasized the importance of dikes to prevent floods in Son Nam. Following the conventional thought in his time, Ngo Thi Si believed that watercourses generally flow southward. This belief reinforced his understanding that being a Safeguard in the south, Son Nam naturally experienced floods. 197 To people like Ngo Thi Si and perhaps governors and writers who predated him, flooding must have been a trait that was associated with Son Nam, more than with any other region.

The ecology of Son Nam, or at least the perception of a wet Son Nam, is likely the reason why the region was associated with the grayish-green soil. To borrow an explanation of modern science, there are often correlations between the soil color and the drainage system of the land. For example, during the rainy season, when the topsoil is covered with water, aerobic bacteria consume all available oxygen and then go dormant. After this happens, anaerobic bacteria present in the soil will begin to reduce metal ions via metabolic processes. These ions, which

¹⁹⁶ Nguyen Trai, "Treatise on the Land," 55 (Han).

¹⁹⁷ Nguyen Trai, "Treatise on the Land," 55–57 (Han).

usually color the soil, will become grayed as a result. Therefore, if water deposits lie over topsoil for extended periods, the color of the soil will become gray.¹⁹⁸

Regardless of how exactly the author of the *Treatise on the Land* would have assigned the above-mentioned features to the soils in Son Nam, as far as our sources suggest, starting at least from the fifteenth century, Vietnamese administrators recognized the unique ecology of Son Nam for the purposes of agriculture. This was a region where rice could be grown as long as dike building became effective enough to manipulate the abundance of water. It might be even speculated that the two different types of soils identified in Son Nam reflect two different main areas of cultivation. If the red soil tended to be located in the hilly areas, the identification of this soil might be a result of an observation of land that came under cultivation at an earlier time where there was no need to build dikes. By contrast, the green-grayish soil should be associated with areas that later came into cultivation, where the dike system eventually made its discernible impact on the region.

In short, there is a significant difference between the fifteenth-century perspective of the regional soils and the modern view of soil types in northern Vietnam. The modern geographical standpoint places the central capital and four internal regions surrounding it in the Red River Delta. The predominant soil of these regions is created by the depositing of the sediments from the Red River and other watercourses in the lowlands of northern Vietnam. By contrast, the fifteenth-century perception largely focused on the contrast between the regions where soils had long been suited for growing wet rice (i.e., the whitish soils in Hai Duong, Kinh Bac, Son Tay)

_

¹⁹⁸ United States Department of Agriculture, "The Color of Soil," *USDA Natural Resources Conservation Service*, accessed April 30, 2016,

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=nrcs142p2 054286.

and places where the waterlogged soil required hydrological treatment so that the rice crop could be secured (i.e., the greyish-green soil in Son Nam).

Conclusion

The knowledge that was produced about the regional discrepancies in soil types in fifteenth-century Vietnam suggests that rulers and scholars at that time placed great concern on land resources. They acknowledged that the soil qualities in the central capital and in the four Safeguards were different from those in the external regions. The soils in all of the most remote frontiers formed one category while the soils in the rest of the external regions were divided into two groups; one group was comprised of upland areas and the other of coastal areas. The analysis of regional fields reveals that for premodern Vietnamese writers, soil types and fields might not necessarily have had a direct association. Since the rank of the field reflected the productivity of the food crop, it is this measurable information that would have helped the rulers define the degree to which the wealth of a region could benefit the central state. Nonetheless, evidence for an enduring recognition of the importance of the rice crop, as illustrated in this chapter, points to an important point. By the mid-fifteenth century, when the central state examined its land resources, it focused on the soil for the rice crop.

Further, the contrast between the internal and the external regions in terms of wealth did not imply a willingness to abandon the frontiers. As Nguyen Trai's records of local products show, the central government understood that such a contrast meant that there was a diversity of products in the kingdom. The fifteenth-century government upheld a clear regional perspective in its effort to understand the land it ruled over. Every region was defined by the presence of rice fields, and it was crucial to report on the degree to which these regional fields could contribute to

the wealth of the central state. Hence, the state would demand certain products from the Safeguard regions while some others from the external regions. If cultivating mulberry trees and other fiber plants as well as manufacturing cloth seemed to be the strength of the internal regions, the external regions were considered as the providers of exotic products such as animal hides and medicinal plants. Nevertheless, most of the important commercial crops came from the southern frontiers such as Thanh Hoa, Nghe An and Thuan Hoa as well as from the coastal eastern Safeguard, Hai Duong.

CHAPTER 4. CONSTRUCTION OF RIVER DIKES

Unlike the conventional thought that the Vietnamese environment has been suited to the farming of wet rice for thousands of years, it took a long time for farmers and the state in northern Vietnam to transform their land into a rice-preferable landscape. Like any rice cultivators, Vietnamese people understood that one of the most important ecological characteristics of the rice plant was its need for appropriate amounts of water. If, as shown in the previous chapter, the fifteenth-century Vietnamese government was confident that the land in their kingdom was suited to rice cultivation, it also insisted that managing the water resources for growing rice was of great importance.

This chapter will depart from a *land* history for a *water* history. It will show that in order to facilitate water for rice farming, from the thirteenth to fifteenth centuries, the Vietnamese state came to commit to river embankment projects. The focus here will not be a history of technology but an environmental one. In doing so, this chapter explores how dike building, as a method of water management, can be seen as an indicator of a transformation in the Vietnamese rulers' perspective toward their environment. It finds that the Vietnamese state's commitment to the river dikes was virtually in tandem with its policy of expanding rice farming in the latter part of the fifteenth century. Between the 1200s and the 1400s, the perception of dike building in Vietnam shifted from a view that took it as a method of flood control to one that regarded it as a security technology for the rice harvests.

The Red River that Demanded Dikes

Scholars who write about the history of water control in northern Vietnam have pointed to a massive dike system on the banks of the Red River. There is no doubt that the first Red River dikes were built from an early period of Vietnamese history. For instance, a nineteenth-century scholar named Nguyen Van Sieu (1799-1872) mentioned that dikes had existed in northern Vietnam for a long time prior to the thirteenth century. Based on a note offered by this scholar, one can deduce that dikes already appeared in Vietnam as early as the first century C.E. Tracing this information, the original source of this dike account can be located in a dynastic history of the Han dynasty. 199 The Concise Summary of Vietnamese Historical Records (越史略 Viêt Sử Lugo, a dynastic history dated from the late fourteenth century, preserves another early account about dikes. This account can be considered one of the earliest accounts reported by Vietnamese writers. According to this source, in 1103 the king commanded "people both inside and outside the royal capital palace to construct dikes for flood control." Such an account also reveals that the early dikes apparently used to be built by local people who lived near by the areas vulnerable to flooding. If the state did not actively send its agents to construct dikes, the dikes would have been built in scattered places where there was a high risk of inundation. Modern historians like

¹⁹⁹ Nguyen Van Sieu, Nguyen Dang Giai, and et. al., Bac Ky Ha De Su Tich 北圻河堤事跡 [The Origins and Developments of the Dikes in northern Vietnam], A.1938, c.1800s. Nguyen Van Sieu did not clarify the name of the source, but his reference should have been referring to an annotation of a record in the Book of the Later Han (後漢書 Hou Hanshu). This note is indicated as a passage from the Records of the Jiao/Giao Jurisdiction (交州記 Jiaozhou ji) by Liu Xinqi 劉欣期, a writer in the Eastern Jin period (380-420). Combining the information of the record in the Han dynastic chronicles and Liu Xinqi's note, one can suggest that dikes used to be built in Fengxi/Phong Khê 封谿 county in Jiaozhi/ Giao Chi district 交趾郡. As Fengxi county was established in 43 C.E., it can be surmised that dikes were built therein in the latter part of the first century.

²⁰⁰ Viet Su Luoc 越史略 [Concise Summary of Vietnamese Historical Records], Sikuquanshu (SKQS)/Qian Xizuo, 1843 (The Chinese Text Project site, c. Late 14th Century), 2/19b, http://ctext.org/library.pl?if=en&res=88001.

Hoa Bang remind us that the well-known dynastic history, the *Complete Book*, mentioned a dike that was built in a place named Co Xa (機舍) in 1108 and a burst that occurred at the Thanh Dam (清潭) dike in 1245.²⁰¹

However, the most famous account about dikes is the event concerning the state-built Dinh Nhi or the "cauldron-handle" dikes in 1248. Although this event is familiar in Vietnamese historiography, there is no substantial analysis about the significance of this event. In what follows, I will demonstrate that the 1248 event is of paramount importance because it involved a special type of dikes that the Vietnamese state ordered to build in order to meet a particular need in the late thirteenth century—flood control. This aspect significantly distinguishes cauldron-handle dikes from sea dikes, another type of state-built dike that became significant from the fourteenth century onward. ²⁰² In general, these cauldron-handle dikes and those sea dikes illustrate two different aims of the Vietnamese state; while the purpose of the former was flood control, the latter was intended to facilitate land reclamation. Moreover, by focusing on the function of the cauldron-handle dikes, we can gain an understanding of the role the state played in the transformation of the landscape as water was prevented from flowing into wetlands that then became suitable for farming.

Dynastic historians recorded the event in 1248 as follows:

On the third lunar month of that year, the King ordered all provinces to construct dikes in order to prevent inundation—those dikes are called Dinh Nhi (鼎耳 or "cauldron").

²⁰¹ Hoa Bang, "Luoc Khao Ve Lich Su De Qua Cac Trieu Dai [A Concise Study of the Dikes during the Dynastic History]," *Tap San Nghien Cuu Van Su Dia* 31 (1957): 2.

²⁰² Nguyen Hai Ke, "De Hong Duc va Cong Cuoc Khan Hoang Vung Ven Bien Nam Song Hong Thoi Le So [The Hong Duc Dikes and Land Reclamation in the Coastal Area South of the Red River during the Earlier Part of the Le Dynasty]," *Nghien Cuu Lich Su* 5 (1985): 35–42.

handle")—from the beginning of the waters to the seacoast in order to ward off the floods. 203

To understand this record, an issue that merits our attention is the fact that it must have been written and edited multiple times. For instance, the comment that "the construction of the Dinh Nhi dikes started from this year" is clearly appended to this record by later editors of the dynastic chronicles. This comment emphasizes the fact that since 1248 a type of dike that was called the Dinh Nhi started to be constructed. So far, the precise reason why the dikes were called "Dinh Nhi" or "cauldron handle" remains unclear. A speculation at least can be made based on this term *per se*; the name of these dikes seems to refer to their shape. In other words, each of these dikes was built in a curved shape similar to a handle of a cauldron. Although more research needs to be done in regard to this technical issue, it is possible that curved dikes were constructed to adapt to the flow of the river, considering that "the velocity of the river is higher on the outside of the curve and slower on the inside of the curve." Thus, it is likely that when the royal court decided to coin a new name for such a dike initiative, the embanking project that started in 1248 must have introduced a new mechanism of coping with the rivers crossing their kingdom.

In any case, the little information in the account on the dikes in 1248 reveals the court's significant investments in terms of both administration and resources. Dynastic historians made

²⁰³ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 5/15b.

²⁰⁴ Jason S. Alexander, Richard C. Wilson, and W. Reed Green, "A Brief History and Summary of the Effects of River Engineering and Dams on the Mississippi River System and Delta" (Reston, Virginia: U.S. Geological Survey, 2012), 9, https://pubs.usgs.gov/circ/1375/.

²⁰⁵ This analysis of cauldron-handle dikes is based on my own reading of primary sources since some research on the Dinh Nhi dikes has been only available in Japanese. See, for example, Chingho Chen, "'Kanae mimi' shō kō 「鼎耳」小考 [Some Comments on the Vietnamese Term 'Dinh Nhi']," *The Journal of Institute of Asian Studies, Soka University* 9 (1988): 241–58; Sakurai Yumio, "The Red River Delta in the Tran Dynasty (1225-1440) I."

those points clear in this record. According to them, the building of these cauldron-handle dikes was undertaken everywhere "from the beginning of the waters to the seacoast in order to ward off the floods." Specialized state agents were assigned; hence, "Principal Commissioners and Assistant Commissioners of the Dike Affairs were appointed to supervise the construction work." Economic cost was also calculated. The report notes, "in the places where the dikes were built, the commissioners examined people's farms, measured the land that was taken, and then compensated the landowners with coins." It is worth noting that even if no resistance to this project occurred, as seems to have been the case, converting farmlands into dikes came at an economic cost.

The 1248 account is familiar to historians of Vietnam, and they have interpreted the scope of this dike initiative in a particular way. Based on the detail that suggests the dikes were to be built "from the beginning of the waters to the seacoast," modern scholars have highlighted the significant impact that such a massive dike system would have had on the course of the Red River as well as on the Red River Delta landscape. However, there is not much information about the scale of this dike project beyond that one statement. What is more, the sentence that contains the information pertaining to the scale of this dike project is not even semantically clear. If the thirteenth-century Vietnamese state had indeed attempted to construct a gigantic dike system that embanked the Red River all the way from its headwaters to the places where this big river emptied its water into the sea, this must have been a long-term project, which dynastic historians should not have failed to mention in the years after 1248.

In addition, this source does not clarify the particular rivers and tributaries where the embankments would have been built. While scholars assume that the target river was the largest

²⁰⁶ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 5/15b–16a. Other citations in this paragraph come from the same source.

waterway in northern Vietnam, the Red River, such an assumption is problematic as the way we perceive "the Red River" today is different from what people in the past understood about this body of water. For instance, the lower part of the Red River Delta used to be marked by the division of the Red River into a great number of distributaries and they constantly changed their courses. Hence, unlike the modern perspective of a single river, people in the thirteenth century did not view the Red River as one big waterway that flowed all the way from the mountainous northwest towards the seacoast. While there are multiple river mouths at which the Red River network empties itself into the sea, it is clear that dikes have never been built (indeed never needed to be built) at every single distributary that moves the water of the Red River to the sea.

The so-called "beginning of the waters" (原頭 nguyên đầu), often translated as "headwaters," is not a trouble-free concept either. A reading of information about rivers in premodern Vietnamese sources suggests that a headwater did not always refer to the origins of a stream, but to a place that local people subjectively identified as the beginning of a river. If the target of the dike project in 1248 was indeed the entire Red River, the modern understanding of the geography of the region places the headwaters of this waterway in the northwestern mountainous area in northern Vietnam. But, as shown below, the fifteenth-century understanding of rivers in northern Vietnam located the beginning of the Phu Luong River, an old name of the Red River, at somewhere in modern Viet Tri. And as we shall see, as the dike building initiative came to aid the expansion of agricultural activities over time, these constructions should have been built in areas that aimed to protect those agricultural zones.

Although dynastic historians might not have meant a dike that would continuously extend from the source of the Red River to the seacoast, they could have been referring to a series of cauldron-handle dikes. Some pieces of information support that idea. A record for the year of

1255, which comes from the same dynastic chronicles, mentions a place that can be interpreted as the Canine Deity cauldron-handle (狗神鼎耳 *Cẩu thần Đỉnh nhĩ*) dike. 207 Although there do not appear to be any historical records of a temple that was dedicated to such a deity, if this interpretation is acceptable, *Cẩu thần Đỉnh nhĩ* could refer to a cauldron-handle dike at a place where a local shrine dedicated to a certain Canine Deity was located.

Moreover, more such dikes continued to be built in later periods. In the fifteenth century, the maintenance of the cauldron-handle dikes was considered an urgent affair. According to a regulation on exempting taxes issued in 1434, sons and grandsons of officials ranked from the sixth echelon upward were exempt from general taxes and corvée labor. However, this exemption was not applied to the duties relating to the construction and maintenance of the cauldron-handle dikes. An article in the Le code concerning the dike regulations in 1673 also offers evidence in support of the state's strong commitment to these dikes. To quote,

When a cauldron-handle dike has just been built, officials like Grand Defenders and Provincial Administration Commissioners must [examine] the local landforms. When the water flow remains far [from the dike], these officials must make reports to [the court] and then execute the assigned tasks following that. This is to prevent the repeated constructing of the dike in the years to come. This is to make sure that the dike can be maintained forever.²⁰⁸

As noted in this regulation, each cauldron-handle dike was viewed as a state-owned construction, requiring the continuous supervision of state agents. The central court even assigned the maintenance of such dikes as a routine task for local officials. In other words, this regulation reveals that as more cauldron-handle dikes were built, these construction projects were not

²⁰⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 5/21a.

²⁰⁸ The original Chinese text can be read in a reproduction in 1961. Nguyen Si Giac, trans., *Le Trieu Chieu Linh Thien Chinh [The Good Governance That Based on Imperial Edicts and Decrees of the Le Dynasty]* (Saigon: Dai Hoc Vien Saigon, 1961), 490–91.

undertaken by private agents like lineage groups or even by local bodies like a village.²⁰⁹ This aspect seems to suggest that a significant amount of resources and labor were needed for the construction of these dikes.

As a footnote, it is worth paying attention to a source relating to the Red River dike system, yet not necessarily to the cauldron-handle dikes. It is a description of the dike system in northern Vietnam, supposedly written by a fifteenth-century Ming Chinese official. This account is in a section of an official gazetteer of Giao Chi/ Jiaozhi (i.e., northern Vietnam) dating from the time of the Ming occupation of Vietnam (1407-1427). Decades ago Sakurai Yumio relied on this source and reconstructed a fifteenth-century Vietnamese dike map. This map highlighted the embankments along the Red River. As shown in this map, a dike on the right catchment of the Red River expanded from the conjunction of the modern Pho Day River and the Red River to the place where the modern Luoc River diverges from the Red River. The left-bank dike of the Red River is said to stretch from a port near the Bach Hac confluence (modern Viet Tri) to Phu Ly in modern Ha Nam province.

At first glance, both the Ming source and Sakurai's reconstructed map give an impression that the dikes ran uninterruptedly on both sides of the middle part of the Red River. If Sakurai's reconstruction is accurate, there are still two caveats that we must consider when using it to build

²⁰⁹ Some researchers have cast light on the differences between public and private dikes (*dê công* and *dê tu*, respectively) in northern Vietnam. See, for instance, Olivier Tessier, "Hydrological Development of the Red River Delta: A Historical Perspective of the Role of the Imperial Then Colonial State (From the XIIth Century to the First Half of the XXth Century)," in *Water and Its Many Issues: Methods and Cross-Cutting Analysis*, ed. Stéphane Lagrée (Regional Social Sciences Summer University "Tam Đảo Summer School Week," Vietnam, 2012), 59–63, http://www.tamdaoconf.com/en/2013/07/20/quy-hoach-thuy-loi-vung-dong-bang-song-hong-nhin-nhan-lich-su-ve-vai-tro-cua-nha-nuoc-phong-kien-va-nha-nuoc-thuoc-dia-the-ky-xii-den-nua-dau-the-ky-xx/.

²¹⁰ For the dating of this source, see Zhang Xiumin, "Yongle Jiaozhi zongzhi de faxian 永乐《交阯总志》的发现 [The Discovery of the Jiaozhi Gazetteer in the Yongle Era]," *Lanzhou Daxue Xuebao*, no. 1 (1981): 53–55.

²¹¹ Sakurai Yumio, "The Red River Delta in the Tran Dynasty (1225-1440) I," 277.

up our understanding of the Red River dike system. First, one cannot use this account about dikes to retroactively interpret the scale of the cauldron-handle dike project in 1248. Although some details in the Ming record on the construction of dikes in northern Vietnam show a resemblance to the corresponding records in the official Vietnamese chronicles, there is neither a reference to the cauldron-handle dikes nor to the event in 1248. Second, the Chinese understanding of the Red River dikes might not have been the same as that of the dike builders in the Red River Delta. As seen in the Ming source, the viewer only focused on the main stream of the Red River, which he called the Phu Luong River. In his words,

Take the Phu Luong River for instance. This river originates from the mountainous area in the northwest. While meandering towards the southeast, this sinuous river stretches into the distance. During summer and autumn, incessant rain often brings about severe inundation. Hence, local people have built dikes along the two banks of the river in order to prevent flooding. ²¹²

This Chinese observer was keen to grasp two critical features of the Red River that made it a waterway always vulnerable to flooding. In the first place, it was not only a meandering river but also one that had to travel a very long way from its source to the sea. In the second place, the abundant rainfall that annually fed this river was concentrated in a limited period of time each year. According to this Ming source, these hydrological characteristics explained the necessity for the construction of dikes along the banks of the Red River. However, the idea that two continuous dikes flanked the Red River on both sides was a rather simplified perception.

Considering that there were big distributaries of the Red River like the Duong and the Day rivers, the Red River dikes could not simply have been a construction that ran uninterrupted along the banks of the Red River. Thus, we can conjecture that the writer of the Ming record

⁻

²¹² "且如富良江, 原於西北山中, 屈曲東南, 瀰漫浩渺. 夏秋之間, 天雨霖霪, 水患且至. 故於兩旁並築堤, 以預防之." Gaspardone, "An Nam Chi (Nguyen)," 145.

might have been observing the Red River dikes from the perspective of those who sailed along this river. By contrast, it was clear to the dike builders in the Red River Delta that to control the flood of this area required the embankment of not only the main stream of the Red River but also some of its many distributaries. This is not to contend that the Ming observer was ignorant about the existence of the dikes along the Red River distributaries. Instead, such a source as this Ming account shows that what one can grasp from the available historical sources is only a partial picture of the Red River dikes.

It is possible that by the early fifteenth century there existed an uninterrupted construction for flood control along the banks of the Red River. However, because of the complex river network in northern Vietnam, the dike project in 1248 should have included only a series of cauldron-handle dikes, each protecting a local settlement. In the period between the thirteenth and fifteenth centuries, the design of the cauldron-handle dike might have also undergone transformations. As noted in the same Ming source, before the Ming occupation, the Vietnamese government recruited local people to carry out the building and the maintenance of the dikes. This work was undertaken annually and was scheduled in tandem with the dry season. The Ming writer commented on this practice as follows.

On the first lunar month of each year, the Dike Officials [of the previous Vietnamese government] used to supervise local people who resided near the dikes to build up the levees, regardless of whether they were rich or poor, old or young. They elevated the low dikes and repaired the collapsed ones. The work needed to be completed by the start of summer. Such a practice was performed annually. During the sixth and seventh lunar months, as the river water rose, the Dike Officials themselves patrolled the dikes.²¹³

The fact that the dike repairs were carried out every year suggests that the water flow might have quite often protruded over the dikes. In other words, it is plausible that the first dikes might not

213" 包午正日提宜赵甘附近人民 無公告賤老幼 俱能築陸 甘低窪老懶區

²¹³"每年正月堤官督其附近人民, 無分貴賤老幼, 俱就築陂. 其低窪者增高之, 坍損者補葺之. 至夏首畢功, 歲以為常. 六七月間, 江水暴漲, 則堤使躬親巡親." Gaspardone, "An Nam Chi (Nguyen)," 145.

have been meant to form a permanent construction. Instead, the dikes could have been built as temporary constructions to ward off the floodwaters each rainy season. However, the fortification and expansion of these dikes into an intricate network over centuries eventually reinforced a perspective, which the fifteenth-century Ming observer captured quite acutely. In an explanation of why the inhabitants of the Red River Delta did not build dams but dikes, the Ming official wrote,

The building of dams is to reserve water while the construction of dikes is to block [the overflow of] water. As for the kingdoms that are heavily invested with various sources of water from the sea and rivers, their lands are often low and swampy. Hence, there is not much need for dams therein, but it is impossible to lack dikes.²¹⁴

In summation, the use of dikes as a critical method of water control reflects a particular perception towards this environment. The cauldron-handle dikes might have first been built in 1248 due to a certain change in people's perception of their environment. Some historians of Vietnam have proposed the idea that this dike project seems to have been linked to a higher frequency of flooding, as reported in dynastic histories for the mid thirteenth century. This thesis has recently been developed in connection to a hypothesis about climate change. For instance, Li Tana has put forth an elaborate argument that covers a combination of several factors: wet weather during the period between 900 and 1250/1300, ecological degradation in the upper Red River area, the shifting of the Red River course, and the construction of the cauldron-handle dikes. The next section will look at Li Tana's thesis in detail and compare it with an earlier analysis by Tran Quoc Vuong on the changes of the Red River's course.

²¹⁴ "陂堰之設, 所以蓄水, 而堤岸之設, 所以捍水. 海邦水國, 地方沉窪. 陂堰可少, 而堤岸不可無也." Gaspardone, "An Nam Chi (Nguyen)," 144.

The Shifting Course of the Red River

In four articles and book chapters published between 2014 and 2016, Li Tana urged historians of Vietnam to pay attention to "an untold story of reduction" of the eastern Red River Delta because this story reveals that "[b]etween the twelfth and fifteenth centuries, some significant changes occurred along the major course of the Red River." In particular, she argues that warmer and wetter weather conditions during the period between 900 and 1250/1300 enabled a population boom by the time of the Tran dynasty. This larger population engaged in more land reclamation in the eastern Red River Delta, where cultivators had already been densely concentrated prior to the twelfth and thirteenth centuries. A consequence of this demographic trend was the outmigration from the eastern to the western Red River Delta. Meanwhile, ecological degradation also increased, especially in the upper Red River region, due to this same population surge. She comments further that the combined effect of deforestation and erosion along the upper Red River and the construction of the cauldron-handle dikes in 1248

²¹⁵ Li Tana, "A Historical Sketch of the Landscape of the Red River Delta," *TRaNS: Trans-Regional and -National Studies of Southeast Asia* 4, no. 2 (June 10, 2016): 8, doi:10.1017/trn.2016.8.

²¹⁶ Li Tana, "Eastern Red River Delta," 324–27.

²¹⁷ Li Tana, "The Sea Becomes Mulberry Fields and Mulberry Fields Become the Sea': Dikes in the Eastern Red River Delta, c.200 BCE to the Twenty-First Century CE," in *Natural Hazards and Peoples in the Indian Ocean World: Bordering on Danger*, ed. Greg Bankoff and Joseph Christensen, Palgrave Series in Indian Ocean World Studies (New York: Palgrave Macmillan US, 2016), 69–70, doi:10.1057/978-1-349-94857-4 3.

²¹⁸ Li Tana, "Swamps, Lakes, Rivers and Elephants: A Preliminary Attempt towards an Environmental History of the Red River Delta, C. 600-1400," *Water History* 7, no. 2 (2015): 206–7; Li Tana, "Landscape of the Red River Delta," 9.

rapidly forced this large river to abandon its eastern discharging stream. Thus, the Red River started to take the stream flowing through modern Nam Dinh as its main course.²¹⁹

Li Tana's quest for an environmental history of the Red River Delta is significant since it offers a new reading of many familiar sources. Although she does not seem to be aware of an earlier Vietnamese study on the shifting course of the Red River, it is intriguing to bring these studies into conversation. In 1960, the late Vietnamese historian Tran Quoc Vuong (1934-2005) published some studies on the locations of pre-tenth-century political centers in the lowlands of northern Vietnam. In doing so, Tran Quoc Vuong traces the historical changes in the Red River. The story that Li Tana presents to account for the rise of the Tran dynasty in the eastern Red River Delta is quite similar to what Tran Quoc Vuong argues about the shifting locations of the ancient political centers in northern Vietnam prior to the tenth century. However, whereas Li Tana proposes that the Red River shifted its course in the thirteenth century, Tran Quoc Vuong describes a similar event that had occurred around the ninth and tenth centuries. He suggests that the rise of Tong Binh (modern Hanoi) from the seventh century onward "might be related to the shifting course of the rivers in northern Vietnam."

As Tran Quoc Vuong suggests, evidence supports the idea that the direction of the Red River made a small curve towards the southwest after it passed Viet Tri. This phenomenon was caused by the changes in the head-ward erosion of the Ca Lo and the Thiep rivers. As a result,

²¹⁹ Li Tana, "Sea Becomes Mulberry Fields," 63–65; Li Tana, "Swamps, Lakes, Rivers and Elephants," 204–9; Li Tana, "Landscape of the Red River Delta," 5.

²²⁰ Tran Quoc Vuong, "Dia Ly Lich Su Mien Ha Noi (Truoc The Ky XI) [A Historical Geography of the Hanoi Region, prior to the Eleventh Century], Part 2," *Nghien Cuu Lich Su* 17 (1960): 44–53.

²²¹ Tran Quoc Vuong, "Hanoi Region, part 1," 50. Tran argues that the Long Bien citadel was located in the region, which bordered the Ca Lo River in the north, the Cau River in the east, the Thiep River in the south, and Tien Du mountain in the west.



Figure 4.1. Approximate Locations of Long Bien and Tong Binh in the period from the fifth to tenth centuries

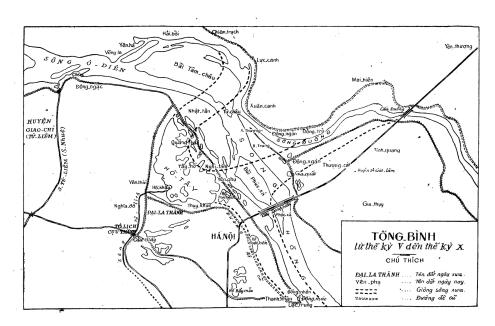


Figure 4.2. The Shifting Course of the Red River

Source: Tran Quoc Vuong, "Địa lý Lịch sử miền Hà-Nội (trước thế kỷ XI) [= A historical geography of the Hanoi region, prior to the eleventh century], Part II," *Nghien Cuu Lich Su* 17 (1960): 52. (Note: Capitalized toponym represents the historical name; Non-capitalized toponym represents the modern name. Hồ Tây [West Lake]; Sông Hồng [The Red River]; Sông Đuống [The Duong River]; Bãi Tầm Châu [Tam Chau Island]; "Giòng sông xưa" [The channel of the Red River prior to the tenth century]; "Đường đề cũ" [The path of the old dike])

these rivers as seen today are no longer connected with the main stream of the Red River. Since the Ca Lo and Thiep rivers lost their roles as the critical waterways that fed the Red River, the discharge from the Red River through the eastern delta decreased in volume. This phenomenon, Tran Quoc Vuong contends, eventually led the eastern political center in Long Bien to shift to Tong Binh in the west (See Figure 4.1). This event took place in the early seventh century. It is unclear where exactly in the area that Tran called "miền Hà Nội," or the Hanoi region, the Tong Binh citadel was located, but intensive human activities in this region clearly transformed this land between the seventh and the ninth/tenth centuries. In this regard, the most significant event is the formation of a big lake still present in modern Hanoi, West Lake.

Basing his ideas on an earlier argument by geographer Nguyen Thieu Lau (1916-67) about the changing direction of the course of the Red River, 223 Tran Quoc Vuong documented the birth of West Lake, a large lake in what is today Hanoi. In particular, he argued that the Red River used to curve through the area where West Lake eventually formed and then divided into two courses at modern Nghi Tam village (See Figure 4.2). The smaller course moved southeast into the same course of the modern Red River while the bigger course moved northeast into the Duong River. Due to the impact of erosion over time, West Lake was eventually formed as an oxbow lake. Further, this process then facilitated the movement of the water in the Red River toward the southeastern course, instead of the previous northeastern course (i.e., the Duong River in Tran Quoc Vuong's hypothesis).

_

²²² Tran Quoc Vuong, "Hanoi Region, part 1," 50–57.

²²³ Tran Quoc Vuong did not provide a detailed citation of Nguyen Thieu Lau's study but only mentioned the article title, which is "Một ít nhận xét về địa lý lịch sử thành Hà Nội" [A few comments on the historical geography of the Hanoi citadel]. Although Tran summarizes Nguyen Thieu Lau's study, there is so far no way to access Nguyen Thieu Lau's original article.

According to Tran Quoc Vuong, historical evidence also supports the notion that the Red River shifted its course in the above manner around the ninth and tenth centuries. As he points out, West Lake first emerged in dynastic chronicles in the early eleventh century. By the late twelfth century, the dynastic historians recorded that the court had to dredge the To Lich River. This event is relevant because, as Tran Quoc Vuong pointed out, the To Lich used to be linked to the Red River.²²⁴ Hence, the dredging of the To Lich River illustrates the reduction of the water flow into this River and this change was clearly caused by the formation of West Lake, which cut off the water supply from the Red River into this river. Meanwhile, as the Red River started to run through its new main course (i.e., the current southeast course), sedimentation occurred along the right bank of the Red River at Dong Ngan which eventually impeded the water flow from moving into the Duong River. This phenomenon, Tran notes, explains why people had to dredge the Duong in later periods.²²⁵

If the main course of the Red River shifted in the ninth and tenth centuries in tandem with the birth of West Lake as shown by Tran Quoc Vuong, how do we assess Li Tana's argument and especially the reasons behind the building of the cauldron-handle dikes in 1248? In fact, most of the evidence that Li Tana uses to illustrate the significant reduction in the speed of the natural expansion of the eastern Red River Delta from the tenth century onward supports Tran Quoc Vuong's analysis. Meanwhile, an examination of some sources offered by Li Tana as evidence for the shifting course of the Red River between the thirteenth and fifteenth centuries can reveal alternative interpretations. One source is a description of the location of the Bac Giang Route in the Tran dynasty (modern Bac Ninh). This description can be found in the *Brief Record*

²²⁴ Tran Quoc Vuong, "Hanoi Region, part 2," 49–50.

²²⁵ Tran Quoc Vuong, "Hanoi Region, part 2," 50–51.

of Annam (安南志略 An Nam Chí Lược), an account written by a Vietnamese refugee at the court of the Yuan dynasty in the late thirteenth and early fourteenth centuries. The Red River, referred to as the Lo River in this source, is mentioned as one that "is divided and reached the sea from here" (Li Tana's translation). Based on this detail, Li Tana argues that the Red River "branched in Bac Giang and from there reached the sea" while its modern main course, she notes, "does not even touch the Bac Ninh area."

In my opinion, this source can be interpreted differently. Just as is shown in Li Tana's translation, the Bac Giang Route was marked as a location where the Red River was divided into several other waterways. Yet, no clear information therein suggests that the Red River flowed through the Bac Giang Route in order to reach the sea. Instead, one can only infer from this source that the Lo River branched from the Bac Giang Route before its water was discharged into the sea. In other words, it is not clear if the fourteenth-century writer identified the Red River section below its diverging point in the Bac Giang Route as a part of the Lo River. He also did not point to one specific stream through which the water of the Lo River was discharged. Hence, this source is not sufficient to contend, as Li Tana argues, that the main course of the Red River flowed eastward in the fourteenth century.

In another source discussed by Li Tana, the Phu Luong River (often understood as a historic name for the Red River) was described as a watercourse that "comes from the south to arrive at the north of the capital (i.e., Thang Long) and runs southeast, crossing the lands of

^{**}Ze6 "瀘江水分, 通於海." The Sikuquanshu version does not contain the word "thuý" (水) while the Chen Chingho and Wu Shangqing versions do. In this context, this word, meaning a stream, can arguably serve as a modifier of the term Lo River, which could suggest that this was a record of a tributary of the Lo River instead of the river itself. Le Trac, An Nam Chi Luoc 安南志略 [Brief Records of Annam], trans. Chen Ching ho (a.k.a. Tran Kinh Hoa) (Hue: Vien Dai Hoc Hue, 1961), 19 (Han); Le Trac, An Nam Chi Luoc 安南志略 [Brief Records of Annam], ed. Wu Shangqing (Beijing: Zhonghua shuju, 2000), 18; Le Trac, An Nam Chi Luoc, SKQS, 1/2b.

²²⁷ Li Tana, "Swamps, Lakes, Rivers and Elephants," 206.

Thuan An, Thuong Hong, Ha Hong prefectures and meandering all the way to the sea." It is possible that Li Tana is correct in pointing out that the reference to the "southeast course" in this account was not the same as the current main course of the Red River, which flows towards Nam Dinh to empty its water at the Ba Lat estuary. However, as far as I am aware, there is no available evidence that connects this southeastward waterway with any visible modern river in the eastern delta, whether it be the Bach Dang or the Thai Binh. Combining the information from the above-mentioned source with the An Nam map (introduced in Chapter 2) shows that the so-called Phu Luong River indeed referred to a section of the modern Red River, which stretched from Thang Long-Hanoi to Khoai Chau (Figure 4.3). Since three prefectures mentioned in the above-mentioned account of the "southeast course" can be roughly identified in this early map, there is a way to demonstrate that this waterway was a section of the modern Red River. The key entails the locations of Khoai Chau and Nam Xuong because both appear in this map and remain recognizable in modern times. Khoai Chau is located on the right bank of this watercourse and Nam Xuong on the left.

In short, the reference to the Phu Luong River in a source like this Ming description did not exactly mean the modern Red River. The reason for this is that this writer considered only the middle section of the Red River as the Phu Luong. He arguably did not use that term to refer to the dynamic lower Red River, where the main stream branched off into multiple

²²⁸ "南至府城之北, 東南流, 歷順安, 上洪, 下洪諸府之境, 縱橫貫串以達於海." Nguyen Van Sieu and Bui Quy, *Dai Viet Dia Du Toan Bien 大越地輿全編 [Complete Book of Geography of Dai Viet]*, A.72, 1900, 1/56a. Li Tana provides a similar translation of this source. Li Tana, "Swamps, Lakes, Rivers and Elephants," 206. In fact, this source came from the *Essentials of Geography for Reading History* (讀史方輿紀要 *Dushi fangyu jiyao*) by Chinese scholar Gu Zuyu 顧祖禹 (1631-92), and Nguyen Van Sieu cited it in his volume. Although it is unclear which sources that Gu based his account on, the description of the Red River provided by Gu cannot date to the period earlier than the fourteenth century. This is because the prefecture names of Thuong Hong and Ha Hong only appeared at some point in the fourteenth century. Li Tana misplaced this source as a passage from Gu Yanwu's *Tianxia junguo lingbing shu*.

watercourses.²²⁹ Hence, if Li Tana is correct that demographic and economic growth occurred in the earlier part of the Tran dynasty because of wetter and warmer weather conditions, historical evidence does not support other components of her argument. As shown above, since the sources pertaining to the course of the Red River do not support the idea that this stream shifted its course between the thirteenth and fifteenth centuries, it cannot be established that the decline of the eastern Red River Delta region and an east-west migration pattern would have related to the construction of the dikes and the shifting course of the Red River.

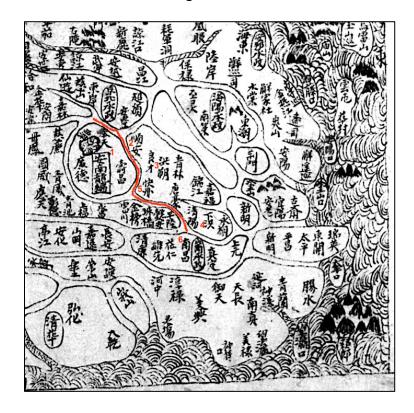


Figure 4.3. A "Chinese" Account of the Phu Luong River

Note: *See Figure 2.2 for the source of this graph. **1- Thang Long-Hanoi (showed in the map as "the Long Bien citadel of Annam"; 2- Thuận An; 3- Thượng Hồng (showed in the map as Hồng Sóc); 4- Hạ Hồng; 5- Khoái Châu; 6- Nam Xương; 7- Thái Bình khẩu (i.e. the Thai Bình river mouth).

-

²²⁹ This topic requires a separate study. Here, it is worth noting that when the Red River passes through Khoai Chau and Nam Xuong, an arm of this river becomes the Luoc River. Some historians have pointed to the significance of this branched stream, largely because through this river, people could sail into the inland of northern Vietnam via the Thai Binh river mouth.

The Impact of Climate Change

Some historians, including Li Tana, have argued that the climate became wetter when the cauldron-handle dikes were first built in 1248.²³⁰ Li Tana's idea is related to a historiographical issue that European historians have termed as the "Medieval Warm Period" (a.k.a. the Medieval Climate Anomaly). In an attempt to understand the possible connection between this climate condition and historical processes in non-European societies, the noted historian Victor Lieberman suggested about a decade ago that,

... stronger monsoons typical of the Medieval Climate Anomaly contributed to the early success of the mainland "charter states" of Pagan in Upper Burma, Angkor in Cambodia, and Dai Viet in northern Vietnam, and that after circa 1300 the onset of the desiccative Little Ice Age helped to undermine those same polities.²³¹

Here, Lieberman spoke of the period c. 950-1300 and his generalization of a wetter condition mostly came from, as the historian himself noted, "areas near the Red River Delta, including southeast China and northern Thailand." The climate question that Lieberman put forth in the case of Dai Viet (northern Vietnam) is that if dry areas in Pagan and Angkor benefited from stronger monsoons, meaning the longer rainy seasons, how did the same condition affect the inhabitants of the Red River Delta? In answering this question, Lieberman suggested that the system of dikes that was produced at this time demonstrates at least one way in which

²³⁰ Li Tana, "Landscape of the Red River Delta," 11.

²³¹ Victor Lieberman and Brendan Buckley, "The Impact of Climate on Southeast Asia, circa 950–1820: New Findings," *Modern Asian Studies* 46, no. 5 (2012): 1052, doi:10.1017/S0026749X12000091.

²³² Victor Lieberman, *Strange Parallels: Integration on the Mainland: Southeast Asia in Global Context, c.800–1830*, vol. 1 (Cambridge: Cambridge University Press, 2003), 363.

Vietnamese peopled responded to the changing climatic condition.²³³ While Lieberman had limited information about northern Vietnam, in the last three years Li Tana has attempted to fill this gap. However, instead of testing Lieberman's theory on the Medieval Warm Period in the case of northern Vietnam, Li Tana has used this idea as a departure point to establish an argument about the dense concentration of population and wealth in the eastern Red River Delta in the twelfth and thirteenth centuries. As shown above, she argues that northern Vietnam benefitted from a warmer and wetter weather during the Medieval Warm Period and that this climatic condition led to a demographic surge. The population pressure was hard on the eastern Red River Delta and a consequence of this pressure was the migration into the western delta at the end of this Medieval Warm Period. While such a working hypothesis for the impact of a similar Medieval Warm Period in Vietnamese history is enticing, we are still awaiting further concrete evidence from meteorological studies.

Researchers who work more directly on climate history have so far offered little information that can enable us to document the history of climate change in the Red River Delta. Curiously enough, about three decades ago a researcher in hydraulic engineering named Nguyen Xuan Tuu carried out a brief survey of climate change in Vietnamese history. The article was brief and the evidence it offered was not well contextualized. Most of the evidence was drawn from the dynastic histories and it is not clear on what basis the author of this article defined the cold or warm level of each historical period. Nonetheless, there were some suggestive generalizations. For instance, the period from the third and fourth to the tenth centuries can be considered to have a warmer climate, compared with the subsequent two centuries. The thirteenth and fourteenth centuries, meanwhile, became warmer while most of the fifteenth

²³³ Lieberman confirms this point in Lieberman and Buckley, "Climate on Southeast Asia," 1062.

century was believed to have experienced a colder condition.²³⁴ If these generalizations can be accepted to a certain degree, there is room to revisit the hypothesis of a Medieval Warm Period in northern Vietnam. So far, the evidence of temperature fluctuations through the Ly to the Tran dynasties is unclear. Nguyen Xuan Tuu's evidence does not support the idea that the climatic conditions from the tenth to the twelfth centuries would favor the expansion of rice farming. The generalization offered by Nguyen Xuan Tuu also calls the climatic discrepancies between the thirteenth and fourteenth centuries into question. In other words, if there is not a significant climate fluctuation in the thirteenth and fourteenth centuries, it cannot be established that the Medieval Warm Period factor contributed to the rise and fall of the Tran dynasty.

Recently, a few studies on pollen sediments in the Red River Delta have started to draw greater attention to issues of climate change. However, these studies focus on the last deglaciation or geological period that ended some 6000 years ago. Attention to the more recent past is still limited. To the best of my knowledge, only one palynological study has dealt with the question of climate change, and that study focuses on the southeastern coast of northern Vietnam. In this study, Zhen Li and his colleagues define the climate condition of our present time (approximate from 1876 to 2006) as being warm and dry. They found that the period from 466 to 1386 experienced the same condition as that of the present time while a cool and wet climate characterized the centuries between 1386 and 1876. While these findings do correspond with the Medieval Warm Period thesis, this study also points out that the climate became drier after 1176, which seems to challenge Lieberman's hypothesis on the stronger impact of monsoons at

_

²³⁴ Nguyen Xuan Tuu, "Buoc Dau Tim Hieu ve Bien Doi Khi Hau o Nuoc Ta trong Lich Su [A prelimary study of Climate Change in Vietnamese history]," *Nghien Cuu Lich Su* 213, no. 6 (1983): 61–62.

²³⁵ Zhen Li, Yoshiki Saito, Eiji Matsumoto, et al., "Climate Change and Human Impact on the Song Hong (Red River) Delta, Vietnam, during the Holocene," *Quaternary International* 144, no. 1 (2006): 4–28, doi:10.1016/j.quaint.2005.05.008.

that time. However, a consideration of the topographical factors of the areas in which evidence for this study was collected suggests a different point. Even in later periods, the southeastern Red River Delta or the region that would become Son Nam in the period from the fifteenth to the eighteenth centuries was often referred to as a wet zone (see Chapter 2). While further research will need to be conducted, the idea that the southeast coast of northern Vietnam experienced a somewhat drier climate after 1176 might suggest that the land in this area became more favorable for cultivation.

Ultimately, more analyses of climate fluctuations are needed in order to confirm the presence of the Medieval Warm Period in northern Vietnam. For objective evidence, more palynological research in the Red River Delta will be helpful. To read the climate information from written sources like the dynastic chronicles requires a deeper level of contextualization. At any rate, there is a consensus that some significant changes in the interactive relationship between the Red River Delta inhabitants and their environment took place between the thirteenth and fifteenth centuries. Hence, the construction of dikes in the mid-thirteenth century can be explained by a greater concern on the part of the royal court about a wetter climate. A quick reading of the well-known dynastic history, the *Complete Book*, indeed supports this view.

According to this source, the first three decades of the thirteenth century passed with only one record of a drought, in 1223, and no record refers to a wet-weather condition. By contrast, from the 1230s to the end of that century, while there are 4 records of droughts, there are 19 records relating to river swelling, tropical cyclones, hail, and dike bursts. While these statistics give a dry/wet weather ratio of 1:5, they also suggest that the state was much more aware of the need to

address water control.²³⁶ Although these records are probably not complete, they do appear to reveal an increase in a wetter climate in the latter part of the thirteenth century.²³⁷

However, there must have been an increase in human activities on the land as well, and this likely resulted in a perception of the greater vulnerability of the unstable weather conditions. To draw an analogy to a notion offered by Lieberman and Buckley, whereas the negative impact of climate waned after 1450 because "the wider societies [were], less vulnerable to climatic pressures."²³⁸ people would have felt more climate-induced pressures during the period from the thirteenth through the fifteenth centuries as they sought to farm more land in order to feed an increasing population. From this perspective, diking seems to have been an effective investment that enhanced state revenue as it offered protection for the harvests. It should be noted that the cost of dikes was only worthwhile when there was abundant rainfall for irrigation. Although the first cauldron-handle dikes might have been built as an ad hoc solution for flood control, by the fifteenth century the construction of river dikes became an indisputable duty of the state. With the building of dikes turning into an established practice, the landscape was transformed remarkably as new farmlands expanded. To maximize the land use for the cultivation of rice, new challenges were posed and part of these new developments could be seen from the efforts to secure a double-cropping system.

²³⁶ See the *Complete Book*. Drought events appear in the records for the years 1241, 1242, 1269 and 1289 while events relating to wet-weather condition in 1236, 1238, 1240, 1243, 1245, 1249, 1255, 1262, 1263, 1265, 1268, 1269, 1270, 1274, 1277, 1283, 1285, 1290, and 1298.

²³⁷ Buckley, Fletcher, Wang, et al., "Monsoon Extremes," 11.

²³⁸ Lieberman and Buckley, "Climate on Southeast Asia," 1053.

Is the *Chiem* Crop the Champa Rice?

For the inhabitants of the Red River Delta, to maintain double cropping demanded knowledge about both the temporal and spatial distribution of rainfall. As briefly mentioned in Chapter 3, the inhabitants in the Red River Delta were credited since early times with the capability of harvesting twice every year. If the early sources are accurate and their descriptions were about the rice crop, then such a pattern of double cropping endured until the emergence of modern agriculture. However, the stability of this cropping pattern was not by any means achieved easily. Instead, the farmers in the Red River Delta struggled for centuries to farm their lands. To review this history, a critical issue that needs to be first addressed is the absence of Champa rice in northern Vietnam.

Chiêm and mùa are the names of two important rice crops in modern Vietnam. As shown below, these terms are generally equated with the fifth- and the tenth-month crops in the context of northern Vietnam. ²³⁹ In addition, some people relate the *chiem* crop, hence the summer crop in northern Vietnam, with Champa rice. This relation is based on two assumptions. First, the name of this harvest crop, *chiem*, is the same as the name for the Cham, the people of the kingdom of Champa. Some scholars have therefore proposed that Vietnamese in the Red River Delta started to cultivate this variety of rice after certain rice cultivars had been imported from Champa. Second, because the quick-ripening and drought-resistant Champa rice had a significant impact

There are differences concerning the farming seasons of the main and complementary crops between northern and southern Vietnam. But it is a very common explanation that the m u a rice was the autumn-harvested crop and the *chiem* the summer one. A telling example of this way of understanding is the fact that almost all Vietnamese translations of old Han texts have rendered the Sinitic names of the two rice seasons as the *chiem* and the *mua* crops.

on the agricultural development of Song China (960-1279),²⁴⁰ the conflation of the *chiem* crop with Champa rice has led some scholars to speculate on the same agricultural developments in Vietnamese history.²⁴¹

However, there is no concrete evidence in favor of the idea that the *chiem* crop in northern Vietnam originated from Champa. Nonetheless, the idea that the fifth-month crop is Champa rice has a history. For instance, a famous eighteenth-century source that includes some information about Vietnamese rice, Le Quy Don's *Catalogued Discourses in the Library* (芸臺類語 *Vân Đài Loại Ngữ*), made that point about *chiem* rice. In this account, Le Quy Don reviewed several Chinese sources that directly pointed to the introduction of the drought-resistant and quick-ripening Champa rice into Song China. ²⁴² In so doing, Le Quy Don first found that one of these Champa rice cultivars, the *cai ha bach* (蓋下自 Chn. *gaixiebai*), was harvested in the fifth lunar month. Because the summer crop in many areas in northern Vietnam was similarly harvested in the fifth month, Le Quy Don mistook it for Champa rice.

Moreover, Le Quy Don's speculation about the relation between certain summer-harvested rice cultivars and Viet-Cham interactions is also problematic. He wrote, "Nam Giao (i.e., assumedly, northern Vietnam) used to be adjacent to the land of the Chiem people (i.e., Champa), therefore many rice cultivars harvested in summer are named *chiem*." Although this

²⁴⁰ Ping-Ti Ho, "Early-Ripening Rice in Chinese History," *The Economic History Review* 9, no. 2 (1956): 200–218, doi:10.2307/2591742; Mark Elvin, *The Pattern of the Chinese Past: A Social and Economic Interpretation* (Redwood City, CA: Stanford University Press, 1973), 121; Bray, *Agriculture*, 6, part 2:492–95.

²⁴¹ Lieberman, Strange Parallels, Vol. 1, 1:386.

²⁴² Le Quy Don, *Van Dai Loai Ngu*, *A.1258*, 9/45a.

²⁴³ "南交與占人相接, 故夏熟穀多名曰占." The latter part of this sentence might be understood differently. For instance, it can be read as "there are many rice crops harvested in summer and these are called *chiem.*" Le Quy Don, *Van Dai Loai Ngu, A.1258*, 9/44b.

terminological observation is reasonable to some extent, it does not support the idea that Champa rice was imported into the Red River Delta.²⁴⁴ Furthermore, while Chinese sources do not make it clear whether the Champa varieties were upland or lowland rice, Randolph Barker has recently reported that Champa rice is an *aus* variety, meaning that it is of upland origin.²⁴⁵ That is to say, there is not a strong possibility that the *chiem* rice in the Red River Delta was also a Champa variety.

In regard to this issue, after having studied a variety of rice cultivars not only in northern Vietnam but also in the central regions (i.e., the former land of Champa), modern Vietnamese agronomist Dao The Tuan admits that it is unclear whether or not the *chiem* rice originated from Champa. He offers another hypothesis, which has been so far the most acceptable explanation. As Dao finds no evidence for the presence of *chiem* varieties in Central Vietnam, he argues that *chiem* rice, highly resistant to cold, drought, acid and saline, was indeed native to the Red River Delta. In this hypothesis, the term *chiem* is thought to derive instead from the ecological conditions in which this rice species grows, namely swampy land.²⁴⁶

Other historians of Vietnam like Sakurai and Li Tana have accepted Dao The Tuan's argument. But the story of the drought-resistant and quick-ripening Champa rice in Chinese history seems to still overshadow the discussion of Vietnamese rice crops, even when scholars of

²⁴⁴ Indeed, in Le Quy Don's account, *chiem* was used to name five out of eight rice cultivars that were suited to the summer crop, including *chiêm di* (占貽), *chiêm dự* (占豫), *chiêm vàng* (占黃), *chiêm bầu* (占保), *chiêm hom* (占歆). Note, these names were read in Vietnamese Nom pronunciation. Le Quy Don, *Van Dai Loai Ngu*, *A.1258*, 9/41a.

²⁴⁵ Randolph Barker, "The Origin and Spread of Early-Ripening Champa Rice: Its Impact on Song Dynasty China," *Rice* 4, no. 3–4 (December 2011): 185, doi:10.1007/s12284-011-9079-6.

²⁴⁶ Dao The Tuan and Le Duc Thinh, "Su Phat Trien cua He Thong Nong Nghiep Dong Bang Song Hong [=The Development of Agricultural System in the Red River Delta]," in *Làng ở Vùng Châu Thổ Sông Hồng: Vấn đề còn bỏ ngỏ* [= The Village in Questions], ed. Philippe Papin and Olivier Tessier (Hanoi: Lao Dong, 2002), 186. Thanks Li Tana for pointing to this source in her latest chapter. Li Tana, "Sea Becomes Mulberry Fields," 60.

Vietnam do not relate the fifth-month crop to Champa rice. Sakurai shows that the failing fifthmonth crop due to drought was the primary cause for peasant drain and the abandonment of villages in the period from the fifteenth to the eighteenth centuries. ²⁴⁷ Following Sakurai, Li Tana makes the same argument concerning the impact of drought on the fifth-month rice, but, in the period prior to 1500. ²⁴⁸ Alexander Woodside, however, has looked at tenth-month rice (the autumn-harvested crop) and suggests that Vietnamese peasants in the eighteenth and nineteenth centuries tended to grow this crop because it "would ripen more rapidly." ²⁴⁹ On balance, it is difficult to assess the value of *chiem* rice in the Red River Delta by tracing the attributes of any rice cultivars subsumed under the name of this rice crop. Meanwhile, if Dao The Tuan's point about the swampy environment of the *chiem* crop is correct, there is an alternative way to look at this issue, namely, the impact of land use and water management on this crop.

Double Cropping and the Summer Harvest

Even though the origin of the *chiem* crop in northern Vietnam is not likely to have been related to Champa rice, Ho Ping-ti's discussion of Champa rice in Chinese history offers some insights into the relationship between a new crop and land use. Ho Ping-ti reminds us that the success of Champa rice did not merely depend on its ability to cope with drought or to mature in a short time. More important, he argues, was the expansion of land use for rice farming. For

²⁴⁷ Sakurai Yumio, "Peasant Drain and Abandoned Villages in the Red River Delta between 1750 and 1850," in *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*, ed. Anthony Reid (London: Palgrave Macmillan UK, 1997), 134, 151.

²⁴⁸ Li Tana, "Eastern Red River Delta," 324–25, 334–35.

²⁴⁹ Alexander Woodside, "The Relationship between Political Theory and Economic Growth in Vietnam, 1750–1840," in *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*, ed. Anthony Reid (London: Palgrave Macmillan UK, 1997), 255.

instance, new varieties with different lengths of time required for maturity meant that rotation could be more effective and that less fertile land could be put in use.²⁵⁰ In light of this argument, an understanding of *chiem* rice can focus on the local areas where *chiem* rice was dominant. This inquiry thus invites the question of how double cropping worked in northern Vietnam.

To describe the system of double cropping in northern Vietnam, many pre-twentieth-century written sources mention two Sinitic terms, namely, the summer rice/crop (夏禾/田 hā hoà/điền) and the autumn rice/crop (秋禾/田 thu hoà/điền). These terms connote the harvesting time of the rice crops in northern Vietnam. In the nineteenth century, Tran Nguyet Phuong's Nam Bang Thao Moc (Plants of the Southern Kingdom) described the autumn rice as a crop that was harvested in the tenth lunar month (ca. November). In terms of the summer harvest, the same writer reported that people would prepare the rice nursery beds in the eleventh lunar month (ca. December) and that this crop would be reaped in the fifth lunar month (ca. June) of the following year. Note, these Sinitic terms do not completely match the actual agricultural rhythm because the tenth-month crop should have been called the winter harvest. Furthermore, although such an account is generally applicable to the farming of rice in the Red River Delta, the nursing and harvesting time of each crop varied from one area to another. At any rate, this perception of crop rotation does correspond to Pierre Gourou's descriptions of agricultural activities in northern Vietnam in the 1930s. After this French scholar started to refer to two

²⁵⁰ Ho, "Early-Ripening Rice in Chinese History," 210, 213–14.

²⁵¹ Tran Nguyet Phuong, *Nam Bang Thao Moc 南邦草木 [The Plants of the Southern Kingdom]*, A.154, 1858, 80a–81b. Note that some sources wrongly associate Nguyet Phuong as a penname of Tran Van Can (1858-1938).

²⁵² See The Historiography Insitute of the Nguyen Dynasty, *Dai Nam Nhat Thong Chi, A.69*, "Khi Hau" Sections.

²⁵³ Gourou, *The Peasants of the Tonkin Delta*, 1:406.

main crops in the Red River Delta as the fifth-month and the tenth-month rice crops, people have followed him in using these terms in English writings.

In the Vietnamese language, the double-cropping system has been defined as the rotation between the *mua* and *chiem* crops. Unlike their Sinitic counterparts, these terms hint at the different contribution of each crop. As seen in a fourteenth-century source, the *Brief Records of Annam*, the main rice crop was harvested in the tenth lunar month. On this occasion, the royal court would "prepare offerings to worship their ancestors; this ceremony was called the Harvest Offerings (薦新 *tiến tân*). Members of the royal court were then allowed to revel in the good time by going to see the harvesting of rice and by going hunting." While the *Brief Records of Annam* described various cultural practices during a yearly cycle, contrary to this emphasis on the celebration of the tenth-month crop, there was no reference to the fifth-month rice crop. 255

The seeming negligence of the fifth-month rice in the *Brief Records of Annam* indeed can be explained by the perception of *mua* and *chiem* in the Vietnamese languages, as it was captured in some seventeenth- and eighteenth-century sources. For instance, Alexandre de

²⁵⁴"良月朔具饌祭先、曰薦新、縱臣僚視田收稻捕獵為樂." Le Trac, An Nam Chi Luoc, SKQS, 1/19a.

²⁵⁵ There is a controversial record in the *Brief Records of Annam (An Nam Chi Luoc)* that apparently reported on the early presence of double cropping in northern Vietnam. However, I will suggest that this record cannot be used as evidence for a double-cropping system of wet rice that dated prior to the fourteenth century. The record reads, "任延云: 田種白穀, 五月作十月登; 赤穀十二月作四月登. 所謂國稅兩熟之稻, 鄉貢八蠶之綿. 麻 粟地狹. 種秈, 二麥無之." Le Trac, An Nam Chi Luoc, SKQS, 15/13a. I break this entire statement into two, divided by the term 麻. The former part is a reiteration of the words of a Han official from the first century C. E. by the name of Nham Dien. Some other Chinese sources provide cross-reference, such as the Shuijing zhu. Further, the Shuijing zhu shows that Nham Dien made this comment only on the area of what becomes today central Vietnam. (Li Daoyuan, Shuijing Zhu 水經注 [Annotated Classic of Waterways], Sikuquanshu, c. late 5th and early 6th centuries, 36/21b, http://ctext.org/library.pl?if=gb&res=6719&remap=gb.) The latter part of this source, however, should be taken as Le Trac's own statement because it appears that no Chinese sources included it. (I discussed this part on note 176). According to Nham Dien's remark, local people annually maintained two farming seasons, One farming season started in the fifth lunar month (ca. June) when the white grain was grown and it was then harvested in the tenth lunar month (ca. November). Another farming season started in the twelfth lunar month (ca. January) to grow the red grain and the harvesting time was the fourth lunar month (ca. May) of the following year. While this agricultural rhythm is close to the pattern of double cropping in later periods, no available information can identify the specific species of the mentioned white and red grains.

Rhode's 1651 *Dictionarium* recorded that *chiêm*, *mùa chiêm* (with *mùa* meaning the harvest season), or *lúa chiêm* (the rice harvested in the latter season) all referred to the secondary harvest in an annual agricultural cycle.²⁵⁶ While de Rhodes's dictionary does not offer a rendering of the term *mùa* as the prior harvest season, this meaning was captured in another missionary dictionary compiled about a century later. A Vietnamese-Latin dictionary drafted by the noted Roman Catholic missionary Pigneau de Béhaine (1741-1799) in 1772 provides that "mùa mùa" was a phrase referring to the first harvest (*prior messis*). There is not any reference to *chiem* as a name of a harvest season in this eighteenth-century dictionary, but it reports that the latter harvest (*posterior messis*) was referred to as "mùa trái," which literarily means the "inverse season."²⁵⁷

In short, it can be speculated that initially people might have largely depended on one harvest season. This is why the term of the first harvest, *mua*, was identical with the term referring to the harvest season. Yet, at some point, people then started to farm the *chiem* crop or the secondary crop in addition to the main *mua* rice. To be a secondary crop means that *chiem* rice did not grow in the prime time of the year. Hence, it can be surmised that the rise of the summer harvest as a regular crop did not occur with little effort or in a short period of time.

Anxieties over the instability of the summer harvest are evident in the early dynastic histories, especially in the period prior to the fifteenth century. Although a natural disaster could threaten any crop, dynastic historians seemed to pay more attention to any abnormality relating to the summer rice. They twice reported, in the records of 1032 and 1117, that a nine-ear stalk (一莖九穗 nhất hành cửu tuệ) of summer rice had been presented to the king as it was considered as a good omen. It was a common belief in early China that a rice stalk that could

²⁵⁶ Rhodes, *Dictionarium Annamiticum*, 58, 153.

²⁵⁷ Pierre-Joseph Pigneau de Béhaine, *Dictionarium anamitico-latinum*, 1772, 315, http://archive.org/details/DictionariumAnamiticoLatinumPigneaux.

bear six or nine ears was considered as a positive portent. But that this particular good omen was associated with the summer rice hints at the instability of this harvest.²⁵⁸ In the omen-preoccupied mind of the premodern Vietnamese rulers, the greater the vulnerability of an enterprise, the more frightening it was. In other words, the greater attention to the summer rice might not mean the greater importance of this crop. It instead might point to an episode in which there was a high risk that this harvest could fail.

There is other evidence that supports the idea that people weighed the two rice crops differently in the period prior to 1500. As the tenth-month rice was the main harvest, reports about this harvest usually mention it by name.²⁵⁹ By contrast, there were efforts to highlight either the success or the failure of the summer rice. A record in 1278 reported that "the rice of the summer-harvest fields failed to ripen" and the one of 1321 reported the opposite situation, using the same emphasis on "the summer fields." The lone appearance of an earlier report on the collecting of taxes that was imposed on the summer fields in 1155 seems to suggest either that this was an unusual practice or that this was the initial action of the state over the control of this secondary crop.²⁶⁰

If the *mua* rice stretched from the early summer to the tenth lunar month (i.e., around November) because this was the best time of the year for growing rice since the temperature was high and there was ample rainfall, the summer rice or any crop that occurred in the other part of the year had to potentially endure drought. Note, in addition to the gain of another rice crop, the

²⁵⁸ This is not to say that similar omens were not spotted regarding the autumn crop. For instance, there was a record in the same dynastic history that the tenth-month rice in 1280 was bountiful and that double-ear rice was sighted in the fields of Tra Kieu (supposedly located in modern Hung Yen).

²⁵⁹ One can find a few of general reports on "a good harvest" in the *Complete Book* for the tenth month in years like 1030, 1270, 1280, and 1491.

²⁶⁰ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 4/12a.

summer rice was deemed worthwhile also because, in contrast to the autumn rice, it avoided the hazard of inundation. The paucity of information in the sources does not enable us to gain an understanding of the continuity in the rise of the summer crop. By the late fifteenth century, the government nonetheless showed much activism in its concern over the summer rice. Since lacking water for irrigation was the biggest challenge to the farmers of the summer harvest, strategies to nurture this secondary crop were developed.

An event in 1484 demonstrates the existence of a technique that would store the rainfall water from the rainy season for the subsequent summer-harvested crop. In the early autumn of 1484, the central court ordered that in order to ensure that the summer rice of the following year could be cultivated, fields had to be bounded with polders. The main purpose of this technique was to hold water for the farming of the summer-harvest crop, which would start at the end of that year. While the focus on summer rice in that year was an *ad hoc* solution for the destruction of the autumn rice by floods, this project was conducted under a state order and the court directly sent its agents to execute the work. According to dynastic historians who recorded this event, in order to supervise local people to build these polders, relevant officials first had to investigate the contour of the land. To reserve the water, they were also urged to "seize the time when the flooded water had started to withdraw a little." ²⁶¹

While many policies continued to focus on the tenth-month rice, the late fifteenth century witnessed some first attempts by the state to take the farming of the summer rice into consideration. This situation is clearly demonstrated in a memorial that a local official presented to the king in 1486. As King Thanh Tong's administration tried to define the best time for construction on the basis of the people's down time from farming, a magistrate of Thu Tri

²⁶¹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 13/40b-41a.

district (modern Thai Binh) by the name of Tran Nhu Vi presented a memorial. Tran Nhu Vi's appeal was a request for the court's consideration of a local variation in regard to the scheduling of corvée labor. He argued that the busy time for farmers who worked on the autumn fields and for those on the summer fields were starkly different. While it was not until the second and third lunar months that farmers who farmed the autumn fields needed to start working, those who farmed the summer fields were particularly busy toward the end of the lunar year. Hence, according to Tran Nhu Vi, if corvée labor for public construction was scheduled solely in the last months of the year, such a policy would not take into consideration the farmers who worked on the summer fields. Although there is no report on the court's reaction to Tran Nhu Vi's memorial, it seems that the reason why it was recorded in the dynastic histories is because this demand was accepted. Otherwise, dynastic historians would have made a clear comment about any opinion of the court against such a memorial.

If as seen in the late fifteenth century, the state took decisive actions to promote the summer rice crop in addition to the main crop in the wet season, in 1522 pests that threatened the autumn harvest and a drought that menaced the summer crop became the two biggest concerns of the authorities over the farming of rice. In an attempt to relieve the impact of pests on the tenthmonth rice in that year, the king followed a custom of praying to the Sky God (see more in Chapter 5). To the Sky God he addressed in his memorial an awareness of the God's warning signs, including "the ripening autumn rice that suffered pests and the new summer rice that was hit by drought." Although some readers might find these phrases cliché, their appearance in a

_

²⁶² Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, 13/52a.

²⁶³ "秋禾就熟, 適被蝗虫, 夏務興功, 又遭旱熯." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, 15/59b.

ritual document issued by the king suggests that the summer rice was well integrated into the kingdom's agricultural cycle.

Having said that, the regular practice of double cropping from the fifteenth century onwards should be understood in light of regional discrepancies. In discussing the wet rice crops in modern Vietnam, Dao The Tuan points out three main cropping systems, including a wet season crop in high fields, double cropping in lower fields, and a crop after the recession of the floods in even lower depressions.²⁶⁴ In premodern Vietnam, these crop systems would have corresponded with areas that produced the autumn harvest, engaged in double-cropping and focused on the summer harvest. As seen in the early nineteenth century, Le Chat showed that the cropping systems varied from one region to another. Based on Le Chat's records, it is unclear which districts in each region (or province) practiced double cropping because the author only made a generalization of the autumn/summer harvest ratio. Take the Four Safeguards (i.e., the four regions surrounding the capital in Thang Long/Hanoi) for instance. Most of the areas in the eastern Safeguard of Hai Duong depended only on the autumn crop, while people in the three other Safeguards grew both summer and autumn rice. The general pattern was that more land was used for the autumn crop than for the summer one. But the reverse pattern existed in certain districts in the southern Safeguard of Son Nam, which pointed to the possibly higher capacity of the land to support the summer crop. ²⁶⁵

_

²⁶⁴ Dao The Tuan, "Types of Rice Cultivation and Its Related Civilizations in Vietnam," *East Asian Cultural Studies* 24 (1985): 48. Cited in Richard A. O'Connor, "Agricultural Change and Ethnic Succession in Southeast Asian States: A Case for Regional Anthropology," *The Journal of Asian Studies* 54, no. 4 (November 1995): 982, doi:10.2307/2059956. Note, O'Connor reads Dao The Tuan's concept of "high fields" as highland.

²⁶⁵ Le Chat wrote this account in the nineteenth century but he described the farming conditions as seen in the late eighteenth century. Hence, his account of administrative regions generally matched the regional layout discussed in Chapter 2. Le Chat, *Bac Thanh Du Dia Chi 北城興地誌 [Gazetteers of Bac Thanh (i.e., Northern Vietnam)]*, Paris.SA.HM.2190, A.1565, 1845.

The idea that Son Nam was the biggest producer of summer rice reinforces several points that this project has so far addressed. First, as we saw in Chapter 3, there was a pre-1800 perception of Son Nam as a wet region. Second, if we follow Li Tana's point that there was a pattern of migration from the eastern to western Red River Delta, the location of Son Nam in the western part of this delta would suggest that much of the land there was opened relatively late. Third, by the fifteenth century, the dike system in the Red River Delta must have been quite extensive so that it was generally able to prevent flooding during the rainy season. Such a characteristic of the landscape means that to accumulate enough water for the winter and spring periods, the summer rice fields were necessarily located in depressed lands. In sum, the increasing importance of the summer rice crop at somewhere around the fifteenth century is inseparable from the rise of Son Nam as a new agricultural center.

If the rulers in the Red River Delta steadily submitted, starting in 1248, to the idea that the central court must take the leadership in flood control, the fifteenth century marks a series of new developments in water management. By that century, a number of factors including a shift into a drier climate and a more solid system of embankments along the Red River made an important impact on lands in areas like many parts of Son Nam. In these areas, wetlands were transformed into a suitable environment for the farming of summer rice, which undoubtedly strengthened the double-cropping system in northern Vietnam. Underneath all of these transformations emerged an ideology that emphatically promoted the expansion of agriculture. By making an inquiry about the so-called policy of "encouraging agriculture," the final section of this chapter proposes that the avid attempt of the state to promote agricultural expansion resulted from a long-term transformation of the interactions between the Red River Delta inhabitants and their environment.

The Policy of "Encouraging Agriculture"

The dynastic histories give an impression that the Vietnamese authorities used to address their patronage of rice farming for centuries by issuing imperial decrees of what is known as policy of "encouraging agriculture" (勸農 khuyến nông). However, just like the dike initiatives and the commitment to the summer rice, it took a long time for the policy of Encouraging Agriculture to be fully executed in the political tradition in premodern Vietnam. It should be noted that the idea of "encouraging agriculture" has its roots in early China and the Chinese political tradition offered various repertoires of practices that helped turn this idea into reality. As seen in Vietnam, two practices of this type include the Ploughing Ceremony (籍田 tich điền, i.e., a ritual in which, in order to set an example for their subjects, the king and/or his ministers came to the royal fields and ceremonially ploughed the first furrow) and the issuance of the decree of Encouraging Agriculture. Vietnamese rulers began the tradition of practicing the Ploughing Ceremony quite early and this ritual became a regular practice that effectively displayed the king's power to his farmer-subjects.

That said, the commitment of the Vietnamese courts to these Chinese-inspired practices was a later development. For instance, reports on the Ploughing Ceremony appeared before 1038, but in that year skepticism about the necessity of this ritual still existed. According to the dynastic chronicles, as King Thai Tong of the Ly dynasty (r.1028-54) was about to plough, one of his officials tried to stop the king. This official argued that ploughing was not the job of a king but a farmer. The king disagreed and said, "If I do not farm by myself, I will not have any grains

to make offerings, and I will not set an example for my people either."²⁶⁶ Here, the idea that kingship could be ritually practiced by example-setting was clearly a Confucian concept. But the more striking point was how this royal court perceived the role it played in the farming enterprise of the kingdom. This eleventh-century king did not emphasize supervising and manipulating his people's agricultural work. Instead, encouraging agriculture seems to have meant that the royal members focused on their own royal fields and by doing so they would inspire their subjects.

A similar degree of reservation by some officials may have initially existed with regards to the early practice of issuing Encouraging Agriculture decrees in Vietnam. A record from 1056 is probably the earliest account of this activity, and it reports that the king issued a decree for encouraging agriculture.²⁶⁷ No information about its contents was provided, and unlike the Ploughing Ceremony, records about the issuance of Encouraging Agriculture decrees soon become absent in the dynastic histories for later periods. Meanwhile, as Confucian readers of the dynastic chronicles in later periods commented on this type of imperial decrees, they would have deemed it significant. The reason they did so was because for them, providing a policy to allot resources for the development of agriculture was one of the most important missions for any successful ruler. That is the reason why fifteenth-century historian Ngo Si Lien highlighted the event of 1056 as one of the examples that demonstrated the standing king's good governance.²⁶⁸

While it is unclear if Encouraging Agriculture decrees were regularly issued after 1056, evidence shows that the notion of encouraging agriculture was translated into actions that are more pragmatic. A crucial factor in this transformation was the implementation of the idea that

²⁶⁶ "朕不躬耕, 則無以供粢盛, 又無以率天下." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 2/25b.

²⁶⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 3/1b. See the same event also in the *Viet Su Luoc*.

²⁶⁸ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 3/6a.

the state needed to take every effort to turn land into rice fields. This process took a long time to develop and its effects varied. For instance, an event in 1344 reveals the presence of a Bureau of Agricultural Encouragement (勸農司 *Khuyến Nông ti*), an institution in which the notion of encouraging agriculture was embedded. As this record shows, the Bureau of Agricultural Encouragement had been active for a certain amount of time by the mid-fourteenth century and there was apparently a need for expanding the activities of this office. We can see these points from the fact that a new position was added to this office. The appointment of a vice-commissioner of farming garrisons (屯田使副 đồn điền sử phó) in that year meant that the main commissioner had performed the relevant duties but he now needed more help.²⁶⁹ This event also reveals that one of the priorities of the policy of encouraging agriculture was an attempt to put more land in use, yet under the supervision of the central government. This aspect of the agricultural encouragement policy changed in the fifteenth century.

Evidence shows that together with a Bureau of Dike Affairs, a Bureau of Agricultural Encouragement was installed at the local level. As seen in a record from 1467, the local bureaus of Dike Affairs and of Agricultural Encouragement were asked to make reports on flood-stricken rice fields and abandoned farmlands. This event shows that by this year the government had established a strong presence at the local level in both dike-related duties and the promotion of farming. Yet, the year of 1475 shows a further development in the state's commitment to the agricultural-encouragement policy. Prior to this year, officials seem to have only served in the Bureau of Dike Affairs and the Bureau of Agricultural Encouragement as their secondary positions, or at least not as routine positions. This changed in 1475. The dynastic chronicles

²⁶⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 7/12b.

²⁷⁰ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/40a-b.

report that in that year the central government installed new official positions that specialized in dike affairs and farming encouragement. As can be seen in later periods, the officials in those positions were often ranked at the low echelons. But the government clearly addressed its commitment to oversee the farming of the kingdom through two main tracks: flood control and agricultural expansion.²⁷¹

Although it is difficult to gain a more detailed picture of policies concerning agricultural expansion in the fifteenth century, the commitment of the state to the encouragement of farming is evident. Such a commitment can be seen as both the cause and the effect of the decision to embank the Red River as a method of flood control. From the thirteenth to fifteenth centuries, the building of dikes without a doubt protected many rice crops in the Red River Delta. The shifting to a drier climate and the increase in cultivation of summer rice are similarly contributing factors to the state's efforts at agricultural encouragement. Meanwhile, without a sustained desire to promote the farming of rice as seen in the policy of Encouraging Agriculture that the fifteenth-century Vietnamese government undertook, the dike projects might not have been developed to the extent that they were and the summer rice might not have been provided with the needed support from the state's policy makers.

Conclusion

For the inhabitants of the Red River Delta, water management meant regulating the complicated river networks in their land and manipulating the water produced by seasonal rainfall. The solidification of the dikes as a form of flood control from the thirteenth to fifteenth centuries

-

²⁷¹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 13/7b. "敕旨天下修治堤防及道路等處. 置勸農、河堤等官."

gradually transformed the Red River Delta landscape and the way the inhabitants there worked with their environment. By the late fifteenth century, the double-cropping system had been stabilized as a result of adapting to the cycle of the wet and dry seasons. Considering the scope of premodern agriculture, this rotation of two crops should have been less an intensive system (i.e., rotation in one piece of land) but more an expansive one (i.e., multiple fields in one region for different crops). In any case, historical evidence shows that the Vietnamese government made various efforts to stabilize this double-cropping system. Thus, the autumn crops tended to be distributed in high areas where the dikes provided flood resistance. Alternatively, people could farm the tenth-month rice in the areas where rainfall provided enough irrigating water but did not overfeed local rivers so that floods would occur. In contrast, the summer crops were located in low depressions where rainfall water would not easily run off and could be stored for farming in the dry season.

This being said, as a method of water management that produced positive impacts on the double rice-cropping system in the fifteenth century, the embankments of rivers did not necessarily indicate that the conditions for farming in northern Vietnam were always stable.

From an environmental perspective, the next chapter will examine the impact of water-related natural disasters on the farming system in northern Vietnam with a continuing focus on the fifteenth century.

CHAPTER 5. ROUTINIZATION OF WATER-RELATED DISASTERS

To continue the focus on "water history," this chapter seeks to understand how the fifteenth-century Vietnamese state responded to natural disasters such as droughts, rainfall, and to some extent, tropical cyclones. Because of the variation in natural hazards, an individual society often comes up with particular coping mechanisms that deal with those risks. As examining some prominent coping mechanisms in the Le court, this chapter points out that a new, state-centralized system of disaster management emerged in Vietnam in the latter part of the fifteenth century. The evidence shows that this development may have resulted from more difficult environmental conditions in the last three or four decades of the fifteenth century. However, the analysis here suggests that a more important reason lies in the specific way that people of fifteenth-century Vietnam perceived their relationship with the natural environment. Generally, they held that a natural disaster signified a certain crisis that must have correlations with some aspects of their society. Because of this particular perception, a probe into natural disasters provided people at that time with a tool to address politico-social transformations in their society.

The Category of Natural Disasters

As a unit of analysis, "natural disasters" are more than a category of calamitous events that produce adverse impacts on the physical world. The extensive literature on risk management and disaster mitigation provides not only valuable insight into our understanding of natural disasters but also helpful references for any historical analysis of this subject. It is imperative that a historical analysis of natural disasters explores not only the material impact of a natural

disaster on the history of a society but also the extent to which a natural hazard reveals a people's attitude and values with regard to their natural environment. As suggested by environmental researchers, while the concept of a "natural hazard" denotes the threat of the negative impacts that a natural process would have on humans or human property, the actual occurrence of such an event is defined as a "natural disaster."

Moreover, there is not a direct connection between the rising frequency of a physical process in the natural environment and an increase in the number of the reported natural disasters. Greg Bankoff points out that this trend of understanding started among some social scientists in the 1970s. As a result, he notes, there have been many efforts to go beyond the socalled "technocratic approach." That is to say, many scholars have challenged the idea that natural disasters are solely nature-induced processes. The scholarly community has, therefore, become dissatisfied with the simple characterization of disaster management as the mastery of the relevant technical issues such as how to predict disasters more accurately and how to prepare and provide post-disaster aids more effectively. As John Kleinen has found in his examination of the available twentieth-century data on typhoons and tropical storms in Nam Dinh, a coastal province in northern Vietnam, there is "no clear evidence that the increase in number and intensity of typhoons also leads to an increase in vulnerability or higher risks for the system."274 Likewise, Bankoff's own research on the Philippines demonstrates the presence of what he calls "cultures of disaster," concluding that disasters have become a highly structured aspect in the lives of many Filipinos. Instead of readily submitting to the notion that local people must be

-

²⁷² Donald Hyndman and David Hyndman, *Natural Hazards and Disasters*, 3rd. (Boston, MA: CENGAGE Learning, 2016), 3.

²⁷³ Bankoff, Cultures of Disaster, 11.

²⁷⁴ Kleinen, "Historical Perspectives on Typhoons and Tropical Storms": 530.

vulnerable to natural disasters, Bankoff shows that they indeed have developed intricate coping mechanisms and that natural hazards have been integrated into part of their long-established cultures.²⁷⁵ In short, a valuable suggestion in studies such as those of Bankoff is the appreciation of the historical and cultural dimensions of natural hazards in a particular society.

The examination of the history of natural disasters has also benefited from analyses of the relationship between the impact of a catastrophic event and the way it is reported and managed. In his *Drought and the Human Story*, Australian geographer R. L. Healthcote reminds us that droughts are in fact unavoidable hazards. Hence, as he points out, regardless of technological developments, the way in which people report on droughts and operate their community in these ensuing disastrous periods can define the extent to which the disasters make their impacts on a particular society. ²⁷⁶ Regardless of when and where they occur, it is common for people to report on natural disasters not merely in regard to their economic costs. Many political and moral implications that come with them can also be articulated, for which there is no shortage of historical examples. Thus, instead of taking natural disasters as a self-evident reference to social disorder, historians can examine them from the perspective of disaster-affected peoples. In this regard, the great number of droughts reported in a historical period may not necessarily be a signifier of a chaotic epoch. Instead, the significance of these drought events can be understood by inquiring why and how they were deemed threatening to a particular society in economic, polio-social and cultural terms.

_

²⁷⁵ Bankoff, Cultures of Disaster, 152–78.

²⁷⁶ R. L. Heathcote, *Drought and the Human Story: Braving the Bull of Heaven*, 1st ed. (Farnham, Surrey, England; Burlington, VT: Ashgate, 2013), 28–30, 129–89.

Natural Disasters in Fifteenth-Century Historical Sources

For historians interested in the environmental history of premodern Vietnam, the modern perception of natural disasters can both echo and diverge from what was presented in the relevant historical records. The best source for tracing the occurrence of natural disasters in fifteenth-century Vietnam is the Le dynastic history, the *Complete Book*. This source is particularly essential not only because of its particular format in presenting the past but also because of the lack of alternative documents. There is no doubt that these dynastic chronicles were modeled after Chinese dynastic histories. As a genre of writing, Chinese-style dynastic histories were often arranged chronologically by dynasty, reign year, and lunar month and date. Because of this format, dynastic histories often provide an accurate date of a natural incident that was recorded.

However, a difference between the *Complete Book* and Chinese dynastic histories is worth consideration as historians attempt to use information from these sources to understand natural disasters. Generally, one or two sections in the famous twenty-four Chinese dynastic histories provide almost all of the recorded natural incidents while the same does not apply to the information in the *Complete Book*. It is, therefore, useful to gain some essential understandings the structure of these dynastic historians. The Chinese dynastic histories always begin with the section called the "Basic Annals" (本紀 *Benji*), which includes the chronicles of the succeeding reigns of a particular dynasty. In addition to this, there are two (or three in earlier times) other sections. One section is called the "Collected Biographies" (列傳 *Liezhuan*). As its title suggests, this section contains detailed profiles of many famous (and sometimes notorious) people of a dynasty. Another section, entitled "Treatises" (志 *Zhi*), provides comprehensive accounts on

various aspects of the state, which range from the state calendar and regulations of royal ceremonies to the administrative structure of the government.²⁷⁷

It is in this specific section that some chapters such as the "Treatise on Patterns of the Sky" (天文志 *Tianwen zhi*) and the "Treatise on the Five Elements" (五行志 *Wuxing zhi*) are of great benefit to the study of natural disasters. The latter parts of this chapter will explain in detail why natural disasters were once classified into categories that related to the Sky and the "Five Elements" or the Five Phases of the life circle. These sections are also helpful because Chinese dynastic historians tended not to mention some of the natural events recorded in this section in the Basic Annals in order to avoid repetition. 278 Hence, using dynastic histories as a source to study natural disasters in traditional China often requires a close reading of the information in these particular "Treatise" chapters. By contrast, the Vietnamese dynastic histories have neither "Collected Biographies" nor "Treatises." Instead, all natural disasters and anomalies, if recorded, were written in the chronicles of every king. Therefore, information about natural incidents in Vietnam must be sifted out of the general narrative provided by these particular chronicles. In what follows, I will provide an overview of the accounts concerning natural incidents as reported in the chronicles of the Le dynasty.

²⁷⁷ For an introduction to the twenty-four dynastic histories of China, see Endymion Wilkinson, *Chinese History: A Manual* (Cambridge, MA: Harvard University Asia Center, 1998), 491–507.

To give an example, the "Treaties on Five Elements" in the *Jiu Tangshu* 舊唐書 [Old History of the Tang Dynasty] mentioned an earthquake in Sichuan in the first lunar month of 638 but this event was not mentioned in the Basic Annals of Emperor Taizong (r. 626-649) of the Tang dynasty. See Liu Xu, *Jiu Tangshu* 舊唐書 [Old History of the Tang Dynasty], Sikuquanshu (SKQS) (The Chinese Text Project site, n.d.), 37/3b, 3/8b-10a, http://ctext.org/library.pl?if=gb&res=5983.

For a discussion of this earthquake, see Yuan Daoyang, Yang Qingyun, Lei Zhongsheng, et al., "Sichuan Beibu Diqu Sanci Zhongqiang Lishi Dizhen Buchong Kaozheng 四川北部地区三次中强历史地震补充考证 [Additional Textual Criticism of Three Moderate-Strong Historical Earthquakes in the Northern Region of Sichuan Province]," *Dizhen Gongcheng Xuebao [China Earthquake Engineeering Journal]* 38, no. 2 (2016): 226–29, http://www.dzgcxb.com/ch/reader/create_pdf.aspx?file_no=20160209&flag=1&year_id=2016&quarter_id=2.

My analysis in this chapter will focus on the period from 1434 to 1504, and such a focus is justified by Vietnamese historiography. This period covers almost all of what has been identified as the Earlier Period of the Le dynasty (i.e., *Lê so* in Vietnamese), which is often described as falling from 1427 to 1527. It is unclear when this term was first used but it must have been coined in order to differentiate this first phase of the Le dynasty from its later period, often referred to as the Restoration Period (i.e., *Lê Trung hung*) and lasting from 1593 to 1789. Between these two periods was a period of rule under the Mac dynasty, a ruling house that was labeled as a "usurping dynasty." Although historians and writers living in the Restoration Period attempted to highlight the continuity of the Le dynasty, the two historical phases are different in a number of ways.

While using the dynastic chronicles for the Earlier Period of the Le dynasty, I observe that the accounts from 1434 to 1504 were relatively consistent in narration. Scholars who have used the Le chronicles have not paid enough attention to the different narration styles in that text. Due to the constraints of space of this project, I limit my analysis to only a few claims on this issue in order to define a working thesis for my selection of sources. In my reading, the evidence supports the idea that the chronicles for the period from 1434 to 1504 were written by the same group or at least the same generation of historians. The identity of at least one historian in this group, Vu Quynh (1452-1516?), is relatively certain. In contrast, the chronicle of the founding king, King Thai To (r. 1427-34), was written in a relatively different style. Finally, due to the large amount of political turmoil in the Le court after 1504, it is unclear to what extent the dynastic chronicles that cover the period from 1505 to 1527 were written by historians of the same group or of those in opposition.

There is a good reason why the writing style of the dynastic chronicles matters to a study of the records on natural disasters. As shown below, Vietnamese people in the past used to regard natural disasters as effective agents that delivered strong political and moral messages. By focusing on a historical period that was documented by historians who shared a relatively coherent perspective, the analysis that follows will attempt to explore the extent to which natural disasters exerted their influences on the state's activities in fifteenth-century Vietnam.

Specialized State Reporters of Natural Anomalies

If dynastic historians regarded natural calamities as state events that were worth recording, the fifteenth-century Vietnamese government in fact installed specialized agencies to observe and report on those phenomena. A careful examination of their evolution reveals that the transformation of these state agencies often resulted from an increasing concern over the connection between the occurrence of natural anomalies and the stability of the government.

Like their Chinese counterparts, Vietnamese rulers installed specialized agencies in the headquarters of the government in order to keep track of many natural processes believed to be clues to the proper order of the universe. The most important bureau was the Directorate of Sky-Watching or of Astronomy. The precise date that the first Directorate of Astronomy was established in Vietnam is unclear. However, considering that this bureau was in charge of not only spotting natural anomalies but also of performing calendric calculations, the evidence from Vietnamese dynastic histories allows the speculation that some state-sponsored activities in astronomy can be dated back to the eleventh century. As shown in the relevant dynastic chronicles, an astral tower (星樓 tinh lâu) named "Five Phoenixes" (五鳳 Ngũ Phượng) was built as a part of a massive plan to construct the new capital in Thang Long (modern Hanoi) in

1010. Almost two decades later, in 1029, when the contemporary king of the Ly dynasty decided to rebuild a palace, the Meridian (正陽 *Chính Dương*) tower was erected in order to "have a place for the management of the clepsydra clocks (漏刻 *lậu khắc*, devices for calculating the duration of time)."²⁷⁹ From this limited information, we cannot say what exactly these edifices were for, but they are plausibly related to astronomical observation and calendric calculations.

The first record of the presence of a state department specializing in "sky-watching" did not appear in the dynastic chronicles until two or three centuries later. In addition to observing astronomical phenomena, officials involved in "sky-watching" were also responsible for supplicating the power behind those phenomena, and there is reference to such officials in the chronicles. In 1261, the Tran court allowed its Office of Supplication (太祝司 *Thái Chúc ti*) to hold an examination in order to recruit new experts in this branch of the government. It appears that no Chinese governmental agencies ever bore this precise title, but the Great Supplicate (太 祝 *Taizhu/ Thái Chúc*) was an official of the Chamberlain for Ceremonials (太常 *Taichang/ Thái Thường*), namely a court agency in charge of royal ceremonies. ²⁸⁰ It appears that the Chamberlain for Ceremonials, however, was not established in Vietnam until much later, in 1465. ²⁸¹ Moreover, since the Great Supplicate in Vietnam was registered on the staff of the state agency in charge of the sky-watching affairs in the mid fifteenth century (see below in the

²⁷⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 2/20a. Alexei Volkov also pointed out the event of the clepsydra clocks. Alexei Volkov, "Astrology and Hemerology in Traditional Vietnam," *Extrême-Orient Extrême-Occident*, no. 35 (May 1, 2013): 117.

²⁸⁰ Charles O. Hucker, *A Dictionary of Official Titles in Imperial China*, Reprinted and Published by arrangement with Stanford University Press (Taipei: Southern Materials Center, 1988), 477.

¹⁸¹ In 1465, King Thanh Tong established six Commissions (院 viện); one of which was the Chamberlain for Ceremonials. In 1466, these Commissions were renamed as Courts (寺 tu). Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/18b, 24a. See the same events recorded in: The Historiography Insitute of the Nguyen Dynasty, Cuong Muc, Taiwanese Reproduction 1969.

discussion of the Astrological Commission), it can be speculated that the Office of Supplication reported in 1261 was a predecessor of this later bureau.

It is also likely that this Office of Supplication was transformed into the Astrological Service (太史局 *Thái Sử cục*) at some point between 1261 and 1339 before it came to be known as the Astrological Commission (太史院 *Taishiyuan/ Thái Sử viện*) in the mid fifteenth century. In 1339, an official of the Astrological Service advised the king to change the title of the calendric system from the "Calendric Instructions" (授時 *Thụ Thời*) to "Calendric Harmony" (協 紀 *Hiệp Kỷ*). Setting issues relating to the history of Vietnamese calendars aside, the record of 1339 provides clear evidence for the installment of a Chinese-style agency whose "principal functions were interpreting celestial and other extraordinary natural phenomena, divining about auspicious days for state ceremonies, weather forecasting, and contributing to the preparation of the official state calendar." Moreover, this information reveals an interesting aspect of the Vietnamese system of "sky-watching," which was not entirely identical to its Chinese counterpart.

In China, the capacity of the Astrological Service was significantly reduced after 758 due to the introduction of a new agency, the work of which focused on the rational and instrumental aspects of astronomical knowledge. This new agency was often known as the Bureau/ Directorate of Astronomy (司天監 Sitian jian in the Song dynasty or 欽天監 Qintian jian in the

²⁸² Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 7/10a-b. The "Calendric Instructions" or *Shoushili*, often translated as "Season Granting," was a calendric system finalized by Guo Shoujing 郭守敬 (1231-1316). It was used in China from 1281 to the late fourteenth century. Although Hoang Xuan Han's analysis of the history of the Vietnamese calendar is more complex, he suggests an important point concerning the reason why the Tran court decided to rename their calendric system in that year. The reason, as he argues, is that the so-called "Calendric Instructions" in the event in 1339 was not the same as the calendar invented by Guo Shoujing. Hoang Xuan Han, *Lich va Lich Viet Nam [Calendar and Vietnamese Calendar]* (Paris: Tap San Khoa Hoc Xa Hoi, 1982).

²⁸³ Hucker, Official Titles, 482.

Ming and Qing dynasties)²⁸⁴ During the period of the Yuan dynasty (1271-1368), the Directorate of Astronomy largely coexisted with the Astrological Commission. If this Astrological Commission was derived from an office like the Astrological Service, the functions of these offices were fully overridden by the Ming authorities' decision in the fourteenth century to maintain only the Directorate of Astronomy. Arguably, this full development of the Directorate of Astronomy marks a significant change.

Considering a critical perception in Chinese political culture that viewed natural anomalies as agents sent by the Heaven in order to deliver politico-moral messages, the Astrological Service seems to have had a more direct influence on politics than units like the Directorate of Astronomy. By contrast, the Directorate of Astronomy was "concerned with making and recording astronomical observations, preparing the official calendar issued annually by the state, and training students of astronomy." That is to say, while the Astrological Service had the responsibility of interpreting the meanings of natural anomalies, this task does not seem to have been emphasized in the services of the Directorate of Astronomy. Hence, while the Directorate of Astronomy was eventually set up in Vietnam in the late fourteenth century, the fact that Vietnamese rulers persisted in following the pre-758 tradition of depending on the Astrological Service is instructive.

It is unclear when the Astrological Service as seen in 1339 was eventually transformed into the Astrological Commission. The interruption of the Ming occupation in the early fifteenth century without a doubt affected the continuity of this state agency. Yet, when the Le rulers set up their new government in the mid fifteenth century, their office in charge of the sky-watching

²⁸⁴ Hucker, Official Titles, 482.

²⁸⁵ Hucker, Official Titles, 456.

affairs was called the Astrological Commission. It is not likely that the Le rulers would have opted for a Yuan model by installing this Commission instead of the concurrent Ming-style Directorate of Astronomy. The higher possibility is that the first few kings of the Le dynasty would have continued a tradition that had existed before the period of the Ming occupation. In any case, the significant development in the latter part of the fifteenth century was, however, the ending of the astrological-oriented tradition embedded in agencies like the Astrological Service in favor of a more rational and pragmatic approach that the Directorate of Astronomy supported.

No extant historical records directly point to this important reform. However, this history is evident in the records about the career of a Grand Astrologer in the years 1434-1449 by the name of Bui Thi Hanh. Bui Thi Hanh first appeared in the Le dynastic chronicles in 1434, namely in the very first year of King Thai Tong's reign.²⁸⁶ He was appointed as the Prefect Grand Astrologer, who was in charge of the Directorate of Astrology and who took the responsibilities for all reports on natural anomalies. The record for the year of 1434 also highlighted the importance of Bui Thi Hanh's occupation as he successfully performed an undertaking that saved the kingdom from the demonic interference of a solar eclipse. Dynastic historians kept a very detailed account of this event. There is no doubt that the Le court took this event seriously; it was clear about the cause of the eclipse (i.e., the spirit of a black gibbon trying to swallow the sun) and the precise solution to reverse the disaster (i.e., catching gibbons alive and then killing them to subdue that demonic spirit).²⁸⁷

Although dynastic historians recounted several other eclipse-related events for which Bui Thi Hanh's solutions continued to be accepted in the Le court in the next decade, the legitimacy

²⁸⁶ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/4a.

²⁸⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/8b-9a.

of this Grand Astrologer was seriously questioned in 1448. What came under attack was not the accuracy of his observations, but his influence over court politics. In that year, a Speaking Official named Dong Hanh Phat remonstrated Bui Thi Hanh after this Grand Astrologer had made a misreport of a lunar eclipse. However, the remonstration did not emphasize Bui Thi Hanh's failure to accurately predict the eclipse. It instead put a strong charge against Bui Thi Hanh for his advocacy of the so-called *yin-yang* theory or the cosmic resonance theory in dealing with natural disasters. 288 In the next year, the same Speaking Official protested against the fact that Bui Thi Hanh was appointed as a consultant (參議 tham nghi) for the Administrative Commission (政事院 Chính sự viện).²⁸⁹ With this position, Bui Thi Hanh could involve himself in court politics. It can be speculated that through such a position Bui Thi Hanh could have used his expertise in tackling natural disasters in order to influence court politics. Dong Hanh Phat successfully undermined the power of Bui Thi Hanh in 1448 as the king followed his remonstration to remove this Grand Astrologer from participating in court politics. However, Bui Thi Hanh found his way back into court politics in 1449, despite another remonstration from Dong Hanh Phat.

No other information sheds further light on the role that Bui Thi Hanh played at the Le court after 1449, nor did any reference to the Astrological Commission appear in the dynastic chronicles for the post-1449 period. Some two decades later, the Le government underwent a series of institutional reforms.²⁹⁰ It is likely that the king at that time, King Thanh Tong, put an end to the long tradition of the Astrological Commission. Like what the Ming rulers did about a

-

²⁸⁸ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/71a-72b.

²⁸⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/82a-b.

²⁹⁰ See, for instance, the records for the years 1465-66 in the *Complete Book*. I have above mentioned in note 281.

century earlier, King Thanh Tong built a Directorate of Astronomy in his administration as a replacement.²⁹¹ This explains the appearance of an official in the Directorate of Astronomy in the record of 1470. According to this account, the official's name was Ta Khac Hai, and he reported on the weather conditions as King Thanh Tong prepared to set off for his large campaign against Champa that year. In the voice of an expert in hemerology, Ta Khac Hai said, "this rain is the rain that can invigorate our army and this northerly wind is a blessing wind."²⁹² This piece of evidence points to one of the main tasks assigned to the Directorate of Astronomy, namely, that its officials were responsible for keeping track of the weather and other related conditions of the natural world in order to determine a proper date for performing a particular state affair.²⁹³

In brief, the direct evidence of how such a state agency collected relevant information and reported on natural disasters is limited due to the nature of the sources. However, the existence of the Astrology Commission in the earlier periods of the Le dynasty and the introduction of the Directorate of Astronomy starting from the late fifteenth century suggest that understanding those natural phenomena was considered to be a state affair. Because of this reason, the Le government in the second half of the fifteenth century also sought to enhance the efficiency of these bureaus. The above-mentioned institutional transformation of these bureaus was an immediate result of this effort. The next section will show that the detecting of natural anomalies and adverse weather often went beyond the communication between the experts in the

²⁹¹ Concerning this replacement, Phan Huy Chu's account provides supplementary evidence. In his description of the official titles of the Le dynasty, this eighteenth-century scholar listed the Astrological Commission as a governmental unit in the earlier period of this dynasty but the Directorate of Astronomy in the reigns of King Thanh Tong. Phan Huy Chu, *Lich Trieu, Paris.SA.HM.2126*, 13/12b.

²⁹² "雨爲潤軍雨, 風從北方爲和風." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 12/59b.

²⁹³ Supplemental evidence for the emergence of the Directorate of Astronomy in the late fifteenth century is found in an eighteenth-century description of the official buildings in the Hong Duc era (1470-97, i.e., the latter period of King Thanh Tong's reign). Le Quy Don, *Kien Van Tieu Luc, Paris.SA.HM.2174*, 3/109b.

Astrology Commission or the Directorate of Astronomy and the king. In many situations, those natural phenomena reshaped the politics at the headquarters of the state.

The Conceptions of Natural Disasters in Fifteenth-Century Vietnam

As mentioned above, the analysis of natural disasters in this chapter focuses on the period from 1434 to 1504. During these seven decades of the Earlier Period of the Le dynasty, many types of disasters caught the attention of the leaders of the kingdom. Depending on their specific contexts, certain phenomena were deemed propitious while some others were not. Meanwhile, many of these recorded events were equated with natural disasters. They ranged from types of disasters frequently observed in modern Vietnam, including droughts, excessive rainfall, storms, flashfloods, insect infestations and landslides, to those less commonly seen, such as fog and earthquakes. In addition, Vietnamese people expressed similar anxiety over any natural event that deviated from the normal expectancies of everyday life, including phenomena such as mysterious sounds, strange fish, the arrival of swarms of snakes, rivers in which the color of the water had changed, and even the appearance of dragons. As seen in the Vietnamese records, natural events that were deemed anomalous also included those that belong to the category of modern astronomy such as eclipses, comets, and certain fixed celestial bodies that moved to occupy an unusual position. While later parts of this chapter provide a more detailed analysis of these phenomena, it is first necessary to understand the conceptual category of the recorded anomalies as in the way that they were perceived in the past.

In the Vietnamese lexicon, the term "natural disasters," *thiên tai*, originates from the Chinese word *tianzai* (天災), which literarily means "disasters sent by the sky." The way in which Vietnamese people associated natural disasters with sky-induced forces was also more or

less derived from the Chinese intellectual tradition. These similarities can be initially inferred from, for instance, Rafe de Crespigny's examination of portents in the Later Han dynasty (206 BCE-220 BC) and Timothy Brook's analysis of weather anomalies and disasters in the Yuan and Ming dynasties (1279-1644).²⁹⁴ Tracing how the relevant Chinese ideas were integrated into Vietnamese beliefs, however, is a daunting task. Here, I will only suggest that what would have been present in the Vietnamese discourse of natural anomalies in the fifteenth century was an amalgamation, of which many components were the legacies of Chinese ideas that dated back to different periods. The following discussion empirically identifies two aspects of this fusion, and I will analyze an event in 1476 by way of illustration.

One of the two aspects concerns the performance of state ceremonies devoted to the sky god in an effort to regulate baleful weather and other natural anomalies. According to the Le dynastic chronicles, Dai Viet (a name commonly used by the Le rulers in the fifteenth century to refer to their kingdom) experienced a prolonged period of significantly reduced rainfall that lasted from winter to the summer of 1476. As mentioned in the previous chapter in regard to crop patterns, this dry spell meant that the summer-harvest rice was at stake. In response to this adverse weather, King Thanh Tong performed a ceremony to pray to a sky god. In order to request rain, he personally wrote a prayer memorial (i.e., a written token that served as the supplicant's appeal to the god). Although dynastic historians only provided a summary of this memorial, they included the lengthy title of its target god: "Being the Greatest, Opening Heaven, Grasping the Talisman, Directing the Calendar, Containing the True, and Embodying the Dao, the Most Venerated Stupendous-Heaven, the Supernal Lord Jade-Emperor" (太上開天執符御曆

²⁹⁴ de Crespigny, *Portents of Protest*, 9–10; Brook, *The Troubled Empire*, 6–7, 50–53.

²⁹⁵ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 13/9a-b.

含真體道昊天至尊玉皇上帝 Thái thượng Khai thiên Chấp phù Ngự lịch Hàm chân Thể đạo Hạo Thiên chí tôn Ngọc Hoàng thượng đế / *Taishang Kaitian Zhifu Yuli Hanzhen Tidao Haotian Zhizun Yuhuang Shangdi*). ²⁹⁶ This title clearly demonstrates one point: it was the Jade Emperor to whom King Thanh Tong turned when there was a shortage of rain.

Emperor and the sky god. Having originated from Daoist tradition, the Jade Emperor was considered the chief celestial god of the heavenly palace, and the one who oversaw the universe with the assistance of many other celestial gods. However, it is also well known that this Daoist god was once identified as the Heaven/Sky god in ancient Chinese state cults. As historians of China have pointed out, Chinese rulers started to worship the Sky god almost from the dawn of Chinese history. Terms such as $di \stackrel{.}{\pi}$ (Lord/Emperor), $tian \stackrel{.}{\pi}$ (Sky), $tiendi \stackrel{.}{\pi}$ (Heavenly Emperor) and $shangdi \stackrel{.}{\pm}$ (Lord on High) were examples of the different titles taken by the Sky god in ancient China. ²⁹⁷ A significant change in the way Chinese people came to understand their ancient Sky god occurred in the early twelfth century. In an attempt to integrate his personal interests in Daoism into this state cult, Emperor Huizong of the Song dynasty (r. 1100-1125)

²⁹⁶ This translation is adapted from the following sources: Patricia Buckley Ebrey, *Emperor Huizong* (Cambridge, MA: Harvard University Press, 2014), 281; Ulrich Theobald, "Religions in China - Siyu 四御, the Four Guides," *ChinaKnowledge.de - An Encyclopaedia on Chinese History, Literature and Art*, August 3, 2010, http://www.chinaknowledge.de/Literature/Religion/personssiyu.html.

²⁹⁷ The term *tien* later conveys both the idea of the observable sky and a notion of the sacred realm in which the chief god of the sky would reside while the term *di* is often reserved to refer to the Chinese emperor. The term that combines these two words means "Heavenly Lord" or the Sky God, who would have acted like an emperor on earth but who ruled from his heavenly palace in the sky. Like the Heavenly Lord, the *shangdi* or Lord/God on High also conveys this notion of the emperor-like god on the upper realm. See also Michael Loewe and Edward L. Shaughnessy, eds., *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* (Cambridge, England: Cambridge University Press, 1998), 252–53, 868.

proclaimed the merging of the ancient Sky god with the Daoist Jade Emperor in a famous edict, dated to 1116.²⁹⁸

How the succeeding Chinese dynasties assessed Emperor Huizong's legacy is a complex issue that reaches beyond the scope of this chapter. However, from the fourteenth century onward, the Ming state actively distinguished the Sky god from the Jade Emperor. Only the emperor could worship this Sky god, and he would do so by performing a state ritual ceremony called the Sacrifice of Heaven (郊 *jiao*). By contrast, the Jade Emperor became central to popular beliefs. ²⁹⁹ The Sky god in the Sacrifice of Heaven in the Ming dynasty continued to bear the title of "the Supernal Lord of the Stupendous Heaven" (吳天上帝 *haotien shangdi*), and this rite was strongly shaped by Confucian ideas of ritual. ³⁰⁰ Hence, there is a possibility that the fusion between the Daoist Jade Emperor and the Chinese ancient Sky God was introduced into Vietnam in the period between the early twelfth and fifteenth centuries, and that this practice remained relatively separate from the intellectual development in China in the post-1200s through the era of King Thanh Tong.

The second aspect of the Vietnamese perception of sky-related events entails a notion that natural anomalies possessed the values of political morality. Deeply founded on Chinese political thought, this notion stirred up many debates among Chinese thinkers. These debates were often centered on two critical concepts that reflected the relationship between the human

__

²⁹⁸ Ebrey, *Emperor Huizong*, 281–82.

²⁹⁹ Myron L. Cohen, "Religion in a State Society: China," in *Asia-Case Studies in the Social Sciences: A Guide for Teaching*, ed. Myron L. Cohen, 1st. (Armonk, NY: M.E. Sharpe, 1992), 19–21.

³⁰⁰ Romeyn Taylor, "Official and Popular Religion and the Political Organization of Chinese Society in the Ming," in *Orthodoxy in Late Imperial China*, ed. Kwang-Ching Liu (Berkeley: University of California Press, 1989).

realm and the natural world, Heaven's Mandate (天命 *tianming*) and cosmic resonance (天人感 *tianren ganying*).

From the dawn of their history, Chinese people perceived natural anomalies as signs that were sent to the earth by the Sky God, and these heaven-sent signs served as the articulation of Heaven's Mandate. While Chinese people submitted to "a conviction that the Chinese State and culture enjoyed a genetic relationship with the supreme power residing in the sky," the legitimate power of an emperor was defined by his ability to follow Heaven's Mandate by means of carefully studying these heaven-sent signs. In other words, an essential reason why natural anomalies were worth noticing was the idea that the Sky god's commands were embedded in these phenomena. This aspect of understanding natural anomalies became particularly serious when it could either support or reject the legitimacy of a king or a dynasty.

The cosmic resonance theory was another aspect in the Chinese debates over the politicomoral values of natural anomalies, though it was not entirely separate from the thesis of
Heaven's Mandate. In this theory, natural anomalies were perceived to be signifiers of certain
types of cosmic chaos. Douglas Skonicki has meticulously pointed out that the Chinese concern
over the connection between natural anomalies and cosmic order was constantly being revised,

[&]quot;commanding/decreeing" analogy in the use of language in religion, which can be summarized as follows: EMPEROR: COMMAND:: SKY: HEAVEN'S MANDATE. As an age-old concept in Chinese political thoughts, Heaven's Mandate refers to the idea that the Chinese emperor was mandated by the supernal power residing in the sky to rule the temporal realm on earth. This conviction was possible because, in Pankenier's sociological explanation, if an emperor ruled through the imposition of commands on his subjects, the Sky/Heaven on High was thought analogously to have an ability to command. Moreover, the Sky/Heaven-God would command not only the human realm through an emperor, who was considered Sky/Heaven's Son, but also the natural world. Thus, the occurrence of natural anomalies was thought to be two-fold. These phenomena were not only the manifestations of the Sky god's will in the natural realm but also the realization of this same will in the empirical world. This is a significant point in the Chinese notion of Heaven's Mandate: the Sky god's act as observed in the natural world was infused with its actualization in the human world. David W. Pankenier, *Astrology and Cosmology in Early China: Conforming Earth to Heaven* (Cambridge: Cambridge University Press, 2013), 220–34.

³⁰² Pankenier, "Heaven-Sent," 187.

refined, and questioned. As his study has shown, central to this process was a departure from the Han correlative cosmology that prevailed in the centuries at the turn of the Common Era.³⁰³

According to the cosmic resonance theory in the Han dynasty, everything should have belonged to a particular category and resonance was believed to have occurred among things that belonged to those same categories.³⁰⁴ When something was amiss, the cause of the resulting deviation could be found in the improper performance of things that were in resonance with it. Hence, attached to this theory were many guides that helped to detect the causes of natural anomalies.

Skonicki also points out that one of the most important challenges to Han correlative cosmology came from Neo-Confucian scholars in the eleventh and twelfth centuries. These scholars argued that the occurrence of natural anomalies was a chance for the rulers to rectify their governance. Although there were wide-ranging differences in their explanations of the relationship between humans and the natural world, Neo-Confucian scholars focused on two points. On the one hand, Neo-Confucian scholars tried to reject Han correlative cosmology but they generally maintained that there was a connection between humans and the natural realm. On the other hand, they criticized the resonance theory for its tendency to allow the rulers to blame natural anomalies on other people, effectively absolving any responsibility the rulers themselves may have had. Instead of putting an emphasis on tracing the causes of a natural deviation, Neo-Confucian scholars focused on theorizing the concept of good government. Hence, in Neo-Confucianism, the occurrence of natural anomalies was a chance to rectify the existing form of

-

³⁰³ Douglas Edward Skonicki, "Cosmos, State and Society: Song Dynasty Arguments Concerning the Creation of Political Order" (Ph.D., Harvard University, 2007).

³⁰⁴ Peter K. Bol, *Neo-Confucianism in History* (Cambridge, MA: Harvard University Asia Center, 2008), 65.

governance. These natural phenomena related to the human world because they acted as a catalyst for the maintenance of good government.³⁰⁵

Considering that all of these ideologies could have been at play, how would fifteenth-century Vietnamese King Thanh Tong have interpreted the meaning of the dry spell that occurred in 1476? In his prayer memorial, the king said that he had decided to pray to the Jade Emperor-*cum*-Sky/Heaven God because months without rain were imposing hardship on the entire populace. He addressed these points to the god:

I cannot help but bear so little virtue, and I have therefore made the myriad people to suffer calamities. Those gullible people are groaning, for they barely can find a way to survive. Thus, I hardly dare to knock at your gate in order to relate my sorrow concerning this situation and to devote my reverence to you. I humbly bow and beg you to forgive my wrongdoings and to transform these calamities into good fortunes so that the rain will come down on all marshes and lands. I respectfully report to you as such. 306

As is shown here, the king was engaging in an act of self-reproach in an attempt to reverse the unfavorable weather. The memorial also determined the cause of the drought. By asking the Sky god to pardon his wrongdoings, the king was implying that the dry spell must have been related to the poor performance of his governing. In other words, while the occurrence of the drought was attributed to divine agency, the critical action needed to transform the prolonged drought rested on the king's ability to rectify his government. His disposition in addressing such a situation was also an important factor that would induce rainfall. It was important to inform the god that as the chief ruler, the king was deeply saddened by the fact that the populace was

³⁰⁵ Skonicki, "Cosmos, State and Society," 522–638.

^{306 &}quot;無以臣之否德, 遽令百姓以受殃, **蚩**蠢嗷嗷, 殆無生理. 此臣敢不叩閽, 以伸哀念, 以籲祗情. 伏願赦過宥罪, 轉災爲祥, 大雨甘露, 遠覃率土. 臣謹願奏祈以聞." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 13/9a-b.

suffering because of the drought. By means of expressing his sorrow, the king was trying to convince the god that he had listened to those divine instructions.

Although there is no direct mention of Heaven's Mandate in the words of King Thanh Tong, the king's proclamation of his ability to connect with the Sky god is clear. Meanwhile, King Thanh Tong's response to the dry spell in 1476 seems to stay in line more with the cosmic resonance theory and less with Neo-Confucianism. In this particular event, the drought does not appear to have been perceived as an agent that challenged the *status quo* of governance. Instead, the entire mechanism of the drought was understood in terms of cosmic resonance: Something went amiss in the government, which induced the Sky god to release the drought. To reverse this process, the king reproached himself to demonstrate his willingness to rectify deficiencies in his government. This action was intended to eventually induce the Sky god to "rectify" the bad weather.

Debates over Solutions to Natural Disasters

When King Thanh Tong presented a memorial prayer to the Sky God-*cum*-Jade Emperor in 1476, his approach to the drought problem was to look at his own court with a strong contention that the rectification of poor governance would be translated into the transformation of the weather condition. Although this idea was not original, the fact that it was accepted without any dispute in King Thanh Tong's court was an illustration of a new development in the central state's approach toward natural disasters. To trace this development, the following analysis takes a drought in 1434 as a point of departure to examine the presence of multiple approaches to natural disasters in the mid fifteenth century. A comparison between this case with the previously-discussed drought in 1476 shows that toward the late fifteenth century a

multiplicity of approaches to natural disasters was eventually replaced with a more uniform way of coping with those incidents.

As mentioned in Chapter 2, the eleven-year-old prince by the name of Le Nguyen Long, later known as King Thai Tong (r. 1434-42), was crowned in the first lunar month of 1434 after his father, the founding king of the Le dynasty – King Thai To (i.e., Le Loi), had passed away. Shortly later, the central court faced a drawn-out drought. By the fourth lunar month in that year "it had not rained for a long time," noted the dynastic historians.³⁰⁷ If dynastic historians did not fail to record any significant drought, the dry spell in this year was the first incident of this kind in the fifteenth century; the last one had occurred some four decades earlier, in 1393. This sudden occurrence of drought and its persistence in the latter months of 1434 made it a problem that deeply troubled King Thai Tong's government.

Unlike King Thanh Tong in 1476, the Le court in 1434 first turned to a local Buddhist deity known as the Dharma Cloud (法雲 *Pháp Vân*). As a Buddhist deity, the Dharma Cloud was believed to possess a divine power strongly associated with rainmaking. According to its hagiography, this deity originated from a local Vietnamese woman, whom an Indian Buddhist monk had granted with the magical power to make rain in the second/third century C.E. ³⁰⁸ By

³⁰⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/7a.

See, for instance, Vu Quynh, ed., "Man Nuong Truyen 蠻娘傳 [The Tale of Man Nuong]," in *Linh Nam Chich Quai 嶺南摭怪列傳 [Arrayed Tales of Selected Oddities from South of the Passes]*, A.1200, 1492, 14b–16b; Nguyen Quang Hong, ed., *Di Van Chua Dau: Co Chau Luc, Co Chau Hanh, Co Chau Nghi [The Extant Texts from Dau Temple]* (Hanoi: Khoa Hoc Xa Hoi, 1997). The gender of the Dharma Cloud is not identified in the written sources. However, this deity has been represented as a goddess as shown in her statue located in the *Dau* (lit., "Berry") temple in Vietnamese or the *Dien Ung* (延應) temple in Sino-Vietnamese in modern Bac Ninh. The Dharma Cloud statue dates to no earlier than the eighteenth century. The Dharma Cloud is one in a group of four goddesses worshipped in the same area. Three others include the Dharma Rain (法雨 *Phap Vu*), the Dharma Thunder (法雷 *Phap Loi*), and the Dharma Lightning (法電 *Phap Dien*). Each of them was worshiped in a separate temple, but the Dharma Rain statue has been relocated to the temple of the Dharma Cloud after the original temple collapsed in the last century. Local people believe that these goddesses were sisters, whose mother's name was Man Nuong. This perception matches the narrative in the hagiography of Man Nuong.

1434, the Le court must have known that there were good precedents for mitigating drought by praying to the Dharma Cloud. The dynastic chronicles mentioned three records about rain-related prayer to this deity prior to 1434; one event in 1073 was to ask the goddess's help to stop prolonged rainfall and two other incidents in 1137 and 1188 in order to request rain. ³⁰⁹ A hagiographical text of the Dharma Cloud reported on some other rain ceremonies that the standing royal courts had devoted to her. ³¹⁰ In addition, the fame of the Dharma Cloud was kept alive by the many processions to carry this deity's statue from her temple to the capital in Thang Long (modern Hanoi). While further studies are needed, these processions seem to be unique because, arguably, no other gods received similar consecration by the central state. In any case, in 1434, this is what King Thai Tong ordered – that the statue of the Dharma Cloud be brought to Thang Long so that the royal court could pray for rain.

The administration of King Thai Tong also made other attempts in order to call for rain. Having found that the needed rainfall did not arrive despite the prayers to the Dharma Cloud, an official named Nguyen Thien Huu presented a memorial to King Thai Tong on the matter. In a later event recorded in the dynastic chronicles, Thien Huu was identified as a Speaking Official (言官 ngôn quan), a generic reference to any person "whose principal and characteristic function was to monitor the making of policy decisions at court and to recommend or criticize policies." In this event, Thien Huu's message to the king was forceful. He said, "I beg you, Your Majesty, to cultivate your virtue, release those wrongly incarcerated, and return palace girls to their homes." "If you do all of this," he added, "and the Sky still does not send down rain,

³⁰⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, 3/40b, 4/20b-21a.

³¹⁰ Nguyen Quang Hong, *Di Van Chua Dau*, 58–63.

³¹¹ Hucker, Official Titles, 579.

please behead me in order to appease the populace."³¹² As the dynastic historians recount, before Thien Huu could hear any answer from the king, it started to drizzle. This light rain immediately became strong evidence for a Grand Councilor named Le Sat to retaliate against Thien Huu for his criticism of the king. Thien Huu had no words to refute Le Sat's charge. At the same time, reports on the recent rainfall in some frontier areas also reached the capital, providing even the stronger evidence that supported Le Sat's point.

In any case, the drought continued to linger in the capital, compelling the central court to seek even more alternative methods of mitigation. Later in the same month the court decided to offer an amnesty for a dozen convicts who had been charged with crimes of little to moderate severity, as noted in the dynastic histories, "because of this prolonged drought." This move seems to have been in keeping with what Nguyen Thien Huu's call to "release those wrongly incarcerated," even though that call had displeased one of the top officials in King Thai Tong's court. Meanwhile, the government arranged what can be considered a Daoist rite called *tiêu/jiao* (熊) in the Hall of Diligence in Governance (勤政殿 *Cần Chính điện*). In this particular ritual performance, the drought was conceived as a type of demonic interference that had to be exorcised. Such a perception is evident in the fact that this ceremony targeted not only the persistent drought but also the lightening (along with thunder) that had led to the burning of a royal boat shortly earlier. The dynastic chronicles provided no further information concerning this ceremony, but at least the venue of the event spoke of its seriousness. The Hall of Diligence

^{312 &}quot;陛下脩德, 録寃囚, 出宮女, 而天不雨, 請斬臣以謝天下." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/7a.

^{313 &}quot;赦輕囚數十人, 以久旱故也." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/8a.

³¹⁴ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/8b.

³¹⁵ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/7a.

in Governance was the place where the most important royal ceremonies, like the coronation of a new king, were held.

Just like the Dharma Cloud procession, both the practice of releasing those wrongly incarcerated, and the performance of a *tieu/jiao* ceremony followed the existing custom of coping with natural calamities. For instance, dynastic historians reported on a prolonged drought that lasted throughout the fifth and sixth lunar months in 1242 but that rains ended in the seventh month. Having done so, they carefully highlighted the single event that occurred between that drought and the subsequent rainfall; that is, that the government reviewed the current legal charges and issued an amnesty to prisoners. A drought in 1269 was reported following the same narrative pattern. The source further noted, "it was not until the seventh lunar month (of 1269) that farmers could start to prepare their fields." To some degree, this note implies the importance of the government's timely action in requesting rainfall; the rice crop in that year would have not been cultivated even dilatorily if the government had not attempted to detect any problems in its legal charges and issued amnesties.

In the years that followed it is clear that the *tieu/jiao* ceremony had been commonly practiced in Vietnamese royal courts. Ample evidence from the dynastic chronicles shows that this ceremony was listed as a required rite to be undertaken in the aftermath of any instance of thunder or thunder-related event for a long time before 1434. The record of a thunderstorm that hit some royal bureaus in 1313, for instance, reveals that by that year the government already had specific regulations concerning the state funds that were used for those post-thunder *tieu/jiao*

³¹⁶ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 5/13b.

317 "六月, 旱. 綠囚, 雨. 至秋七月, 民始得耕種." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 5/32b.

ceremonies.³¹⁸ So, while it is unclear if the royal administrations prior to King Thai Tong's reign regularly dedicated *tieu/jiao* ceremonies to the mitigation of drought, the event in 1434 at least shows that in an attempt to seek rainfall at all cost, the government applied an existing custom to the problem of drought.

Considering the diverse range of methods taken by King Thai Tong's administration in an effort to end the drought in 1434, Nguyen Thien Huu's proposal was the only approach that was turned down. There was good reason for this rejection. While the Le court must have been concerned that the severity of the drought would harm the summer-harvest rice, the debate between Thien Huu and Le Sat shows that this natural incident signified to them a more serious problem. Thus, a continuous tension over the way to address the drought persisted in the Le court that year. Two events that occurred in the fifth lunar month of 1434 illustrate this scenery.

In one event, Vice Grand Councilor Nguyen Trai (whom we met in Chapter 2) charged a palace secretary named Nguyen Thuc Hue and some other officials with causing the current drought. He said, "You are officials in charge of state revenue; causing us to suffer this drought is due to your deeds." Nguyen Trai's condemnation was made after this secretary and another chancellor had attempted to change some of the contents in an imperial memorial drafted by him. This memorial was an important diplomatic document because it was drafted on behalf of the

³¹⁸ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 6/30b-31a.

³¹⁹ Nguyen Thien Huu perhaps would be in the same line with the dynastic historians, who tried to avoid talking directly about the *de facto* power-holders in the contemporary court of King Thai Tong. Enough evidence in the dynastic histories reveals that Le Sat was one of, if not the most, important figures that were controlling the Le court in 1434. Note that the newly enthroned king was only an eleven-year-old boy in 1434. Moreover, the acute friction between this king and his favorite assistants (who cannot not be easily identified based on the information in the dynastic histories) on the one side and Le Sat on the other side in some years later demonstrates the serious factionalism in the Le court. For the antagonism between King Thai Tong and Le Sat, see Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/40b-41b.

^{320 &}quot;爾軰聚歛臣, 罹此旱災, 爾等所致也." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/9b-10a.

king and it was intended to be presented to the Ming emperor in order to request investiture.

Therefore, while it is unclear what the specific contents that this palace secretary wanted to revise were, the bitterness in Nguyen Trai's drought accusation seems to have resulted from his disappointment about the fact that there were people in the court who had little integrity but who could participate in the critical affairs of state.

This position can be observed in his further explanation to the above-mentioned Grand Councilor Le Sat. Because Thuc Hue reported to Vice Grand Councilor Le Sat what Nguyen Trai had said, Le Sat in turn got into an argument with Nguyen Trai. In order to defend Thuc Hue, Le Sat affirmed that the blame for the drought could only be attributed to the actions of the king and the grand councilor, not the officials below them.³²¹ To Le Sat, Nguyen Trai responded as follows:

Thuc Hue relied on his petty skills of managing revenue in order to take a critical position in the government. Every time registers are needed to present to the court, he always ingratiates himself with your Honor by trying to squeeze the populace in order to feed officials. Because of this, I made such a condemnation. Other than that, I reprimanded neither our king nor the Grand Councilor of our court. 322

Hence, three different ways to "interact" with the drought in 1434 were captured in the dynastic chronicles; they were respectively reflected in the actions of Nguyen Thien Huu, Nguyen Trai, and Le Sat. Earlier, Thien Huu requested some political actions in order to end the drought, that is, to mitigate the natural disasters. While Thien Huu did not make explicit the cause of the drought, Nguyen Trai and Le Sat did. However, Nguyen Trai would have agreed with Thien Huu that the occurrence of drought meant that something in the court needed to be

³²¹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/10a.

^{322 &}quot;叔惠以掊克小才,居天下樞要,每有奏簿,皆欲損民歸官,以求合上意,故僕因事而發耳,非有所諷議君相也." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/10a.

changed. That is why Nguyen Trai targeted the corruption of a palace secretary like Thuc Hue, instead of accusing the king. By contrast, Le Sat must have held a doctrine that correlated the drought with the virtues of the king and the councilor. Evidently, he held that the king and the councilor of the central court must take responsibility for the drought. However, he did not want to declare this responsibility. Given that Le Sat earlier tried to find counterevidence to Thien Huu's remonstration, it is understandable that he would have made every effort to suppress any opinion that make this kind of political blame.

Another event, one that also occurred in the fifth month of 1434, demonstrates the danger of any attempt to make an accusation against the king and the councilor of the court. The dynastic historians recounted that a palace craftsman named Cao Su Dang was beheaded in that month due to his having murmured that the lack of virtue in the king was inducing the long-lasting drought. During this time Cao Su Dang was a palace craftsmen who had been recruited to construct the Bao Thien temple (lit., the temple of "Paying Gratitude to the Sky/Heaven"), a famous Buddhist temple in Thang Long. 323 Due to the hardship of the work, this craftsman could not help but complain. In his statement of protest, he said, "The king has no virtue, therefore the drought is hitting us. Great officials are taking bribes, and those having no achievements are recruited. What good deeds have been done that [the court] must offer prayers to the Buddha [by

_

Thien temple to the eleventh century. A tower, also named "Bao Thien," was subsequently mentioned in historical sources. It appears that the Bao Thien tower was a type of Stūpa built as a part of the early Bao Thien temple. There are sources that suggested that this tower was destroyed during the Ming occupation of Annam in the early fifteenth century. The event in the record of 1434 has often been overlooked. This source clearly records that the court initiated the building of the Bao Thien temple (起報天寺 khởi Báo Thiên tự) that year. Thus, it is still unknown if this construction meant a renovation of the eleventh-century Bao Thien temple or a reconstruction of a similar temple on the grounds of that old temple.

building a temple for him]?"³²⁴ As someone informed against Cao Su Dang, he was indicted for a crime of "spreading fraudulent statements on state affairs" and sentenced to decapitation.³²⁵

The key figure behind Cao Su Dang's case was, again, the powerful man Le Sat. The dynastic historians noted that Le Sat was angry over this incident. When Nguyen Thien Huu and his fellow Speaking Official Bui Cam Ho attempted to reverse the harsh charge against Cao Su Dang, Le Sat fiercely opposed them. The Grand Councilor's main argument was in the same line with the court judge. In other words, for him it was critical to impose harsh punishments on those who tried to use the current drought in order to criticize the government. One more time, Nguyen Thien Huu failed to defend the opposite view. Meanwhile, the weather conditions again helped to reinforce Le Sat's cause as some drizzle came after the closing of Cao Su Dang's case. Just as he had argued against Nguyen Thien Huu's memorial in the previous month, Le Sat firmly claimed that this rain was precisely counterevidence for any accusation against the current performance of the government.

In brief, the long-lasting drought in 1434 deeply troubled every member in King Thai Tong's court. Everybody including Le Sat would have agreed that natural incidents like drought and rainfall were correlated to what was occurring in the human realm. However, as seen in all of the above-mentioned cases in 1434, to contend that the best method to end the drought was for the government to enhance its moral virtue was to hold a very precarious proposition. The comment of another Grand Councilor named Le Ngan on the death sentence of Cao Su Dang was emblematic of the complexity of this situation. Although, as Le Sat would have argued, the

324 "天子不德, 以致旱災. 大臣受賂, 舉用無功, 有何善而必崇寺佛乎." The translation of the term 寺 (tự) in this sentence is open for discussion. Here I have translated 崇寺 (sùng tự) as "to worship." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/10b.

³²⁵ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/10b.

occurrence of drizzle validated the decision that put Cao Su Dang to death, members in the central court could not help but find this indictment disturbing. This explains why Le Ngan bitterly commented that, "Although killing many bad people brings down bountiful rainfall, it is difficult to walk on a road filled with human bones."

Self-reproach as a Response to Natural Calamities

If Le Sat forcefully undermined any effort to call for the king and the Grand Councilor to take responsibility for the ongoing drought in 1434, the central court made a remarkable reversal in the fifth lunar month of 1438. It did so by issuing an imperial decree of self-reproach, as noted by dynastic historians, "because of natural calamities." This decree reads,

Consistently throughout these years, droughts and insect infestations have recurred while natural calamities frequently appear. During the fourth and fifth lunar months of this year, thunders repeatedly rattled those trees in front of the Royal Ancestral Temple in Lam Kinh (i.e., the hometown of the Le kings in Thanh Hoa). Contemplating these problems will show us some insights. Have I, the King, not cultivated my virtue and is my governing therefore abandoned to wild idleness? Is the Grand Councilor not competent and is he therefore not harmonizing and regulating [the operation of the court properly? Is our court not recruiting the right people and those who are worthy are therefore not being distinguished from those who are unworthy? Is bribery occurring openly and is the law court therefore being deluged with false accusations? Are the people overloaded with public construction projects and are they therefore becoming exhausted? Is the government overtaxing the people and are they therefore suffering further impoverishment? I have cited those *problems* in order to make self-reproach and I will perform a great amnesty. I am now requesting all of you officials, regardless of belonging to the higher or lower echelons, being a literary or martial official, to point out any flaw of the current governance. Everybody must deliver straightforward reports without shirking. If your words are constructive, you will be honored with prestige; and if there is ignorance and imprudence in your memorials, I will pardon you. Doing so can

326 "多殺惡人則多雨, 但路骨难行耳." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/10b-11a.

^{327 &}quot;以災異." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/50b.

probably regain Heaven's will and quell the occurrence of natural calamities. This will make our country forever blessed. 328

There was a long history concerning the emperor's issuance of this type of decree as a method to cope with natural calamities in traditional China.³²⁹ The decree issued by King Thai Tong in 1438 generally conforms to this tradition. However, this might be one of the first decrees of this kind that a Vietnamese ruler decided to deliver as his response to an ongoing natural calamity.

Some notes are necessary to understand the change in King Thai Tong's reaction to natural anomalies between 1434 and 1438. As shown above, the main figure involved in the dispute over how to deal with the drought in 1434 was Grand Councilor Le Sat. This powerful man was, however, expelled from the Le court just one year before the first self-reproach decree of King Thai Tong. Dynastic historians portrayed the fall of Le Sat as a result of a long-term conflict between this senior official and the king. Concerning the key factor of this conflict, they explained that by 1437, "King Thai Tong was grown up and was able to wisely hear and justify state affairs whilst Le Sat was clinging to his power." However, my reading of the related records in the dynastic chronicles (which I do not have space to detail here) suggests that the removal of Le Sat resulted instead from factionalism in the Le court. In other words, the issuance

^{328 &}quot;比歲以來, 旱蝗相仍, 災異荐. 至今四五月間, 累次雷震藍京太廟前園樹. 驗其致咎, 必有其由. 抑朕德不修, 而庶政荒怠歟; 将宰輔非才, 而爕理失宜歟; 抑任用非人, 而賢否混淆歟; 抑賄賂公行, 而獄訟冤濫歟; 抑土木屡興, 而民力疲困歟; 將賦歛繁重, 而民財匱乏歟; 引咎自責, 大赦天下. 凡尔大臣、文武庶官等, 宜各指其過失, 直言無所隐諱. 如有可采, 必顯加榮擢, 雖有愚戇迂疏, 亦不之罪. 庶可以回天心, 弭災變, 使國家永享無窮之福矣." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 11/50b-51a.

³²⁹ For some general ideas about this tradition, see, for example, Wang Yao, "Zuiji zhaowen ti tedian tanwei 罪己诏文体特点探微 [Research on Compositive Characteristics of Self-Reproach Decrees]," *Jixi Daxue Xuebao*, no. 3 (2015): 112–15.

^{330 &}quot;時帝年既長, 咱斷既明, 而黎察猶參固權位." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/40b.

of a self-reproach decree in 1438 is the realization of a political vision upheld by a new group of bureaucrats who surrounded King Thai Tong.

In a field such as the management of natural anomalies, it appears that Confucian scholars were claiming their very first victory. As seen here in the 1438 decree, its rhetoric reveals an attempt to mold the entire Le court into a government that based its key value on a critical concept in Confucian political theory, the power of virtue (dirc/de). As the chief-in-command of the court, the king was first expected to take responsibility for the cultivation of this moral value. This explains why the first point in the self-reproach decree of 1438 was a reflection on the king's virtue. The program for this kind of government also required morality in every aspect of governance. As this decree pointed out, the Grand Councilor was expected to be a facilitator in the operation of the court, perhaps in contrast to the old model of a powerful man having been set by someone like Le Sat. Along the same line, the decree highlighted that worthies should be recruited, corruption eliminated, justice established, and human power and resources of the populace used properly.

Clearly, all these points aimed at establishing a government based on virtue. Moreover, it appears that these ideas were declared in the Le court in 1438 quite peacefully. In addition to the expulsion of Le Sat, two other factors help to understand this development. First, it seems that King Thai Tong and his supporters were attempting to make changes in the court. The constant occurrence of natural calamities, as mentioned in this decree, provided them with a chance to validate the need for change. Second, this decree faithfully followed an existing pattern of viewing natural anomalies. If the drought debates in 1434 demonstrate the predominance of the view that natural anomalies correlated to problems in governance, the decree in 1438 legitimized this point. More importantly, it did so by the power of the king. As seen in this decree, the idea

about an organic relationship between the unfavorable weather (i.e., the thunderstorms in this case) with the corrupting aspects of the government can be recognized by the decree writer's usage of the term "problem" (答 cữu/jiu, which I have italicized in the above translation). This term can refer to both a calamity, such as a natural calamity, and to a fault or to something blameworthy, such as the shortcomings of a government. In this text, the usage of the dual meanings of this term highlights the point that there was a correlation between natural anomalies and problems in governance.

Having said that, King Thai Tong most likely did not abandon other methods of addressing the problem of natural disasters. His legacies were well preserved in the reign of his successor, King Nhan Tong (r. 1442-59). Take a rain request in 1448 for example. 331 Although dynastic historians did not make any note of the ongoing drought in that year, the government engaged in a series of activities that aimed at requesting rainfall. The entire court was required to perform a ritual purification (齋戒 trai giới/zhaijie) and then to participate in rain-requesting ceremonies that were held in both a Daoist temple named "Spectacular Numina" (景靈 Canh Linh) and a Buddhist temple named "Repayment of Kindness" (報恩 $B\acute{a}o$ $\^{A}n$). Dynastic historians recorded that the king personally made the prayers. In that very same month, the Dharma Cloud procession was performed. Meanwhile, the government released several dozen prisoners whose cases were deemed to not have enough evidence to get a conviction. Apparently, this kind of act was meant to show the king's benevolence by giving people the benefit of the doubt. The court's reactions to the drought in that year also included an order that requested all of the high officials to present memorials on the causes of the drought. As a result, some top officials indeed wrote self-reproach memorials and even requested their own resignation.

³³¹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/68b-69a.

In the end, the king issued his own self-reproach decree. Comparing the contents of this decree with the one issued in 1438 points to some similarities. Both documents addressed the responsibilities of the king and the grand councilor. They both affirmed that natural calamities signified a certain disorder in the operation of the numinous material forces of *yin* and *yang*. Finally, both decrees called for some practical solutions to improve the performance of the government in order to dissolve Heaven's discontent. In other words, by 1448 the issuance of self-reproach decrees had become a routinized task to be undertaken in an attempt to mitigate natural calamities such as droughts. Likewise, the contrast between the smooth flow of the state's responses to the drought in 1448 with the contentious disposition of how to deal with the same kind of natural calamities a decade earlier also supports the idea of routinization. Before turning to a more detailed analysis of the routinization in dealing with natural calamities, it is necessary to add a further comment about self-reproach decrees.

King Nhan Tong came to the throne when he was just a two-year old boy. In the first ten years of his reign, his mother—Empress Dowager Tuyen Tu—played the role of a regent. In fact, it was in that decade that most natural calamities were recorded. Meanwhile, all self-reproach decrees dated to the eras of King Nhan Tong appeared during this period. From 1443 to 1453, dynastic historians recorded six self-reproach decrees issued by King Nhan Tong, or to be more exact, on behalf of the king. The reasons for the self-reproach decrees in 1447 and 1452 were not specified. As for the other cases, the detection of a meteor shower and the occurrence of an earthquake set conditions for the decree in 1443, thunderstorms and floods for the one in 1445, droughts for those in 1448 and 1449, and hail for the one in 1451.

332 See Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, vol.12.

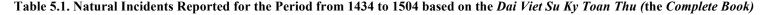
There are some possible reasons that explain why self-reproach was preferred as a method of responding to natural calamities in the 1440s. Although the central court continued some other procedures to handle the occurrence of natural calamities, as seen in the drought in 1448, issuing a self-reproach decree helped to reinforce a moral ideal of kingship. Considering the risk that a young king might have confronted with a court ridden with factionalism, the morality-based model of kingship, which originated from Confucian values, should have proved effective. Moreover, the mechanism of self-reproach allowed enough room for a sense of uncertainty as to how to subdue natural calamities. As seen in all of these self-reproach decrees, the prescribed causes of natural anomalies were framed in terms of rhetorical questions. Those questions could be always modified and extended, depending on the current condition of politics. Thus, this problem-defecting procedure allowed people to endure the anxiety over natural calamities under an assumption that their attentiveness to the problems in the human realm was eventually translated into a change in the natural world.

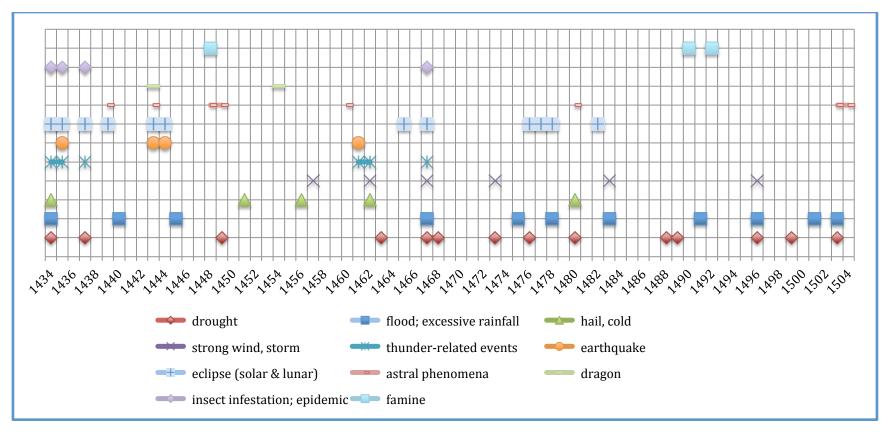
Hence, in the 1440s certain Neo-Confucian values were incorporated into the Le court's ideal of kingship. Instead of putting an emphasis on the numinousness of Buddhist deities and on Daoist exorcism, there was a gradual turn to some reliance (and expectation) on the king's proactive role in the management of natural disasters. Having said that, at that time the main conceptual framework that ruled the way people perceived natural disasters continued to be the cosmos resonance theory. The king continued to be deemed as one among many elements that affected the balance of the *yin* and *yang* forces or the cosmic order. As mentioned above, this perception was fully developed in the Han dynasty but it was then criticized and rejected strongly by Neo-Confucian scholars in the eleventh/twelfth century in China. As we shall see in the analysis below, some practices that were based on this cosmic resonance theory started to

become the target of criticism in the Le court during this very period. By the late fifteenth century, the idea that natural calamities were as a sign of the disturbance of the harmony of *yin* and *yang* forces might not have been completely abandoned. However, the king recognized a direct connection between himself and the Sky/Heaven in order to transform the Heaven-sent natural calamities as seen in the dry spell in 1476. This new dominant vision, as the following section will show, resulted from a more reliable system of disaster management that was reinforced during King Thanh Tong's reign.

Routinization of the Management of Natural Calamities

In the last few decades of the fifteenth century, the Le rulers' vision of natural calamities changed significantly. Some quantitative observations of natural incidents in the period from 1434 to 1504 illustrate this point. As a general principal, historians who attempt to reconstruct the environmental condition of the past would agree that a lower frequency of natural disasters tends to signify a more favorable situation for social progress. In the language of the fifteenth century, because the human and natural worlds were in a correlative relationship, fewer natural calamities signified the presence of an orderly ruling system. As for the latter part of the fifteenth century, ample studies in Vietnamese historiography have affirmed the prosperity of King Thanh Tong's reign, especially during his second and last era of rule, namely the Hong Duc period (1470-1497). In other words, there is good reason for an expectation of a low number of natural calamities during this king's reign. However, quantitative observations do not support that idea. Table 5.1 provides an overview of eleven select categories of natural incidents reported for the period from 1434 to 1504. The same data is presented in Table 5.2 in order to draw a comparison between the first half of the period in question and the second one.





Note: *Although these categories of natural incidents are from a select number of categories, they represent the most important events that occurred with the highest frequency. **The results represent the number of years in which natural incidents of the same kind were reported. For instance, lunar eclipses were reported twice in 1476, but the above chart only contains one value for that year. The reason for this method is mainly technical. There are not many cases in that two or more events of the same kind were reported in a one-year period. Moreover, as for certain natural incidents such as a drought that lasted for a long period, dynastic historians might refer to the same event more than one time.

Table 5.2. Comparing the Number of Natural Incidents Recorded in the Period from 1434 to 1469 with that in the Period from 1470 to 1504

	From 1434 to 1469		From 1470 to 1504	
	TOTAL	Average	TOTAL	Average
Natural Incidents		of 36 years		of 35 years
Drought	6	0.17	8	0.23
Flood; Excessive rainfall	4	0.11	7	0.20
Hail; Cold	4	0.11	1	0.03
Strong wind; Storm	3	0.08	3	0.09
Thunder-related events	6	0.17	0	0.00
Earthquake	4	0.11	0	0.00
Eclipse (solar & lunar)	8	0.22	4	0.11
Astral phenomena	5	0.14	3	0.09
Dragon	2	0.06	0	0.00
Insect infestations; Epidemic	4	0.11	0	0.00
Famine	1	0.03	2	0.06

According to the information in Table 5.2, droughts, floods and phenomena relating to tropical cyclones were reported at a higher rate in the post-1470 period. By contrast, the number of astronomical events in the pre-1470 period such as eclipses and the unusual appearance of certain celestial bodies were higher than that in the Hong Duc period. Significantly, while thunders should have been related to stormy weather, the observers in the Hong Duc period did not report even one instance of thunder, making a sharp contrast to their counterparts in the earlier period. Similarly, dragons were never spotted in the Hong Duc period. In comparison, people in the earlier period not only saw dragons, they were also keen on detecting other anomalies (not included in this chart), such as a loud sound similar to thunder recorded in 1435 and 1437, a strange light somewhat similar to a rainbow reported in 1434, or the water of a pond in Lam Kinh (hometown of the royal family) that suddenly turned red in 1456.

Paying attention to the contexts of these natural incidents can provide several explanations for these contrasts between the periods before and after 1470. Although climatic events such as droughts, floods, excessive rainfall, strong winds, and storms occurred more frequently in the Hong Duc period, King Thanh Tong's court did not seem to experience apprehension over these events as much as his predecessors. A good example is an event in 1462, a time just two years after the coronation of King Thanh Tong. Dynastic historians related that the king requested his officials to present the so-called memorials of "speaking forthrightly" (直言 trực ngôn) in that year because of "unexpected events such as hail, strong winds and thunder." To a certain degree, requesting memorials in which officials were encouraged to "speak forthrightly" can be considered as a part of the self-reproach procedure. As seen in many self-reproach decrees issued in the 1440s, the king often asked his officials to constructively criticize the existing government. Hence, King Thanh Tong's request in 1462 belonged to the same tradition of self-reproach.

However, the new factor in this event was the focus, at least, of dynastic historians, on the scenario after the issuing of the decree. A Confucian official named Hoang Thanh (a.k.a. Hoang Trinh Thanh or Trinh Thanh, b.1410-d.1463) presented a seven-point memorial and the king accepted it without difficulty. The first point in this memorial directly addressed the issue of natural calamities. This official suggested that the king should "properly regulate the operation of *yin* and *yang* in order to summon the harmony of the numinous material force." Six other points all concerned specific tasks that an ideal government in the Confucian style was supposed

333 "時因雨雹風雷之變, 詔求直言." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/10b.

³³⁴ "順陰陽, 以召和氣." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 12/10b.

to undertake; they included a focus on orthodox education, maintenance of the royal lineage, restraint on spending state revenues, recruitment of right officials, and attentiveness to military exercises and border protection. By listing the *yin-yang* regulation as one of the practical tasks for governing, Hoang Thanh was reinforcing and standardizing a "regimen" for the occurrence of natural disasters. While his formula shows the continuity of what had been addressed in the self-reproach decrees in the 1440s, it also illustrates how an approach to natural calamities that emphasized the proactive role of the king and his administration was being routinized.

This routinization process reflected the Le court's attempts to build a state-controlled system of dealing with natural disasters in the late fifteenth century. This trend is evident in the dwindling of some Buddhist practices in state rainmaking. Although King Thanh Tong continued to send his people to pray to different deities in order to transform calamitous conditions, the Dharma Cloud processions for requesting rain were apparently terminated at the state level. In fact, the last procession dedicated to this rainmaking deity that the dynastic histories recorded was the one in 1448. An editor of the Le dynastic chronicles in the post-1500 period was fully aware of this change when he added a note under the record of the procession in 1188 that reads, "this old custom was still practiced in the earlier periods of our dynasty." That is to say, this custom was no longer practiced in his time.

The development of the Le court's supportive attitude toward Daoist approaches to the management of natural disasters was somewhat more complicated. It appears that cosmic resonance theory, one that supported many Daoist exorcist practices, came under attack during this period. This trend can be speculated from two events that we have already examined: the questioning of the political power of Grand Astrologer Bui Thi Hanh in 1448-49, and the

^{335 &}quot;今朝國初猶乃舊俗." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 4/21a.

replacement of the Directorate of Astrology with the Directorate of Astronomy at some time between 1449 and 1470. Likewise, it appears that many natural incidents spotted more often in the pre-1470s period, such as eclipses, astral phenomena, and other anomalies like dragons, tended to be associated with cosmic resonance doctrines. In addition, the significant decrease in the number of thunder-related events probably reflects the decline of Daoism in the Le court. As mentioned above, the Daoist *tiéu/jiao* ceremony in 1434 did not only target the drought that occurred in that year but also a thunderstorm that had hit a royal boat. Studies of Daoism in Chinese history provide ample evidence for the expertise of Daoist masters in tackling thunder-related incidents.³³⁶ The absence of recorded thunder-related events in the post-1470 period could be a reflection of a trend to demote the importance of Daoist practices at the Le court.

However, since Daoist exorcism provided a rich reservoir of expertise concerning how to expel the demonic influence, the Le rulers would have found these Daoist practices useful for the management of natural disasters. Certainly, the abundant literature on Daoism and popular religion in Ming China is instructive for a deeper understanding of the relationship between Daoist exorcism and the state's efforts to cope with natural calamities. In this chapter, I will only make some empirical observations about the state system for the management of natural disasters that developed in late-fifteenth-century Vietnam.

In the latter half of the fifteenth century, the Le rulers actively installed state proxies for the management of natural disasters. This state enterprise was carried out in both religious and civil terms. In 1449, a Shrine of Wind, Cloud, Thunder and Rain (風雲電雨壇 *Phong Vân Lôi*

³³⁶ See, for instance, Florian C. Reiter, *Basic Conditions of Taoist Thunder Magic 道教*雷法 (Wiesbaden: Harrassowitz Verlag, 2007).

 $V\bar{u}$ $d\hat{a}n$) was erected in the capital. 337 Dynastic historians did not provide detailed information about this shrine or the ritual performances relating to it. There is a high likelihood, nevertheless, that this shrine was dedicated to state rainmaking ceremonies and other rituals relating to climatic problems. By 1468, a set of state regulations on rainmaking and rain-ceasing rituals were enacted. 338 King Thanh Tong himself played an active role in this religious development. As seen in 1476, the king sent his personal prayer to the Sky god in an attempt to mitigate the dry spell and to call for rainfall. He also attempted to request his royal ancestors to help transform the calamitous weather by performing a ritual ceremony in the Imperial Ancestor Hall (太廟 Thái Miếu) in 1473. 339 Based on the information in the dynastic histories, this might be the first time the royal ancestors were associated with a rain ritual. Further, both of the events in 1473 and 1476 strongly demonstrate the centralization of the king in the state rites of rainmaking.

Indeed, the intimate relationship between King Thanh Tong and the natural realm was carefully documented in the dynastic histories. This aspect contributed significantly to the making of a state system that dealt with natural disasters because the king, as the utmost leader of the state, was believed to be able to affect the natural realm. The dynastic historians recorded that in 1460, after a long period without rainfall, the sky sent down rain. This rainfall was attributed to the fact that an altar for King Nhan Tong, who had died the previous year, had been erected. Since King Thanh Tong had just been crowned in the aftermath of an eight-month long period during which the royal court fell into a domestic crisis, the rainfall was deemed as a

³³⁷ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 11/79b.

^{338 &}quot;定祈雨祈晴儀註." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 12/47b.

³³⁹ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 13/1b.

³⁴⁰ "是夜, 天大雨, 自春至此不雨. 仁宗既升祔, 乃雨." Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 12/4a.

sign that validated the legitimacy of the new king.³⁴¹ Likewise, a strong wind along with rain in 1467 occurred as the validation for King Thanh Tong's newly-cast royal seal in the Imperial Ancestor Hall. The seal bore the line that said "Seal of an Emperor who has received the Mandate [of Heaven]" (皇帝受命之寶 Hoàng Đế thụ mệnh chi bảo).³⁴² Even the king's poems could move the gods so that they brought down rain. In 1496, while performing a rain ritual, King Thanh Tong wrote his poems on four sheets of paper and asked one of his officials to stick them on the walls of an important temple. The rain fell that night.³⁴³

By the 1470s, the state system of disaster management was expanded to include local activities. Keeping traces and making reports on natural calamities in local areas were made the duties of local officials. Between 1471 and 1473, King Thanh Tong set up a local agency called the Provincial Surveillance Commission (憲司 hiến ty). According to eighteenth-century scholar Phan Huy Chu, part of the duty of this state agent was "to thoroughly report on any aberrant phenomenon, drought or flood in its jurisdiction." With this agency working to reinforce state control in local areas, King Thai Tong was attentive to its duties regarding the management of natural disasters. As a result, the king ordered that any local official be demoted if he did not perform proper rites when his jurisdiction experienced natural anomalies.³⁴⁵

-

³⁴¹ One of King Thai Tong's sons named Nghi Dan took over King Nhan Tong's throne after a bloody battle in the internal court. According to the dynastic chronicles, Nghi Dan killed both Empress Dowager Tuyen Tu and King Nhan Tong. However, shortly after Nghi Dan encrowned himself, some officials decided to overthrow him and replaced him with the future King Thanh Tong.

³⁴² Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 12/40b.

³⁴³ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., Complete Book, Paris.SA.PD.2310, BK 13/72a.

^{344 &}quot;憲司職掌如見本處災異水旱, 一體陳言." Phan Huy Chu, *Lich Trieu, Paris.SA.HM.2126*, 14/41b-42a.

³⁴⁵ Le Van Huu, Phan Phu Tien, Ngo Si Lien, et al., *Complete Book, Paris.SA.PD.2310*, BK 13/11b.

Conclusion

In brief, although King Thanh Tong did not enjoy better environmental conditions than his predecessors, his reign has been glorified as an era of prosperity. This understanding requires some justifications. In his magnum opus, *A History of the Vietnamese*, Keith Taylor is keen to note that the records of natural disasters like droughts during King Thanh Tong's reign provide good evidence for how the government "paid closer attention to village life than any previous regime." It appears to me that the high number of drought records in King Thanh Tong's reign should have been related to the agricultural expansion in the late fifteenth century, which I discussed in Chapter 4. The same reason might explain an increase in the number of floods and excessive rainfall events. Having said that, this does not deny that there were less stable weather conditions in the late fifteenth century in comparison to the middle period of the same century. Clearly, considering the condition of traditional agriculture, the expansion of farming activities would often mean a higher level of vulnerability to the fluctuations in seasonal rainfall or to droughts and floods.

The more the central state concerned itself with natural disasters and anomalies, the more efforts it would have invested into seeking for effective ways to manage those incidents. As a result, by the late fifteenth century, many of the older ways to approach natural anomalies were transformed into a new system of disaster management. It is likely that this strong state-centralized system helped King Thanh Tong's court to effectively cope with the frequent occurrence of natural calamities.

³⁴⁶ Taylor, A History of the Vietnamese, 218.

In addition, the specific contexts of natural anomalies recorded in the dynastic chronicles for the period from 1434 to 1504 show that the attentiveness of the central state to natural incidents in pre-twentieth-century Vietnam tended to reflect a certain tension in socio-political terms. Scholars who have studied the information relating to natural anomalies in the dynastic histories have good reason to argue that the more frequently the dynastic historians reported on natural anomalies, the less effectively the contemporary government was functioning. However, the analysis in this chapter suggests a different understanding of those reported natural disasters. As Vietnamese society and the Le court experienced many socio-political changes in the latter part of the fifteenth century, natural disasters became an analogical index to those disruptions. In this regard, water-related disasters such as drought, rainfall, and stormy weather came to fore in the perception of people at that time.

CONCLUSION

Throughout this dissertation, I have tried to show how the particular natural environment in the area of what is now northern Vietnam contributed to the unfolding events in the fifteenth century. I will briefly review this historical analysis by considering three following points. The first point is more or less a summary of my argument and analyses in the preceding chapters. The second point reflects on the degree to which this study can be evaluated from the viewpoint of "environmental explanations." Finally, the third point will revisit some topics outlined in the Introduction chapter.

§

By focusing on the human-nature relationship, this dissertation finds that the aspects of the environment most often observed and documented by fifteenth-century Vietnamese rulers and scholars can be subsumed under two interrelated categories: land and water. This dissertation also argues that the underlying force that connected these categories was a self-perception of a community having readily committed to wet rice as its fundamental food crop.

Information from the sources under examination reveals that a critical task the Le rulers first undertook was to survey the *land* of their kingdom and the resources it contained. That land came to form their perception of the space in which their kingdom was located. As a result, they conceptualized the Vietnamese "landscape" as being consisted of a central capital and two concentric circle-like zones. On the one hand, this space was a manifestation of an administrative plan. According to that plan, the major regions of the kingdom were identified in terms of their directional relationship with the royal capital. On the other hand, the fifteenth-century observer would have argued that this landscape was necessarily understood by the identification of a

network of important mountains, rivers and other types of landmarks. The evidence suggests that the selection of these natural features as factors that helped conceptualize the Vietnamese landscape was based on the degree to which they were historically and culturally significant to the central capital. Furthermore, when the Le rulers searched for local resources, their vision was clearly attached to this landscape and especially to the land element of the natural environment. The soils in different regions were characterized by particular features and the regionally cultivated fields were classified in different ranks. This classification meant that soil resources were deemed critical for every region in the kingdom. Meanwhile, the identification of local specialties suggests an important point: what made the land of the kingdom uniform was the presence of rice fields.

While rice was a critical element in their survey of the land, the Le rulers regarded *water* as a significant element as well. This is because the cultivation of the rice crop was only possible with the proper regulation of water, such as adequate drainage and enough supply during the seasons of rice harvests. The sources indicate that the building of dikes and the practicing of drought-countering customs were two main issues concerning the regulation of water in fifteenth-century Vietnam. Although Vietnamese people started to build dikes from earlier times, my analysis attempts to show that the fifteenth century was one of the more important episodes in the history of the Red River dikes. In doing so, I reviewed a famous event in 1248, the initiation of the state-sponsored Dinh Nhi (or cauldron-handle) dikes. Although archaeological and anthropological work might shed light on the particular technological aspects of these dikes, the analysis in this dissertation demonstrates that the building of the cauldron-handle dikes in 1248 marked a development in the way Vietnamese people interacted with the Red River network. By the fifteenth century, the Red River dike network was a construction effective

enough to prevent the annual flooding of the Red River system. The Vietnamese government at the time actively imposed state laws that made the building of the cauldron-handle dikes an obligation for almost all of its subjects. Moreover, my analysis has also proposed that these river dikes (not to be mistaken with the sea dikes, which this dissertation has not had a chance to discuss in detail) were significant because their building and maintenance were in tandem with the state's commitment to encourage agriculture, and especially, to secure the summer-harvest rice crop.

Similar to the construction of these dikes, performing drought-countering practices had existed centuries before the fifteenth century. The above chapters suggest that in order to understand how fifteenth-century people perceived a drought and how they therefore acted upon it in the way they did, it is important to pay attention to their conceptions of natural disasters. In many circumstances, the government of the Le dynasty declared a dry spell because of its concerns over the harvesting time of the rice crops. However, because the government often regarded droughts and other natural anomalies as a sign of a certain disturbance in the cosmos, what was more important to the rulers during a natural calamity was their attempt to reestablish cosmic harmony. Thus, although the second part of the period from 1434 to 1504 experienced more difficult weather conditions than the first part, I have proposed that the Le government, in the last decades of the fifteenth century, appears to have been less panicked by the occurrence of natural calamities. The reason for this lies mainly in the fact that the government was able to develop a more systematic program in order to respond to natural disasters toward the late fifteenth century. In other words, people in the government were equipped with knowledge of what to do when a natural calamity occurred, and this was reflected in their changing practices. I speculate that those methods of natural disaster mitigation were effective particularly in the case

of disasters such as droughts because in the weather patterns of northern Vietnam, these droughts were generally mitigated by the late monsoon rainfall.

§

In an attempt to put the environment to the fore, my approach should not be seen as an effort to promote "environmental determinism," or "geographic determinism." Instead, I follow the ideas that world historian Jared Diamond expressed in his defense of the "geographic considerations." First, Diamond has pointed out that geographic considerations are often rejected partly because "geographic explanations usually depend on detailed technical facts of geography and other fields of scholarship: knowledge of wild plant and animal distributions, facts of climates and soils, and so on."³⁴⁷ A similar position can be applied to an analysis of environmental history, which requires a deep body of knowledge of disciplines often unfamiliar to historians. For instance, I have tried to familiarize myself with the materials concerning the soil sciences, the geological development of the Red River Delta, and the literature on natural hazards and risk management. That said, since my focus remains on the historical sources of the fifteenth century, the analysis carried out in this dissertation is more inclined to analyze how "the environment" was conceptualized in the past.

Second, Diamond convincingly argues that "geographic considerations" have value in explaining some human phenomena that cannot merely be reduced to the effects of "the human spirit, free will, and individual agency." To bring this point in conversation with my research, the above chapters have shown that beliefs about the environment were at times critical in defining how humans interacted with the natural environment. In their explanation of why the

_

³⁴⁷ Jared Diamond, "What Does 'Geographic Determinism' Really Mean?," *Jared Diamond's Personal Webpage*, n.d., http://www.jareddiamond.org/Jared_Diamond/Geographic_determinism.html.

³⁴⁸ Diamond, "Geographic Determinism."

Vietnamese state in historical times was strongly committed to the farming of rice, agricultural and food historians have argued that the particular soil and water conditions of this land facilitated a diet centered on rice. In my analysis, the realization of a Vietnamese self-perception about a community that grew wet rice can be detected from the Vietnamese belief that rice was the most fundamental food crop of the land. This perception was reinforced not only by knowledge of the particular material environment but also by the long-term social and cultural practices relating to rice farming.

§

In the Introduction, four topics were presented for consideration: the significance of the fifteenth century in Vietnamese historiography, the regional analysis of premodern Vietnamese history, the employment of the geographical construction of the Red River Delta, and the issue of how Confucianism was adopted in Vietnam. The above chapters have attempted to respond to each of these themes, but they have also left many relevant issues open for future discussion.

This dissertation continues to support the current scholarship on the significance of the fifteenth century in Vietnamese historiography. Yet, in an analysis only focusing on the fifteenth century, I restrain myself from arguing that this century made a turning point in Vietnamese environmental history. What is clear is that the rulers of the Le dynasty put forth many systematic efforts in order to document, understand, and effectively work with the environment in which they were building their kingdom. I have suggested that the way the rulers and writers of the Le dynasty came to conceptualize the environment changed in one aspect or another over the last seven decades of the fifteenth century. If by the late fifteenth century, the rulers and writers of the Le dynasty devised a layout to describe the landscape of their kingdom, this layout of the land is significant because it endured for centuries following the 1400s. Furthermore, this

perception of landscape was embedded in the way the Le rulers understood the distribution of soil types, rice crops, and other products. From the standpoint of the Le authorities, the most important rice producing areas were located in the Safeguard regions. Besides these places, and based on the qualities of the regional fields, a western external region, Hung Hoa, and the two southern external regions, Thanh Hoa and Nghe An, were also recognized as significant rice producing regions. All other external regions were classified as areas where the regional fields were not as productive. It will be useful to testify this understanding in the materials of later periods, considering that Vietnamese historiography has long addressed its attention to the rise of the southern realm starting from the sixteenth century. Likewise, the continuing commitment to dike building as seen in the late fifteenth century played an important role in the stabilization of the summer-harvest crop as well as the advocacy of agricultural expansion. In the field of disaster management, the state officially routinized many practices to cope with droughts and other natural disasters. All of these traits were carried on in the following centuries, albeit with many modifications due to the historical contingencies in later periods.

In terms of regional analysis, this dissertation has not provided sophisticated data and analysis of regional differences in fifteenth-century Vietnam. There is good reason to question the degree to which the above-mentioned sketch of regional divisions in the *Treatise on the Land* "truly" represented the fifteenth-century Vietnamese landscape. That said, information about the regional soils suggests a somewhat different division inside the Safeguard zone. On the one hand, the soils in the three Safeguards—Hai Duong, Kinh Bac and Son Tay (i.e., the middle and lower eastern areas of the Red River system)—were deemed fertile but had been under cultivation for a long time. On the other hand, the southern Safeguard—Son Nam (i.e., the lower southeastern area of the Red River)—displayed unique soil features that indicated the presence

of marshlands. With a focus on rice farming, the expansion of settlements into the marshlands at the lower Red River meant that some crop-related technologies must have been enhanced. Examples of these technologies are the building of dikes and the development of a double-crop system with the stabilization of the summer-harvest crop. Although the above chapters have discussed those developments in tandem with the state policy of agricultural expansion in the late fifteenth century, it can be suggested that these technological developments mostly affected the Safeguard regions. Here I would like to further suggest that the role of Son Nam in later periods is a possible future research topic. Considering that this region connected Thang Long with Thanh Hoa (the hometown of the Le dynasty) in particular and with the southern frontiers in general, further work that focuses on Son Nam will fruitfully contribute to our understanding of the political divisions between the northern and southern parts of the Vietnamese land during the period from the sixteenth to eighteenth centuries.

Another point concerning the issue of regional divisions is the changing perceptions of the types of natural disasters in later periods. This dissertation has analyzed the central state's extensive attention to droughts in the fifteenth century. If one reads the dynastic chronicles for information about droughts and other natural calamities, one must keep in mind that these natural events were often those that had politico-moral implications to the rulers and scholars at the time. The fact that droughts were often mentioned in the historical records does not mean northern and north-central Vietnam were not affected by tropical cyclones. Perhaps, the coastal areas affected by tropical cyclones were not yet as important as the rice farming areas around the royal capital in Thang Long (modern Hanoi). In fact, three major natural hazards in modern Vietnam include

tropical cyclones, floods and droughts.³⁴⁹ It should be expected that as the Vietnamese territory was expanded into the south after 1500, more records of tropical cyclones would have been included in historical sources. My own preliminary research on natural disasters points out to a higher frequency of floods in the eighteenth century. These observations are all potential for further research.

This dissertation continues to use the geographical construction of the Red River Delta with a conviction that the boundaries of this delta, as it is often defined, likely overlapped with the heartland of the fifteenth-century Vietnamese kingdom. However, I want to emphasize that there is much room to rethink how we understand information about the environment in historical sources in order to weave it into a modern framework of analysis. Besides the research of other relevant disciplines such as geology, geography, archeology and anthropology, historical studies might contribute by tracing the changes in the way that people in historical times understood and documented different natural elements. In our case, more research needs to be done with regard to how premodern people conceptualized the Red River network in their own terms.

Finally, the question of how Confucianism and other Chinese concepts were adopted in Vietnam is naturally too complicated for a single study to provide a complete answer.

Throughout my research on the information about the natural environment in historical sources, I find that as far as the fifteenth century is concerned, Confucianism was not the predominant ideology that gave Vietnamese rulers and scholars the most input in their contemplation of land and water. Here and there Chinese ideas were always present in Vietnamese writings. However,

³⁴⁹ Fumihiko Imamura and Dang Van To, "Flood and Typhoon Disasters in Viet Nam in the Half Century Since 1950," *Natural Hazards* 15, no. 1 (1997): 75, doi:10.1023/A:1007923910887; "National Report on Disaster Reduction in Vietnam" (World Conference on Disaster Reduction, Kobe Hyogo, Japan, 2005), 12, https://www.unisdr.org/2005/wcdr/preparatory-process/national-reports.htm.

to identify a particular Chinese idea that was introduced into Vietnam is a very daunting task. I have attempted to show, for instance, how fifteenth-century Vietnamese people swung from a *yin-yang* perspective of the human-nature relationship to a Neo-Confucian form of political activism in copying with natural disasters. While fifteenth-century Vietnamese scholars unquestionably read Chinese books to obtain knowledge of various aspects of life, to argue that Confucianism had a crucial impact on Vietnamese narratives of the natural environment requires much more research.

APPENDIXES

Appendix A: Timeline of the *Treatise on the Land* and related events

1400	First time the <i>Complete Book</i> (i.e., the dynastic chronicles of the Le dynasty)
	mentions Nguyen Trai (1380-1442). He was said to pass the Civil Service
	Examination held by the current Ho dynasty (r. 1400-1407). Ly Tu Tan (?-?), a
	person who contributed some commentaries to the Treatise on the Land also
	passed this examination.
1407	The Ming authorities took northern Vietnam from the Ho dynasty and continued
	to occupy the region until 1427.
1417	The dynastic histories considered this year the first year of the uprising led by Le
	Loi, who later became the founding king of the Le dynasty.
1427	A record in the Le dynastic history dated to the first lunar month of this year
	states that Nguyen Trai was charged with the task of aiding Le Loi to draft all
	diplomatic documents exchanged with the Ming officials. In the eighth month, Le
	Loi proclaimed the establishment of the Le dynasty. He was later known as King
	Thai To (r. 1427-1433).
1434	King Thai Tong (r. 1434-1442), son of King Thai To, was crowned at age eleven.
1435	Nguyen Trai presented two essays in the <i>Treatise on the Land</i> to King Thai Tong.
1442	King Thai Tong died in mysterious circumstances. Nguyen Trai was accused of
	having been involved in the regicide and was executed in the same year.

- 1442-59 King Nhan Tong's reign. King Nhan Tong was crowned when he was three. Both King Nhan Tong and King Thanh Tong (r. 1460-1497), successor of King Nhan Tong, were King Thai Tong's sons. 1459 Prince Le Nghi Dan, King Thai Tong's eldest son, carried out a coup d'état. Having killed Kinh Nhan Tong and the Empress Dowager, Nghi Dan encrowned himself as a new king. 1460 Some loyal officials overthrew Nghi Dan and placed Bang Co on the thrown. Bang Co was later known as King Thanh Tong. King Thanh Tong took two reignal titles, the Quang Thuan period (1460-1469) and the Hong Duc period (1470-1497).1464 King Thanh Tong appointed one of Nguyen Trai's surviving sons as a county official. 1466 Kinh Thanh Tong established thirteen provincial units including a superior prefecture where the royal capital was located (i.e., Thang Long—modern Hanoi). 1467 King Thanh Tong ordered that Nguyen Trai's extant writings be collected. 1469 King Thanh Tong standardized the maps of twelve provincial units and the capital prefecture (which made up thirteen provincial units). Some names of provincial units were changed to new ones during this event, including Hai Duong, Kinh
- Having launched a sucessful campaign in Champa, King Thanh Tong took over some land in the northern part of this kingdom and turned it into the southernmost province of Vietnam at the time. He named this province Quang Nam.

Bac, Son Tay, and Son Nam.

A scholar named Tran Khac Kiem wrote a preface to a collection of Nguyen

Trai's writings. Although this editing work might be a result of King Thanh

Tong's order in 1467, it is unclear if Tran Khac Kiem's edition included Nguyen

Trai's *Treatise on the Land* essays.

1497 King Thanh Tong passed away. His son, King Hien Tong (r.1497-1504), succeeded him to be the fifth king of the Le dynasty. This dissertation mainly covers the history from 1434 to 1504.

1833-1837 Duong Ba Cung collected Nguyen Trai's bequeathed writings, including the *Treatise on the Land*.

Duong Ba Cung's initial collection of Nguyen Trai's writings was printed by the Phuc Khe printing house.

§

Appendix B: An Introduction to Different Versions of the *Treatise on the Land*

After engaging in a textual study, I have classfied all the extant versions of the *Treatise on the Land* (興地志 *Du Địa Chí*) that I can access into three groups as followed; each of them represents a group of redactions. Unless otherwise noted, this dissertation bases its analysis on the version that belongs to the first group, namely, the Tran Tuan Khai version.

Tran Tuan Khai version: In 1966, Tran Tuan Khai first translated the *Treatise on the Land* into modern Vietnamese. This translation also contains photographs of the manuscript that Tran Tuan Khai used. As Tran Tuan Khai notes in his preface, this manuscript is bounded together with the *Diplomatic Documents during Wartime* (軍中辭命集 *Quân Trung Từ Mênh*

Tập) and both are attributed to Nguyen Trai as it is entitled "Bequeathed Work of Nguyen Trai whose penname is Uc Trai" (抑齋相公遺集 Úc Trai Tướng Công Di Tập). It is unknown where this text is currently kept. Tran Tuan Khai does not mention the archive from which he obtained the text either. However, it is clear that this text was recopied no earlier than the nineteenth century. In any case, this version includes not only the main text of the Treatise on the Land that is attributed to Nguyen Trai but also some other supplementary texts (See below). A version that is very similar to the Tran Tuan Khai version is the manuscript A.830.

A.2251, A.1900 and A.53: These three versions are also manuscripts and they should have derived from the same text that Tran Tuan Khai's version did. However, they do not include some of supplementary texts that are in the Tran Tuan Khai version. They differ one to another either in their arrangement of content or the fuller inclusion of information.

Phuc Khe version: Examples of texts that derive from the Phuc Khe version include those having call numbers A.1753, A.3198, VHv.1498/3, VHv.1772/3, and A.139. This is a print version, and it is the only print version of the *Treatise on the Land*. In the 1830s, a scholar named Duong Ba Cung (1795-1868), who hailed from the same hometown as Nguyen Trai, Nhi Khe village (in southern Hanoi), edited an anthology of Nguyen Trai's work, which included the *Treatise on the Land*. While researchers often consider print versions as the most reliable source, this print version of the *Treatise on the Land* includes many typos. It also excludes many useful commentaries of Nguyen Trai's text. According to several prefaces to this print version, Duong Ba Cung started to prepare a draft of Nguyen Trai's anthology before 1833. In the period between 1833 and 1837, Nguyen Nang Tinh (?-?, passed the provincial exams in 1819) and Ngo The Vinh's (1802-56) helped to edit this draft and the collection was finally made available in print by the Phuc Khe printing house in 1868.

Most of the above mentioned versions are available in microfilm and can be accessed in several U.S. libraries, including the Library of the University of Hawai'i at Mānoa. Besides these versions, future work might consider an examination of manuscripts such as A.131 and A.2815; both are kept in the Library at the Institute of Han-Nom Studies in Hanoi and they do not seem to derive from the Phuc Khe print version.

§

Appendix C: A Synopsis of the Contents of *Treatise on the Land*

The Tran Tuan Khai version is comprised of the main text of the *Treatise on the Land*, a component that can be called "the narrator's text" which give reasons why the main text was written, and many annotations and commentaries on the main text.

The main text is comprised of two short essays (only about 850 words in length). The first essay is a brief history of the Vietnamese kingdom from its antiquity. Note that the main text does not use the term "Vietnamese" but a term that can be translated as "our kingdom" or "our state" (我國 ngã quốc, Chn. wo guo). This essay discusses the earliest territorial demarcation of the kingdom, the successive rulers and the demographical changes of the kingdom in historical times. The second essay first introduces all country names and capitals of the kingdom in historical times. It then provides fifteen short descriptions of the regions that formed the territory of the kingdom of the contemporary dynasty, the Le dynasty. Each of these descriptions includes information of some significant regional landmarks, regional soils, ranks of cultivated fields and local products.

The component called "the narrator's text" includes separate passages that introduce the above-mentioned essays. It also gives reasons why these essays were written. According to the

narrator's text, in 1435 Nguyen Trai, a Grand Councilor of the Le court at that time, presented the first essay to King Thai Tong (r. 1434-42), the current and the second king of the Le dynasty. Upon reading this essay, the king requested that Nguyen Trai write a survey of all former capitals in their land as well as of "the mountains, rivers, and local specialties" (山川風物 son xuyên phong vật) in the kingdom. Nguyen Trai's response to this request resulted in the second essay. Following Nguyen Trai's second essay, there were some other passages that belong to the narrator's text. According to these passages, the king was impressed with the scale of the kingdom that he had inherited from his father, King Thai To (a.k.a. Le Loi). He then ordered three prominent Confucian scholar-officials at the time to write annotations and commentaries on Nguyen Trai's essays. These three officials included Nguyen Thien Tung (?-?), Nguyen Thien Tich (?-?), and Ly Tu Tan (?-?). To conclude his narration, the narrator related another conversation between the king and Nguyen Trai. The king expressed his admiration for his father, who had founded the kingdom he was now ruling. He also requested that Nguyen Trai continue teaching him and providing him with more knowledge. In replying to the king, Nguyen Trai said, "O Majesty, that you could have such words, this is the blessing on our kingdom/state."

Besides the main text and the narrator's text, the Tran Tuan Khai version includes many annotations and commentaries on the main text. Let us examine each of these types of supplementary texts. The *first* component of these supplementary texts includes the annotations of Nguyen Trai's main text. These annotations cover some short explanations of difficult terms and note toponym changes. In the annotations for the second essay, which is about the fifteen regions, the annotator explained how to locate a certain region by identifying the boundaries between the region and its neighboring regions. Information about the number of administrative units in each region is also mentioned in these annotations.

The *second* component is often known as a "review" (謹按 *cẩn án*). These "review" passages only appear in the second essay. They provide more details about the local administrative system by listing the current prefectures and counties and county-like units in each of the fifteen regions. The reviews also chart some historical events that occurred in certain subsidiary regions. To some extent, these review passages were attempting to write "mini" local histories. The *third* component is a very short essay, which is called a "comprehensive composition" (通論 *thông luận*). This essay is inserted at the end of Nguyen Trai's first essay.

Modern readers often hold that Nguyen Thien Tung, Nguyen Thien Tich, and Ly Tu Tan, respectively wrote these three components. The reason for this is a passage in the narrator's text that reports that these three scholars wrote annotations, reviews, and comprehensive composition to supplement Nguyen Trai's text. Future work is needed in order to verify this information. Personally, I think that some annotations seem to have been written during Nguyen Trai's lifetime or in the late fifteenth century because all of the events that were mentioned in those annotations were dated to no later than the 1420s (i.e., the end of King Thai To's reign). In other words, we might have some of Nguyen Thien Tung's original annotations. It is more difficult to justify the date of the other two components. In any case, even those annotations that might have originally been written by Nguyen Thien Tung must have been redacted significantly. In this dissertation, some annotations are used to support my understanding of the main text. I generally treat them as sources that can be loosely dated to the fifteenth century.

The fourth type of supplementary texts includes critiques contributed by a scholar whose surname is Ly. A point that needs to be clarified here is that there are two different groups of critiques and both are attributed to a certain Mr. Ly. One such group includes all critiques that were attached directly to Nguyen Trai's main text and another group in fact includes only one

passage that belongs to a section entitled "Various Appraisals" (諸說評論 Chur thuyết bình luận). The "Various Appraisals" is the last section in the Tran Tuan Khai version; it includes several appraisals of Nguyen Trai instead of his writing. The main reason why we need to separate these two groups is because the first group was arguably written by Ly Tu Tan, the scholar who wrote a "comprehensive composition" to supplement Nguyen Trai's text, while Ly Tu Tan was mentioned as a third person in the passage in the "Various Appraisals." There is a possibility that Ly Tu Tan was the author of the first group of critiques because of the following evidence. This Mr. Ly used the first-person voice in one of his critiques in order to report that he once served as a Vice Grand Councilor in Kinh Bac. Meanwhile, an explanatory note in other section of the Tran Tuan Khai version remarks that Ly Tu Tan was the Vice Grand Councilor in the Northern Circuit (i.e., Kinh Bac) before he was summoned to the central court in order to serve as a Recipient of Edicts, that is, an official assisting the king to compose decrees and announcements.

The fifth group of commentaries is labeled as "appendixes" or as "additional notes" (附 *phụ lục*). These additional notes tend to refer to regional events that occurred in the mideighteenth century. This was the time when Governor Trinh Sam ruled the central state on behalf of the Le king in northern Vietnam. Thus, it is safe to say that the *Treatise on the Land* started to be supplemented with these additional notes at some time in the second half of the eighteenth century.

The sixth group includes critiques contributed by two eighteenth-century scholars, Nguyen Tong Quai (a.k.a. Nguyen Tong Khue, 1692-1767) and Ngo Thi Si (1726-1780); both are referred to in the *Treatise on the Land* by their style names: the former as Thu Hien and the latter Ngo Phong. It is unclear if these scholars actually read Nguyen Trai's main text and made

those comments. But it is clear that someone tried to connect the contemporary understandings of the Vietnamese kingdom with the fifteenth-century descriptions.

Besides these six groups of supplementary texts, there are some more commentaries or critiques that were cited from certain other texts. The titles of these texts were identified but we barely know anything about each of these texts as a whole.

Appendix D: Dating the Treatise on the Land

A passage that can be attributed to Ly Tu Tan includes information about the transmission of Nguyen Trai's text in the late fifteenth century. To follow this issue, we need to recall that Nguyen Trai's life ended tragically. In 1442, he was put to death after being accused of participating in the regicide of King Thai Tong. King Thai Tong was the king to whom Nguyen Trai had presented the two essays in the *Treatise on the Land* in 1435. Dynastic histories of the Le dynasty recorded this event, but there was not any clear statement concerning the cause of King Thai Tong's death as well as the verdict on Nguyen Trai's involvement. A clear point is the fact that Nguyen Trai was never convicted of murdering the king. The dynastic historians instead attributed the cause to one of Nguyen Trai's concubines by the name of Nguyen Thi Lo. Moreover, because factions and political purges were endemic at the Le court during the ten-year reign of King Thai Tong, it is highly plausible that Nguyen Trai's case was one chain in a series of the political purges at the time.

Although the dynastic chronicles never mentioned that Nguyen Trai was vindicated, by 1460s the Le court started to recognize Nguyen Trai again. The king at the time was King Thanh Tong (r.1460-1497), a son of King Thai Tong. If King Thanh Tong had believed that Nguyen Trai was involved in the killing of his father, he would not have shown his respect for Nguyen

Trai's legacy. However, in 1464 King Thanh Tong appointed a son of Nguyen Trai to be a county official. In 1467, the king ordered that Nguyen Trai's remaining poems and compositions be collected. This is not to mention that King Thanh Tong himself wrote some poems in praise of Nguyen Trai.

In regard to Nguyen Trai's writings, a critique attributed to Ly Tu Tan provides the following account, which supports the notion that Nguyen Trai wrote the *Treatise on the Land* in 1435 and that this work survived in the Le court through the crisis in 1442. According to this critique, having had Nguyen Trai executed, the senior military official Le Liet, one of the most powerful men in the Le court in 1442, commanded that the woodblocks of Nguyen Trai's essays be destroyed. However, Le Liet was later put in jail. By that time, King Nhan Tong, son and successor to King Thai Tong, had grown up and one time he by chance found a copy of the *Treatise on the Land* in the Palace Library. Following that, he took the *Treatise on the Land* as one of the "readings for state affairs" (政本 *chinh bån*).

The tone of this story is very close to that of the narrator's text, which relates how King Thai Tong enthusiastically received Nguyen Trai's essays (See Appendix C). Both these anecdotes highlight the ideal image of the Le throne. While the narrator's text portrays King Thai Tong as a king full of passion in studying, Ly Tu Tan's account refers to King Nhan Tong as a good king, who embraced a keen interest in reading about the history and geography of his kingdom. It is not difficult to think that both of these stories are fictive because these kings were only little boys at the time when these events supposedly occurred. King Thai Tong was about twelve years old and King Nhan Tong was not more than nine. (We know that King Nhan Tong was at about that age because the dynastic histories recorded that Le Liet was arrested from 1444 to 1448).

However, I argue that there is a reason why such stories were created. Nguyen Trai presented the *Treatise on the Land* to Emperor Thai Tong in 1435 while the dynastic histories recorded that he was appointed as the king's master in the same year (See the story at the beginning of Chapter 2). Moreover, to read Nguyen Trai's role as a mentor of the king and to view the *Treatise on the Land* as a document prepared for the king's study is supported by information in some other sources. For instance, a passage of the narrator's text emphasizes that before King Thai Tong asked Nguyen Trai for the second essay, he ordered that the first one be classified as one of "the guide books of state affairs" (政書 chính thư). Also, a heading on the cover page of the Phuc Khe version indicates that this text was one of the "Precious Instructions in the National Book Collection" (國書寶訓 *Quốc thư bảo huấn*). Likewise, a brief reference in the dynastic histories reveals that Ly Tu Tan also served as an official teacher of King Nhan Tong during the period from 1444 to 1448 in which Le Liet (the senior military official who ordered to destroy the woodblocks of the *Treatise on the Land*) was in jail. Hence, it is possible that Ly Tu Tan brought Nguyen Trai's text back into the royal educational curriculum. Had he done so, Ly Tu Tan must have played a significant role in the editing of the text, especially in those critiques attributed to him. The story concerning the return of the *Treatise on the Land* as we have just mentioned should have also been added during this time.

In short, if we are to believe that Nguyen Trai wrote the two above-mentioned essays in 1435, a significant amount of supplementary texts would have been added in around 1444 to 1448. We still do not know with certainty about the writer who wrote the review passages, which include information about the number of administrative units in the current Le kingdom. As I analyzed in Chapter 2, the anachronisms in Nguyen Trai's main text suggest that the text must have been edited another time between 1469 and 1471 (See also Appendix A). This speculation

matches the fact that Nguyen Trai's extant writings were collected according to King Thanh Tong's order in 1467. In other words, by the late fifteenth century, Nguyen Trai's main text was still known in the Le court. Therefore, if the information about the regional layout and other regional descriptions in the main text of the *Treatise on the Land* was not in the original texts written by Nguyen Trai in 1435, the main text in the extant versions of the *Treatise on the Land* can be still used to understand the second half of the fifteenth century.

BIBLIOGRAPHY

Cited Primary Sources

- An Nam Hinh Thang Do 安南形勝圖 [=The Contours of An Nam]. A.3034., n.d.
- An Nam Vu Cong 安南禹貢 [Annam's Tribute of Yu]. A.2251., n.d.
- Bac Ninh Tinh Dia Du 北寧省地輿 [Local Gazetteer of Bac Ninh Province]. A.590., Early 19th Century.
- Buu Cam, Do Van Anh, Pham Huy Thuy, Ta Quang Phat, and Truong Buu Lam, trans. *Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas]*. Saigon: Bo Quoc-gia Giao-duc, 1962.
- Cai Shen. *Shu Jizhuan 書集傳 [=Commentaries on The Book of Documents]*. The Chinese Text Project site. Accessed March 21, 2017. http://ctext.org/library.pl?if=gb&file=5115&page=3.
- Dai Nam Toan Do 大南全圖 [Comprehensive Maps of the Dai Nam State]. A.2959., n.d.
- Dan Son (penname). Son Cu Tap Thuat 山居雜述 [Mixed Record of a Mountain Hermit]. A.822., Late 18th and Early 19th Centuries.
- Fang Xuanling. "Doutao Qi Su Shi 竇滔妻蘇氏 [The Tale of Lady To, Wife of Doutao]." In *Jinshu 晉書 [History of the Jin Dynasty*], Vol. 96, c.600s.
- Gaspardone, E., ed. "An Nam Chi (Nguyen) 安南志原 [Records of Annam]." In Ngan-Nan Tche Yuan: Texte Chinois Édité et Publié Sous La Direction de Léonard Aurousseau. Hanoi: Imprimerie d'Extrême-Orient, 1932.
- Gu Jiegang, and Liu Qiyu. Shangshu Jiaoshi Yilun 尚書校釋譯論 [Textual Annotation and Criticism of the Book of Documents]. Beijing: Zhonghua shuju, 2005.
- Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas]. A.2499 (Microfilm R.141 University of Hawaii at Manoa)., c. 15th to 17th Centuries.
- Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas]. Hiroshima University 98846., c. 15th to 17th Centuries.
- Huinh-Tinh Paul Cua. *Dai Nam Quac Am Tu Vi [Dictionaire Annamite]*. Saigon: Imprimerie REY, CUROL & Cie. 4, rue d'Adran, 4, 1895.

- Le Chat. Bac Thanh Du Dia Chi 北城輿地誌 [Gazetteers of Bac Thanh (I.e., Northern Vietnam)]. Paris.SA.HM.2190 & A.1565., 1845.
- Le Quy Don. Dai Viet Thong Su 大越通史 [Comprehensive History of Dai Viet]. A.1389., Late 18th Century.
- ———. Kien Van Tieu Luc 見聞小錄 [Records of What Were Heard and Seen]. Paris.SA.HM.2174., c. 1700s.
- ———. Phu Bien Tap Luc 撫邊雜錄 [Miscellaneous Records on the Pacified Borderland]. Paris.SA.HM.2108., 1776.
- ——. Van Dai Loai Ngu 芸臺類語 [The Catalogued Discourses of the Library]. A.1258., 1773.
- Le Trac. An Nam Chi Luoc 安南志略 [Brief Records of Annam]. Siku Quanshu (SKQS). The Chinese Text Project site, c.1300s. http://ctext.org/library.pl?if=gb&res=5820&remap=gb.
- ——. *An Nam Chi Luoc 安南志略 [Brief Records of Annam]*. Translated by Chen Ching ho (a.k.a. Tran Kinh Hoa). Hue: Vien Dai Hoc Hue, 1961.
- ——. An Nam Chi Luoc 安南志略 [Brief Records of Annam]. Edited by Wu Shangqing. Beijing: Zhonghua shuju, 2000.
- Le Trieu Cong Phap 黎朝貢法 [Tributary Regulations of the Le Dynasty]. A.53., n.d.
- Le Van Huu, Phan Phu Tien, Ngo Si Lien, Vu Quynh, Pham Cong Tru, Le Hi, and et. al. *Dai Viet Su Ky Toan Thu 大越史記全書 [The Complete Book of the Historical Records of the Dai Viet]*. Paris.SA.PD.2310. The Grand Secretariat of the Le dynasty, 1697.
- Li Daoyuan. *Shuijing Zhu 水經注 [Annotated Classic of Waterways]*. Sikuquanshu., c. late 5th and early 6th centuries. http://ctext.org/library.pl?if=gb&res=6719&remap=gb.
- Li Shiji. *Xin Xiu Bencao 新修本草 [The New Edition of the Materia Medica]*. The Chinese Text Project Site., 7th century. http://ctext.org/library.pl?if=en&file=31500&page=55&remap=gb.
- Li Wenfeng. Yue Qiao Shu/ Viet Kieu Thu 越嶠書 [Book of the Mountainous Land of Viet]. Paris.HM.2154., c.1500s.
- Liu Xu. *Jiu Tangshu 舊唐書 [Old History of the Tang Dynasty]*. Sikuquanshu (SKQS). The Chinese Text Project site, n.d. http://ctext.org/library.pl?if=gb&res=5983.
- Nam Quoc Vu Cong 南國禹貢 [The Southern Kingdom's Tribute of Yu]. A.830., n.d.

- Nam Viet Dia Du Chi 南越地輿志 [Treatise on the Land of Nam Viet]. A.1900., n.d.
- Nguyen Trai. "Du Dia Chi 輿地志 [Treatise on the Land]." In *Uc Trai Tuong Cong Di Tap Du Dia Chi [A Translation of Nguyen Trai's Treatise on the Land]*, translated by Tran Tuan Khai. Saigon: Nha Van Hoa, 1966.
- Nguyen Van Sieu, and Bui Quy. Dai Viet Dia Du Toan Bien 大越地輿全編 [Complete Book of Geography of Dai Viet]. A.72., 1900.
- Nguyen Van Sieu, Nguyen Dang Giai, and et. al. *Bac Ky Ha De Su Tich 北圻河堤事跡 [The Origins and Developments of the Dikes in northern Vietnam]*. A.1938., c.1800s.
- Pham Dinh Ho, ed. Can Khon Nhat Lam 乾坤一覽 [Inquiry into Heaven and Earth]. A.414., Late 18th Century.
- ——. Nhat Dung Thuong Dam 日用常談 [Frequent Words for Daily Use]. Paris.SA.CC.973., 1827.
- Pham Than Duat. "Hung Hoa Ky Luoc 興化記略 [Brief Record of Hung Hoa]." In *Pham That Duat Toan Tap [The Comprehensive Anthology of Nguyen Trai]*, edited by Pham Dinh Nhan, translated by Ngo The Long, 117–224, 619–88. Hanoi: Van Hoa Thong Tin, 2000.
- Phan Huy Chu. Lich Trieu Hien Chuong Loai Chi 歷朝憲章類誌 [Treaties of the Successive Dynasties]. Paris.SA.HM.2126., 1821.
- Pigneau de Béhaine, Pierre-Joseph. *Dictionarium anamitico-latinum*, 1772. http://archive.org/details/DictionariumAnamiticoLatinumPigneaux.
- Rhodes, Alexandre de. *Tu Dien Annam-Lusitan-Latinh: Thuong Goi Tu Dien Viet-Bo-La* [Dictionarium Annamiticum Lusitanum et Latinum, org. pub. 1651]. Translated by Thanh Lang, Hoang Xuan Viet, and Do Quang Chinh. Ho Chi Minh City: Khoa Hoc Xa Hoi, 1991.
- The Historiography Insitute of the Nguyen Dynasty. *Dai Nam Nhat Thong Chi 大南一統志 [Comprehensive Gazetteer of Dai Nam]*. A.69., 1800s.
- ———. Dai Nam Nhat Thong Chi 大南一統志 [Comprehensive Gazetteer of Dai Nam]. Paris.SA.HM.2128., 1800s.
- ———. Kham Dinh Viet Su Thong Giam Cuong Muc 欽定越史通鑑綱目 [Imperially Commissioned Outlines and Details of the Comprehensive Mirror of Viet History]. Taiwanese Reproduction 1969., 1884.
- Tran Nguyet Phuong. Nam Bang Thao Moc 南邦草木 [The Plants of the Southern Kingdom]. A.154., 1858.

- Truong Quoc Dung. Thoai Thuc Ky Van 退食記聞 (A.k.a. Cong Ha Ky Van 公暇記聞) [Records After Official Hours]. A.45., Early 19th Century.
- Uc Trai Tap 抑齋集 [Anthology of Nguyen Trai Whose Penname Is Uc Trai]. Phuc Khe print., n.d.
- Viet Su Luoc 越史略 [Concise Summary of Vietnamese Historical Records]. Sikuquanshu (SKQS)/ Qian Xizuo, 1843. The Chinese Text Project site, c. Late 14th Century. http://ctext.org/library.pl?if=en&res=88001.
- Vu Quynh, ed. "Man Nuong Truyen 蠻娘傳 [The Tale of Man Nuong]." In *Linh Nam Chich Quai* 嶺南摭怪列傳 [Arrayed Tales of Selected Oddities from South of the Passes], A.1200., 14b–16b, 1492.
- Zhang Hua. Bowu Zhi 博物志 [Record of the Investigation of Things], c.200s.

Cited Secondary Sources

- Alexander, Jason S., Richard C. Wilson, and W. Reed Green. "A Brief History and Summary of the Effects of River Engineering and Dams on the Mississippi River System and Delta." Reston, Virginia: U.S. Geological Survey, 2012. https://pubs.usgs.gov/circ/1375/.
- Bankoff, Greg. *Cultures of Disaster: Society and Natural Hazards in the Philippines*. London; New York: Routledge, 2003.
- Barker, Randolph. "The Origin and Spread of Early-Ripening Champa Rice: Its Impact on Song Dynasty China." *Rice* 4, no. 3–4 (December 2011): 184–86. doi:10.1007/s12284-011-9079-6.
- Biggs, David. *Quagmire: Nation-Building and Nature in the Mekong Delta*. Seattle: University of Washington Press, 2010.
- Bol, Peter K. *Neo-Confucianism in History*. Cambridge, MA: Harvard University Asia Center, 2008.
- Boomgaard, Peter. Frontiers of Fear: Tigers and People in the Malay World, 1600-1950. New Haven: Yale University Press, 2008.
- Braudel, Fernand. *The Mediterranean and the Mediterranean World in the Age of Philip II*. 1st. US. Vol. 2. 2 vols. New York: Harper & Row, 1973.
- Bray, Francesca. *Biology and Biological Technology: Agriculture*. 2nd ed. Vol. 6, part 2. Science and Civilisation in China. Cambridge: Cambridge University Press, 1986.

- Bréelle, Dany. "The Regional Discourse of French Geography in the Context of Indochina: The Theses of Charles Robequain and Pierre Gourou." Flinders University, 2003. https://tel.archives-ouvertes.fr/tel-00363032.
- Brook, Timothy. *The Troubled Empire: China in the Yuan and Ming Dynasties*. History of Imperial China. Cambridge, MA: Belknap Press of Harvard University Press, 2010.
- Buckley, Brendan M., Roland Fletcher, Shi-Yu Simon Wang, Brian Zottoli, and Christophe Pottier. "Monsoon Extremes and Society over the Past Millennium on Mainland Southeast Asia." *Quaternary Science Reviews* 95 (July 2014): 1–19. doi:10.1016/j.quascirev.2014.04.022.
- Cao Huy Giu, trans. *Dai Viet Su Ky Toan Thu [The Complete Book of Historical Records of the Dai Viet]*. Hanoi: Khoa Hoc Xa Hoi, 1968.
- Chen, Chingho, ed. Daietsu Shiki Zensho: Kōgōbon 《大越史記全書》: 校合本 [Textual Annotations of the Complete Book of the Historical Records of the Dai Viet]. Chen Chingho. Tokyo: Tokyo University, 1984.
- ——. "'Kanae mimi' shō kō 「鼎耳」小考 [Some Comments on the Vietnamese Term 'Dinh Nhi']." *The Journal of Institute of Asian Studies, Soka University* 9 (1988): 241–58.
- ——. *On the Various Editions of the Dai-Viet Su-Ky Toan-Thu*. Hong Kong: Center for East Asian Studies, Chinese University of Hong Kong, 1976.
- Cohen, Myron L. "Religion in a State Society: China." In *Asia-Case Studies in the Social Sciences: A Guide for Teaching*, edited by Myron L. Cohen, 1st., 17–31. Armonk, NY: M.E. Sharpe, 1992.
- Cong ty Tu van GeoViet. "Ban Do Dat Tinh Ha Nam [Soil Map of Ha Nam Province]." Ban Do Mang Luoi Dat Lua Dong Bang Song Hong [An Online Map of Rice Soil in the Red River Delta], 2014. http://www.huongdancanhtaclua.com.vn/ban-do-chi-tiet/16.
- Cooke, Nola. "Nineteenth-Century Vietnamese Confucianization in Historical Perspective: Evidence from the Palace Examinations (1463-1883)." *Journal of Southeast Asian Studies* 25, no. 2 (1994): 270–312.
- ------. "Regionalism and the Nature of Nguyen Rule in Seventeenth-Century Dang Trong (Cochinchina)." *Journal of Southeast Asian Studies* 29, no. 1 (1998): 122–61.
- ------. "The Composition of the Nineteenth-Century Political Elite of Pre-Colonial Nguyen Vietnam (1802–1883)." *Modern Asian Studies* 29, no. 4 (1995): 741–764.
- Crespigny, Rafe de. *Portents of Protest in the Later Han Dynasty: The Memorials of Hsiang Kai to Emporor Huan in 166 A.D.* Oriental Monograph Series 19. Canberra: Faculty of Asian Studies in association with Australian National University Press, 1976.

- Dampier, William. Voyages and Descriptions Vol. 2 or A Supplement of the Voyage Round the World. 2nd ed. London: Printed for James Knapton, at the Crown in St. Paul's Churchyard, 1700.
- Dao Duy Anh, and Van Tan, eds. *Nguyen Trai Toan Tap [The Comprehensive Anthology of Nguyen Trai]*. 2nd ed. Hanoi: Khoa Hoc Xa Hoi, 1976.
- Dao The Tuan. "Types of Rice Cultivation and Its Related Civilizations in Vietnam." *East Asian Cultural Studies* 24 (1985): 41–56.
- Dao The Tuan, and Le Duc Thinh. "Su Phat Trien cua He Thong Nong Nghiep Dong Bang Song Hong [=The Development of Agricultural System in the Red River Delta]." In Làng ở Vùng Châu Thổ Sông Hồng: Vấn đề còn bỏ ngỏ [= The Village in Questions], edited by Philippe Papin and Olivier Tessier, 183–206. Hanoi: Lao Dong, 2002.
- Daubenton, Pierre. "Mulberry Tree [Originally Published as 'Murier' in Encyclopédie Ou Dictionnaire Raisonné Des Sciences, Des Arts et Des Métiers, 10:870–10:876 (Paris, 1765).]." Translated by Ann-Marie Thornton. *The Encyclopedia of Diderot & d'Alembert Collaborative Translation Project*, April 15, 2013. http://hdl.handle.net/2027/spo.did2222.0002.154.
- De Weerdt, Hilde. "Maps and Memory: Readings of Cartography in Twelfth- and Thirteenth-Century Song China." *Imago Mundi* 61, no. 2 (2009): 145–167.
- Diamond, Jared. "What Does 'Geographic Determinism' Really Mean?" *Jared Diamond's Personal Webpage*, n.d. http://www.jareddiamond.org/Jared_Diamond/Geographic_determinism.html.
- Dinh Khac Thuan. "Bai Tho Khac Da Cua Vua Le Loi O Vung Nui Tinh Cao Bang [On King Thai To's Poem Carved on a Cliff in Cao Bang]." *Tap Chi Han Nom* 1, no. 110 (2012): 46–49.
- Dyt, Kathryn. "Calling for Wind and Rain' Rituals." *Journal of Vietnamese Studies* 10, no. 2 (May 1, 2015): 1–42.
- Ebrey, Patricia Buckley. *Emperor Huizong*. Cambridge, MA: Harvard University Press, 2014.
- Elvin, Mark. *The Pattern of the Chinese Past: A Social and Economic Interpretation*. Redwood City, CA: Stanford University Press, 1973.
- ——. The Retreat of the Elephants: An Environmental History of China. New Haven: Yale University Press, 2008.
- ——. "Who Was Responsible for the Weather? Moral Meteorology in Late Imperial China." *Osiris*, 2nd, 13 (January 1, 1998): 213–37.

- Fumihiko Imamura, and Dang Van To. "Flood and Typhoon Disasters in Viet Nam in the Half Century Since 1950." *Natural Hazards* 15, no. 1 (1997): 71–87. doi:10.1023/A:1007923910887.
- Gourou, Pierre. *The Peasants of the Tonkin Delta A Study of Human Geography [Orig. Pub. as "Les Paysans Du Delta Tonkinois. Etude de Geopgraphie Humanine" in 1936]*.

 Translated by Richard R. Miller. Vol. 1. 2 vols. Behavior Science Translations. New Haven: Human Relations Area Files, 1955.
- Heathcote, R. L. *Drought and the Human Story: Braving the Bull of Heaven*. 1st ed. Farnham, Surrey, England; Burlington, VT: Ashgate, 2013.
- Ho, Ping-Ti. "Early-Ripening Rice in Chinese History." *The Economic History Review* 9, no. 2 (1956): 200–218. doi:10.2307/2591742.
- Hoa Bang. "Luoc Khao Ve Lich Su De Qua Cac Trieu Dai [A Concise Study of the Dikes during the Dynastic History]." *Tap San Nghien Cuu Van Su Dia* 31 (1957): 1–17.
- Hoang Xuan Han. *Lich va Lich Viet Nam [Calendar and Vietnamese Calendar]*. Paris: Tap San Khoa Hoc Xa Hoi, 1982.
- Hucker, Charles O. *A Dictionary of Official Titles in Imperial China*. Reprinted and Published by arrangement with Stanford University Press. Taipei: Southern Materials Center, 1988.
- Huckstorf, V. "Semilabeo Notabilis." *The IUCN Red List of Threatened Species*, 2012. http://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T166903A1150009.en.
- Hughes, J. Donald. What Is Environmental History? 1st ed. Cambridge: Polity, 2006.
- Hyndman, Donald, and David Hyndman. *Natural Hazards and Disasters*. 3rd. Boston, MA: CENGAGE Learning, 2016.
- Kleinen, John. "Historical Perspectives on Typhoons and Tropical Storms in the Natural and Socio-Economic System of Nam Dinh (Vietnam)." *Journal of Asian Earth Sciences* 29, no. 4 (February 15, 2007): 523–31.
- "Ky Thuat Trong Dau [Mulberry Planting Techniques]." *Vietnam Sericulture Research Center*, March 21, 2017. http://vietseri.vn/Chi-tiet-tin/Hoi-dap-ky-thuat-trong-dau/11555/ky-thuat-trong-dau.
- Le Ba Thao. *Thien nhien Viet Nam [The Natural Environment of Vietnam]*. Hanoi: Khoa Hoc Ky Thuat, 1990.
- Lewis, Mark Edward. *The Early Chinese Empires: Qin and Han*. History of Imperial China. Cambridge, MA: Belknap Press of Harvard University Press, 2007.

- Li Tana. "A Historical Sketch of the Landscape of the Red River Delta." TRaNS: Trans-Regional and -National Studies of Southeast Asia 4, no. 2 (June 10, 2016): 1–13. doi:10.1017/trn.2016.8. -. "An Alternative Vietnam? The Nguyen Kingdom in the Seventeenth and Eighteenth Centuries." Journal of Southeast Asian Studies 29, no. 1 (1998): 111–21. —. "Between Mountains and the Sea: Trades in Early Nineteenth-Century Northern Vietnam." Journal of Vietnamese Studies 7, no. 2 (2012): 67-86. -. "Swamps, Lakes, Rivers and Elephants: A Preliminary Attempt towards an Environmental History of the Red River Delta, C. 600-1400." Water History 7, no. 2 (2015): 199-211. ——. "The Ming Factor and the Emergence of the Việt in the 15th Century." In Southeast Asia in the Fifteenth Century: The China Factor, edited by Geoff Wade and Sun Laichen, 83–103. Singapore: NUS Press, 2010. -. "The Sea Becomes Mulberry Fields and Mulberry Fields Become the Sea': Dikes in the Eastern Red River Delta, c.200 BCE to the Twenty-First Century CE." In Natural Hazards and Peoples in the Indian Ocean World: Bordering on Danger, edited by Greg Bankoff and Joseph Christensen, 55–78. Palgrave Series in Indian Ocean World Studies. New York: Palgrave Macmillan US, 2016. doi:10.1057/978-1-349-94857-4 3.
- ------. "Towards an Environmental History of the Eastern Red River Delta, Vietnam, c.900–1400." *Journal of Southeast Asian Studies* 45, no. 3 (October 2014): 315–37.
- Li, Zhen, Yoshiki Saito, Eiji Matsumoto, Yongji Wang, Susumu Tanabe, and Quang Lan Vu. "Climate Change and Human Impact on the Song Hong (Red River) Delta, Vietnam, during the Holocene." *Quaternary International* 144, no. 1 (2006): 4–28. doi:10.1016/j.quaint.2005.05.008.
- Lieberman, Victor. *Strange Parallels: Integration on the Mainland: Southeast Asia in Global Context, c.800–1830.* Vol. 1. 2 vols. Cambridge: Cambridge University Press, 2003.
- Lieberman, Victor, and Brendan Buckley. "The Impact of Climate on Southeast Asia, circa 950–1820: New Findings." *Modern Asian Studies* 46, no. 5 (2012): 1049–1096. doi:10.1017/S0026749X12000091.
- Loewe, Michael, and Edward L. Shaughnessy, eds. *The Cambridge History of Ancient China:* From the Origins of Civilization to 221 B.C. Cambridge, England: Cambridge University Press, 1998.
- McElwee, Pamela D. *Forests Are Gold: Trees, People, and Environmental Rule in Vietnam.* Seattle: University of Washington Press, 2016.
- McNeill, J. R. "Observations on the Nature and Culture of Environmental History." *History and Theory* 42, no. 4 (December 1, 2003): 5–43.

- ——. "The Historiography of Environmental History." In *The Oxford History of Historical Writing: Volume 5: Historical Writing Since 1945*, edited by Axel Schneider and Daniel Woolf, 159–76. Oxford: Oxford University Press, 2011.
- Miller, G. Tyler, and Scott Spoolman. *Living in the Environment: Principles, Connections, and Solutions.* 17th ed. Belmont, CA: Brooks/Cole, 2012.
- Moormann, Frans R., and N. van Breemen. *Rice: Soil, Water, Land.* Los Baños, Philippines: International Rice Research Institute, 1978.
- Mostern, Ruth. "Dividing the Realm in Order to Govern": The Spatial Organization of the Song State (960-1276 CE). Cambridge, MA: Harvard University Press, 2011.
- ——. "Historical Gazetteers: An Experiential Perspective, with Examples from Chinese History." *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 41, no. 1 (2008): 39–46.
- "National Report on Disaster Reduction in Vietnam." Kobe Hyogo, Japan, 2005. https://www.unisdr.org/2005/wcdr/preparatory-process/national-reports.htm.
- Needham, Joseph, Lu Gwei-Djen, and Huang Hsing-Tsung. *Biology and Biological Technology: Botany.* Vol. 6, part 1. 6 vols. Science and Civilisation in China. Cambridge; New York: Cambridge University Press, 1986.
- Ngo Dang Tri, and Do Thi Thanh Loan. "Bon Lan Dieu Chinh Dia Gioi Hanh Chinh Thanh Pho Ha Noi Thoi Ky 1954-2008 [The Administrative Bounderies of Hanoi Was Adjusted Four Times, 1954-2008]." Hanoi, 2010.
- Ngo Duc Tho, Hoang Van Lau, Ngo The Long, and Ha Van Tan, trans. *Dai Viet Su Ky Toan Thu: Ban In Noi Cac Quan Ban [The Complete Book of Historical Records of the Dai Viet: Official Print Version of the Grand Secretariat]*. Hanoi: Khoa Hoc Xa Hoi, 1983.
- Ngo The Long. "Ve Ban Dai Viet Su Ky Toan Thu In Van Go Cua Pham Cong Tru Moi Tim Thay [On the Newly Discovered Woodblock Version of the Complete Book of the Historical Records of the Dai Viet Edited by Pham Cong Tru]." *Tap Chi Han Nom* 4, no. 1 (1988). http://hannom.org.vn/web/tchn/data/8801.htm.
- Nguyen Hai Ke. "De Hong Duc va Cong Cuoc Khan Hoang Vung Ven Bien Nam Song Hong Thoi Le So [The Hong Duc Dikes and Land Reclamation in the Coastal Area South of the Red River during the Earlier Part of the Le Dynasty]." *Nghien Cuu Lich Su* 5 (1985): 35–42.
- Nguyen Quang Hong, ed. Di Van Chua Dau: Co Chau Luc, Co Chau Hanh, Co Chau Nghi [The Extant Texts from Dau Temple]. Hanoi: Khoa Hoc Xa Hoi, 1997.
- Nguyen Si Giac, trans. Le Trieu Chieu Linh Thien Chinh [The Good Governance That Based on Imperial Edicts and Decrees of the Le Dynasty]. Saigon: Dai Hoc Vien Saigon, 1961.

- Nguyen Xuan Tuu. "Buoc Dau Tim Hieu ve Bien Doi Khi Hau o Nuoc Ta trong Lich Su [A prelimary study of Climate Change in Vietnamese history]." *Nghien Cuu Lich Su* 213, no. 6 (1983): 60–63.
- Nha Hoc Chanh Vinh Yen. *Dia Chi Tinh Vinh Yen [Geocultural Records of Vinh Yen Province]*. Hanoi: Imprimerie Thuy-Ky 98, Rue du Chanvre, 1939.
- Niu Junkai. "Cong 'zheng Zhan' dao 'ping Nan': 15-18 shiji Yuenan nanxing lucheng tu yanjiu 从'征占'到'平南': 15~18 世纪越南'南行路程图'研究 [From 'Conquering Champa' to 'Pacifying the South' Vietnamese Maps of the Southern Advance, 15th-18th Centuries]." *Guojia hanghai (National Maritime Research)*, no. 1 (2016): 82–100.
- O'Connor, Richard A. "Agricultural Change and Ethnic Succession in Southeast Asian States: A Case for Regional Anthropology." *The Journal of Asian Studies* 54, no. 4 (November 1995): 968. doi:10.2307/2059956.
- Oosthoek, K. Jan. "Reconstructing Past Climates." *Environmental History Resources*. Accessed March 9, 2017. https://www.eh-resources.org/reconstructing-past-climates/.
- Pankenier, David W. *Astrology and Cosmology in Early China: Conforming Earth to Heaven.* Cambridge: Cambridge University Press, 2013.
- ——. "Heaven-Sent: Understanding Cosmic Disaster in Chinese Myth and History." In *Natural Catastrophes During Bronze Age Civilisations: Archaeological, Geological, Astronomical and Cultural Perspectives*, edited by Benny J. Peiser, Trevor Palmer, and Mark E. Bailey, 187–97. Oxford: Archaeopress, 1998.
- Philippe Langlet, and Thanh Tam Quach. "Note sur les phénomènes naturels extraordinaires au Tonkin sous la dynastie de Le (15e-18e siecles)." *Les Cahiers d'Outre-Mer* 48 (1995): 251–58.
- Phung, Hieu. "Recording Natural Anomalies in Eighteenth-Century Vietnam: A Particular Application of the 'Chinese' Moral Approach to Environment." Hong Kong, 2015.
- Reid, Anthony. "From Betel-Chewing to Tobacco-Smoking in Indonesia." *The Journal of Asian Studies* 44, no. 3 (May 1985): 529–47.
- Reiter, Florian C. Basic Conditions of Taoist Thunder Magic 道教雷法. Wiesbaden: Harrassowitz Verlag, 2007.
- Rome, Adam. "From the Editor." Environmental History 8, no. 1 (January 1, 2003): 6–7.
- Sakurai Yumio. "10 seiki beni kawa deruta kaitaku shiron 10 世紀紅河デルタ開拓試論 [The Red River Delta in the Tenth Century]." *Tonan Ajia Kenkyu (Southeast Asian Studies)* 17 (1980): 597–632.
- ------. "Chin chōki beni kawa deruta kaitaku shiron 1: nishi hanran hara no kaitaku 陳朝期紅河デルタ開拓試論 1: 西氾濫原の開拓 [=The Red River Delta in the Tran

- Dynasty(1225-1440) I]." *Tonan Ajia Kenkyu (Southeast Asian Studies)* 27 (1989): 275–300.

- Skonicki, Douglas Edward. "Cosmos, State and Society: Song Dynasty Arguments Concerning the Creation of Political Order." Ph.D., Harvard University, 2007.
- Stroud, Ellen. "Does Nature Always Matter? Following Dirt through History." *History and Theory* 42, no. 4 (December 1, 2003): 75–81.
- Sutter, Paul S. "What Can U.S. Environmental Historians Learn from Non-U.S. Environmental Historiography?" *Environmental History* 8, no. 1 (2003): 109–129.
- Taylor, Keith W. A History of the Vietnamese. Cambridge: Cambridge University Press, 2013.
- ——. "Authority and Legitimacy in 11th Century Vietnam." In *Southeast Asia in the 9th to 14th Centuries*, edited by David G. Marr and A. C. Milner, 139–76. Singapore: ISEAS—Yusof Ishak Institute, 1986.
- ——. "Surface Orientations in Vietnam: Beyond Histories of Nation and Region." *The Journal of Asian Studies* 57, no. 4 (1998): 949–78.
- Taylor, Romeyn. "Official and Popular Religion and the Political Organization of Chinese Society in the Ming." In *Orthodoxy in Late Imperial China*, edited by Kwang-Ching Liu. Berkeley: University of California Press, 1989.
- Tessier, Olivier. "Hydrological Development of the Red River Delta: A Historical Perspective of the Role of the Imperial Then Colonial State (From the XIIth Century to the First Half of the XXth Century)." In *Water and Its Many Issues: Methods and Cross-Cutting Analysis*, edited by Stéphane Lagrée, 37–83. Vietnam, 2012. http://www.tamdaoconf.com/en/2013/07/20/quy-hoach-thuy-loi-vung-dong-bang-song-hong-nhin-nhan-lich-su-ve-vai-tro-cua-nha-nuoc-phong-kien-va-nha-nuoc-thuoc-dia-the-ky-xii-den-nua-dau-the-ky-xx/.
- Theobald, Ulrich. "Religions in China Siyu 四御, the Four Guides." *ChinaKnowledge.de An Encyclopaedia on Chinese History, Literature and Art*, August 3, 2010. http://www.chinaknowledge.de/Literature/Religion/personssiyu.html.

- Tran Quoc Vuong. "Dia Ly Lich Su Mien Ha Noi (Truoc The Ky XI) [A Historical Geography of the Hanoi Region, prior to the Eleventh Century], Part 1." *Nghien Cuu Lich Su* 15 (1960): 48–57.
- ——. "Dia Ly Lich Su Mien Ha Noi (Truoc The Ky XI) [A Historical Geography of the Hanoi Region, prior to the Eleventh Century], Part 2." *Nghien Cuu Lich Su* 17 (1960): 44–53.
- Truong Buu Lam. "Loi gioi thieu [Introduction]." In *Hong Duc Ban Do 洪德版圖 [The Hong Duc Atlas]*, translated by Buu Cam, Do Van Anh, Pham Huy Thuy, Ta Quang Phat, and Truong Buu Lam, vii–xix. Saigon: Bo Quoc-gia Giao-duc, 1962.
- United States Department of Agriculture. "Family Poaceae." *USDA Natural Resources Conservation Service*. Accessed May 22, 2016. http://plants.usda.gov/java/ClassificationServlet?source=display&classid=Poaceae.
- . "The Color of Soil." *USDA Natural Resources Conservation Service*. Accessed April 30, 2016. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=nrcs142p2 054286.
- Vijayan, Kunjupillai. "Approaches for Enhancing Salt Tolerance in Mulberry (Morus L) A Review." *Plant OMICS* 2, no. 1 (2009): 41–59.
- Volkov, Alexei. "Astrology and Hemerology in Traditional Vietnam." *Extrême-Orient Extrême-Occident*, no. 35 (May 1, 2013): 113–40.
- Vu Duong Luan. "The Politics of Frontier Mining: Local Chieftains, Chinese Miners, and Upland Society in the Nông Văn Vân Uprising in the Sino-Vietnamese Border Area, 1833–1835." *Cross-Currents: East Asian History and Culture Review* 11 (June 2014). https://cross-currents.berkeley.edu/e-journal/issue-11/vu.
- Vu Tu Lap. Vietnam: Geographical Data. Hanoi: Foreign Languages PubHouse, 1979.
- Wade, Geoff, and Sun Laichen, eds. *Southeast Asia in the Fifteenth Century: The China Factor*. Singapore: NUS Press, 2010.
- Wang Yao. "Zuiji zhaowen ti tedian tanwei 罪己诏文体特点探微 [Research on Compositive Characteristics of Self-Reproach Decrees]." *Jixi Daxue Xuebao*, no. 3 (2015): 112–15.
- Whitmore, John K. "Cartography in Vietnam." In *The History of Cartography. Vol. 2, Book 2. Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, 478–508. Chicago; London: The University of Chicago Press, 1994.
- ------. "Chiao-Chih and Neo-Confucianism: The Ming Attempt to Transform Vietnam." *Ming Studies*, no. 1 (1977): 51–91.

- "Paperwork: The Rise of the New Literati and Ministerial Power and the Effort toward Legibility in Đại Việt." In *Southeast Asia in the Fifteenth Century: The China Factor*, edited by Geoff Wade and Sun Laichen, 104. Singapore: NUS Press, 2010.
 "The Development of Lê Government in Fifteenth Century Vietnam." PhD diss., Cornell University, 1968.
- ——. "The Rise of the Coast: Trade, State and Culture in Early Đại Việt." *Journal of Southeast Asian Studies* 37, no. 1 (2006): 103–22.
- ------. "The Two Great Campaigns of the Hong-Duc Era (1470-97) in Dai Viet." *South East Asia Research* 12, no. 1 (March 2004): 119–36.
- Wilkinson, Endymion. *Chinese History: A Manual*. Cambridge, MA: Harvard University Asia Center, 1998.
- WLE Greater Mekong. "Dams in the Red River Basin: Commissioned, Under Construction and Planned Dams in April 2016." Vientiane: CGIAR Research Program on Water, Land and Ecosystems Greater Mekong, 2016. https://wle-mekong.cgiar.org/wp-content/uploads/Red A0 2016 Final.pdf.
- Woodside, Alexander. "The Relationship between Political Theory and Economic Growth in Vietnam, 1750–1840." In *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*, edited by Anthony Reid, 245–68. London: Palgrave Macmillan UK, 1997.
- Yee, Cordell D. K. "Reinterpreting Traditional Chinese Geographical Maps." In *The History of Cartography. Vol. 2, Book 2. Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, 35–70. Chicago; London: The University of Chicago Press, 1994.
- Yuan Daoyang, Yang Qingyun, Lei Zhongsheng, Su Qi, and Wu Zhao. "Sichuan Beibu Diqu Sanci Zhongqiang Lishi Dizhen Buchong Kaozheng 四川北部地区三次中强历史地震补充考证 [Additional Textual Criticism of Three Moderate-Strong Historical Earthquakes in the Northern Region of Sichuan Province]." *Dizhen Gongcheng Xuebao [China Earthquake Engineeering Journal]* 38, no. 2 (2016): 226–235. http://www.dzgcxb.com/ch/reader/create_pdf.aspx?file_no=20160209&flag=1&year_id=2016&quarter_id=2.
- Zhang Xiumin. "Yongle Jiaozhi zongzhi de faxian 永乐《交阯总志》的发现 [The Discovery of the Jiaozhi Gazetteer in the Yongle Era]." *Lanzhou Daxue Xuebao*, no. 1 (1981): 53–55.