State, Society and Water Management in Late Imperial Southeast China

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Contents

Abstract

This thesis is a study of water management systems in the late imperial (1368-1912) Minnan region (southern Fujian), China. Based on stone inscriptions and local gazetteers, I present case histories of several well-documented water management systems. I explore trends in social organization and state-society issues relevant to water management systems, with particular emphasis placed upon the means by which lineages came to control water management structures. I then consider the causes and characteristics of water management-related conflict, as well as trends in government intervention in related disputes, and the principles upon which local officials adjudicated these disputes. I argue that property rights status was important to adjudication, particularly the concepts of "official," "communal" and "private" land and resources. Finally, I contextualize Minnan water management systems among systems in other parts of China.

Résumé

Cette thèse étudie les systèmes de gestion de l'eau pendant les dernières années de la période impériale dans la région de Minnan (dans le sud du Fujian) en Chine. L'histoire de plusieurs systèmes bien documentés de gestion de l'eau est présentée, à partir de l'étude de pierres avec des inscriptions et de registres locaux. Les tendances dans l'organisation sociale liée aux systèmes de gestion de l'eau et les problèmes politico-sociaux associés sont analysés, avec une attention toute particulière sur les moyens employés par les groupes pour contrôler les organisations qui gèrent l'eau. Les causes et les caractéristiques des conflits relatifs à la gestion de l'eau sont étudiées, ainsi que l'intervention des gouvernements et les principes suivis par les instances locales dans la résolution de ces disputes. Les auteurs soutiennent que le statut de la propriété importe dans l'attribution des ressources, en particulier les concepts de ressources « gouvernementales », « communales » et « privées ». En dernière partie, les systèmes de gestion de l'eau dans la région de Minnan sont mis en perspective avec les systèmes d'autres régions de la Chine.

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Introduction

In the late imperial Minnan region, water management structures were essential to agricultural production and the livelihoods of local residents. Wedged between scarce irrigation sources and perennially encroaching ocean tides, peasants laboured at wet-rice cultivation. The centrality and scarcity of irrigation water gave rise to quarrels and even violent feuds, events sometimes referred to by the government as "disputing" or "struggling" over water (*zhengshui* 爭水).[1] I use the term "water management system" to describe interlinked physical structures such as reservoirs and canals that performed various water-related functions, including the provision of irrigation water. Aside from their practical importance to agriculture, water management systems are of interest to historians because, like regional markets, they were points of contact, cooperation and conflict between lineages, villages, and the state—that is, they were one of the key overlapping, hierarchical networks that constituted the structure of rural Chinese society.[2] Furthermore, the localized management of some water management systems exemplified the state's explicit acceptance, even encouragement, of a large degree of autonomy and self-governance in rural society.

In addition to expanding our understanding of late imperial rural society, the study of premodern water management systems is also of interest to students of modern and contemporary rural China. There is evidence that at least in some

[1] *Fujian shengli* 福建省例. Qing Dynasty. (Reprint, Taipei: Taiwan datong, 1987), 439.
[2] Prasenjit Duara, *Culture, Power, and the State: Rural North China, 1900-1942* (Stanford: Stanford University Press, 1988).

regions of post-1949 China, in spite of the increased government control over rural society and active suppression of traditional forms of social organization that characterized the period, water management remained a major source of extra-village and lineage conflict.[3] More recently under post-socialist conditions, traditional forms of social organization, such as lineages, have reasserted themselves to fill vacuums in local governance left by the disintegration of communes and other socialist institutions. It has been demonstrated that in at least one region of the country, and likely many more, water management systems have simultaneously reemerged as major sources of rural social conflict.[4] Elsewhere, it has been shown that the organization of resurgent local cultural institutions such as temple societies still bear the marks of late imperial irrigation systems.[5]

The social organization of water management systems, and the roles played by state and non-state actors, has garnered considerable attention from social theorists and historians alike. Karl Wittfogel famously argued that throughout history large-scale irrigation works necessitated the oversight of centralized bureaucratic governments, and therefore, societies centered on such irrigation systems failed to develop the kind of independent aristocracy that formed in the west. China was one of the "hydraulic societies" Wittfogel singled out as historically

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[3] Mobo C. F. Gao, *Gao Village: A Portrait of Rural Life in Modern China* (Honolulu: University of Hawaii Press, 1999), 11-24.

[4] According to Liu and Murphy, in rural Jiangxi since the 1980s, irrigation water has reemerged as a key factor in lineage disputes. See Liu Liangqun and Rachel Murphy, "Lineage Networks, Land Conflicts and Rural Migration in Late Socialist China," *The Journal of Peasant Studies* 33, 4 (2006): 612-645.

[5] Kenneth Dean and Zhenman Zheng, *Ritual Alliances of the Putian Plain* (Leiden: Brill, 2010).

doomed to the stultifying despotism of a centralized bureaucracy.[6] Wittfogel's theory has since been refuted by a number of studies (see below) that highlight the roles played by non-state organizations in the maintenance of large-scale water management systems. Most notably, studying Bali, Clifford Geertz showed that societies dependent on large scale irrigation systems for agricultural production do not necessarily rely on the state for water management—in Bali, an organization called the "Subak" was formed by local communities to manage irrigation autonomously from the state.[7]

In his research on Hunan, Peter Perdue demonstrates that government officials played an active but ultimately supporting role in water management in the Dongting Lake region. It was the initiative of common Chinese in reclaiming land and building polders in the lake's vicinity that led to changes in the region's economy and ecology—government officials could merely attempt to regulate, often unsuccessfully.[8] Adding an element of class conflict to this focus on state-society relations, in his numerous studies of irrigation in Jiangnan and Central China, Akira Morita argues that by the late sixteenth century, the rise of a new, powerful landowning class had disrupted the workings of irrigation systems founded in earlier periods and featuring small and mid-sized landowners as users. In response to the intrusions of large landowners who sought to monopolize water supplies,

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[6] Karl August Wittfogel, *Oriental Despotism; A Comparative Study of Total Power* (New Haven: Yale University Press, 1957).
[7] Clifford Geertz, "The Wet and the Dry: Traditional Irrigation in Bali and Morocco," *Human Ecology*, 1, no. 1 (1972): 23-39.
[8] Peter C. Perdue, "Official Goals and Local Interests: Water Control in the Dongting Lake Region during the Ming and Qing Periods," *The Journal of Asian Studies*, 41, 4 (1982): 747-765.

small and medium landholders were supported by local officials in their efforts to strengthen and reassert the regulations that governed irrigation systems.[9]

Dong Xiaoping and Christian Lamouroux have carried out meticulous fieldwork and source collection related to the history of irrigation in rural Shanxi. Their work showcases the strategic maneuvering of individuals and social units, such as villages, as they engaged in conflict and shifting alliances to ensure access to scarce irrigation water.[10] This strategic maneuvering is also reflected in Kenneth Dean and Zheng Zhenman's work in the Putian region of Fujian. Dean and Zheng show that in Putian, just to the north of Minnan, ritual alliances developed during the Ming in part as a means to organize and defend water access in this densely cultivated region. Although government involvement in adjudication of irrigation disputes persisted in the late imperial period, local balances of power between villages, lineages and ritual alliances were the key determinants of water access. This work attests to the diversity of social organization found throughout China, as well as the way in which struggles over resources shaped and were shaped by the structure of local society.[11]

In an article on irrigation in coastal Fujian, including the Minnan region, Zheng Zhenman divides water management structures sociologically into the three categories of "official" (*guanban* 官辦), "commoner" (*minban* 民辦) and "official-

[9] Akira Morita 森田明, *Qingdai shuili shehui shi yanjiu* 清代水利社會史研究, translated by Zheng Liangsheng 鄭樑生 (Taipei: Guoli bianyi guan: 1996), 34, 362-406.

[10] Dong Xiaoping 董 曉萍 and Christian Lamouroux 藍 克利, *Bu guan er zhi—Shanxi sishe wucun shuili wenxian yu minsu* 不灌而治—山西四社五村水利文獻與民俗 (Beijing: Zhonghua shuju, 2003).

[11] Dean and Zheng, *Ritual Alliances of the Putian Plain*.

commoner" (*guanmin ban* 官民辦). Zheng argues that in the late imperial period there was less government funding available for irrigation projects, so that commoner and official-commoner irrigation works became the norm.[12]

In this thesis I examine the social organization of water management systems in late imperial Minnan. Due to the limitations of sources on Minnan water management, I do not attempt to provide a comprehensive, statistical overview of the organization of water management structures. I also do not engage in detailed comparison between water management in the late imperial period and previous eras, as information on water management prior to the Ming is scarcer yet.[13] What I *am* able to do, however, is use surviving evidence to establish the key challenges faced by local residents in constructing and maintaining water management systems, as well as identify trends in the social organization of, and official intervention in, these systems. I agree with Zheng that in Minnan, Ming and Qing governments played a less direct role in building water management works than their Song predecessor. Lineages came to threaten or dominate many water management structures, and gained power over such structures via philanthropy or force. However, the government was willing to acquiesce with and even aid lineage

[12] Zheng Zhenman, "Mingqing Fujian yanhai shuili zhidu yu xiangzu zuzhi" 明清福建沿海水利制度與鄉族組織, in *Xiangzu yu guojia, duoyuan shiye zhong de Mintai chuantong shehui* 鄉族與國家, 多元視野中的閩台傳統社會 (Beijing: Xinzhi sanlian shudian, 2009), 51-6.

[13] For the Minnan region, late imperial gazetteers note that some water management structures were first constructed in the Song or earlier, and sometimes even relay the names of individuals who oversaw the construction projects. However, there is almost never enough information provided on the organization of these structures to allow for comparison with water management during the Ming and Qing eras.

dominance over water management structures, so long as lineages managed these structures in a way that was conducive to the good of the surrounding community. Nevertheless, when it became necessary to protect the interests of local residents from the tyranny of a powerful lineage, the state did not shy away. I argue that in such instances, officials often justified their adjudications with property rights concepts such as "official," "communal" and "private." The property rights statuses of water management structures were not as straightforward as they might first appear.

The first chapter of this thesis is comprised of case histories of individual water management systems, while the second chapter features analysis of the social organization of water management structures. The third chapter is a study of state intervention in Minnan water management structures. In the conclusion, comparison is made between water management in Minnan and other regions of China.

Late Imperial Minnan

Late imperial (1368-1912) Minnan 閩南 (meaning Southern Fujian), located in Fujian Province 福建省 on the southeastern Chinese coast, was comprised of the Quanzhou 泉州 and Zhangzhou 漳州 Prefectures (*fu* 府). Quanzhou Prefecture 泉州府 contained seven counties (*xian* 縣): Jinjiang 晉江, Nan'an 南安, Hui'an 惠安,

Dehua 德化, Anxi 安溪, Tong'an 同安, and Yongchun 永春.[14] Zhangzhou Prefecture 漳州府 was comprised of ten counties: Longxi 龍溪, Zhangpu 漳浦, Longyan 龍岩,[15] Nanjing 南靖, Changtai 長泰, Zhao'an 詔安,[16] Haicheng 海澄,[17] Ningyang 寧漾,[18] Zhangpu 漳平 and Pinghe 平和.[19]

Minnan is first and foremost a cultural-linguistic region—it is the region where speakers of the Minnan dialect reside. Geographically, the Minnan region is formed by the Wuyi Mountains 武夷山 to the northwest, Daiyun Mountain 戴雲山 to the north, Lianhua Mountain 蓮花山 to the south and the Taiwan strait to the east. Two primary rivers—the Jiulong River 九龍江 and Jin River 晉江—cross the region and enter the sea, forming the Zhangzhou and Quanzhou plains. The mountains to

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[14] In 1734, Yongchun County was combined with Dehua County 德化縣 (Quanzhou Prefecture) and Datian County 大田縣 (Yanping Prefecture 延平府) and elevated to the status of Independent Department (*zhili zhou* 直隸州). See Chen Zhiping 陳支平, Xu Zhang 徐漲, *Minnan quyu fazhan shi* 閩南區域發展史 (Xiamen: Fujian renmin chuban she, 2007), 173-75.

I follow Hucker's translation of *zhili zhou* as "Independent Department." See Charles O. Hucker, *A Dictionary of Official Titles in Imperial China* (Taipei: Southern Materials Center, 1985), 178.

[15] In 1734, Longyan County was combined with Zhangping and Ningyang Counties and elevated to the status of Independent Department (*zhili zhou* 直隸州). Ibid., 173-175.

[16] Prior to 1530, the land that comprises Zhao'an County was part of Zhangpu County. Ibid., 173-75.

[17] Haicheng County was established in 1565 on land formerly belonging to Zhangpu and Longxi Counties. Ibid., 173-75.

[18] Ningyang County was established in 1566 on land formerly belonging to Longyan County, Datian County, Yong'an County. Ibid., 173-75.

[19] Prior to its establishment in 1519, the lands that comprise Pinghe County were part of Zhangpu and Nanjing Counties. Ibid., 173-75.

the north and west protect Minnan from the cold air that sweeps in from the continent during the winter.[20]

The average temperature in Zhangzhou is 10 Celsius in winter, and 22 Celsius in summer. Zhangzhou can receive as little as 1100 millilitres of rain per year in its coastal area, and as much as 2000 in its mountainous region.[21] The average temperature in Quanzhou is 19.5-21.0 Celsius, reaching 26-29 in the hottest month, and falling to 9-13 in the coldest. Quanzhou receives 1000-1800 millilitres of rain per year, 80% of which falls between March and September. However, amounts of rainfall fluctuate greatly year-to-year.[22] Typhoons are common between July and September.[23]

During the late imperial period (1368-1912), Minnan was one of the regions of Fujian where a double crop of rice was possible.[24] Beginning in the third month for the spring crop, and the fifth month for the autumn crop, seedlings were soaked in preparation for planting. After four to five days of soaking, they were ready for transplanting in the fields. It took about seventy days before the first crop was ready for harvest, and about one hundred days before the autumn crop was ready. Although the cultivation of cash crops became increasingly widespread in the late

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[20] Ibid., 2－3.

[21] Zhangzhou shi difangzhi biancuan weiyuan hui 漳州市地方志編纂委員會, ed., *Zhangzhou shizhi* 漳州市志, "qihou" 氣候 (Beijing: Zhongguo shehui kexue chuban she, 1999).

[22] Quanzhou difangzhi biancuan weiyuan hui, ed., 泉州市地方志編纂委員會, "qihou" 氣候, *Quanzhou shizhi* 泉州市志 (Beijing: Zhongguo shehui kexue chuban she, 2000).

[23] Chen and Zhang, *Minnan quyu fazhan shi*, 2－3.

[24] Evelyn Sakakida Rawski, *Agricultural Change and the Peasant Economy of South China* (Cambridge: Harvard University Press, 1972), 37.

imperial period, including sugarcane, oranges, indigo, peanuts, fruit and tea, and tobacco from the Americas, rice remained the dominant crop in Minnan.[25]

Wet rice cultivation requires significant inputs of water. Beginning in the Tang (618–907), water management structures were built in the Minnan region. These structures had four primary functions. The first was the collection of fresh water. Natural lakes (*hu* 湖), man-made reservoirs (*tang* 塘, or on a smaller scale, *bei* 陂), and dams (*ba* 壩) were used to collected fresh water from springs (*quan* 泉) and streams (*xi* 溪). The second was the transport of fresh water from sources to fields via canals or ditches (*zhen* 圳, *keng* 坑). The third was the obstruction of the ocean's saline waters. Polders (*dai* 埭) were dykes—earthen walls—built to surround plots of salinized coastal land. These dykes fended off the ocean's tides so that once a source of fresh water had been added, salinized coastal land could be converted for agricultural use. The fourth function of water management structures was the release of fresh water. Sluice gates (*doumen* 陡門, *zhamen* 閘門) were installed in water management structures so that fresh water could be released in times of overabundance, shared among users according to schedule, and, when installed in polders, so that fresh water could be released when necessary while guarding against the ocean's saline water at all other times.

[25] Fei Mei'er 費梅爾 and Lin Renchuan 林仁川, *Quanzhou nongye jingji shi* 泉州農業經濟史 (Xiamen: Xiamen daxue chuban she, 1998), 94－7.

Sources

This thesis is based on analysis of stone inscriptions and local gazetteers from the late imperial Minnan region.[26] In the appendix, I have included full transcriptions of the steles and gazetteer excerpts that I draw on to form my arguments. Although this is a limited collection of sources, at present, it is the best we have for water management in the late imperial Minnan region. The information provided in these rich inscriptions and gazetteer entries, and the continuities and divergences between them, are enough to allow me to trace several key patterns in the social organization of Minnan water management.

The study of local gazetteers by historians of late imperial China has long been commonplace, whereas stone inscriptions remain comparatively

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[26] All steles used in this section are found in the following four collections:
He Bingzhong 何丙仲, ed., *Xiamen beizhi huibian* 廈門碑誌匯編 (Beijing: Zhongguo guangbo dianshi chuban she: 2004); Jiang Qingxi 江清溪, ed., *Nanjing shike ji* 南靖石刻集 (Fuzhou: Haichao sheying yishu chuban she, 2007); Li Canhuang 李灿煌, ed., *Jinjiang beike xuan* 晉江碑刻選 (Xiamen: Xiamen daxue chuban she, 2002); Wang Wenjing 王文徑 ed*., Zhangpu lidai beike* 漳浦歷代碑刻 (Zhangpu: Zhangpu xian bowuguan, 1994).

Although information on water management systems in Minnan gazetteers is rarely detailed enough to be of help to this study, I have managed to find useful data in the following three gazetteers:
Zhou Xuezeng 周學曾, ed. *Jinjiang xianzhi* 晉江縣志, Qing Daoguang 清道光, reprint, (Fuzhou: Fujian renmin chuban she, 1990); Ma Heming 馬龢鳴, Chen Pixian 陳丕顯, and Du Hansheng 杜翰生, eds., *Longyan xianzhi* 龍巖縣志, Republican era (Shanghai: Shanghai shudian: 2000); Guo Gengwu 郭賡武, Huang Ren 黃任 and Huai Yinbu 懷蔭布, eds., *Quanzhou fuzhi* 泉州府志, Qing Qianlong (Shanghai: Shanghai shudian chuban she: 2000).

underutilized.[27] The majority of the stone inscriptions considered here were the products of conflicts over the management of irrigation systems that garnered the local magistrate's intervention, and ended with his ruling set in stone. Steles of this type are of particular value as they detail the pre-conflict circumstances of a given water management system, the causes and events of the conflict, the way in which the government intervened, and the newly mandated system of water management. Steles that were not the products of disputes were instead born of natural disaster, and served to commemorate the contributions of local officials to the repair of irrigation structures damaged by flooding, or to promulgate a new set of post-repair rules regarding the operations and upkeep of the water management system as well as access to water. Descriptions found in local gazetteers, on the contrary, are often frustratingly brief and ahistorical.

Stone inscriptions were clearly valued for their durability and the ease with which they could be installed in public places, where the promulgations inscribed upon them could be made visible to the community. Most of the stone inscriptions used in this study were installed inside of or in front of temples. Each one of these steles performed at least one of three functions, and often all three: (1) a *commemorative* function, in praising the contributions of local officials or commoners to the resolution of disputes, or for their leadership in building or repairing water management works; (2) a *legal* function, in promulgating a legal ruling; or (3) a *contractual* function, in bearing testament to the terms of an

[27] Transcripts of some stone inscriptions were included in local gazetteers, but the vast majority of stone inscriptions were excluded.

agreement regarding the management, maintenance or sharing of a water management system.

In the stone inscriptions that this thesis draws on, there are references to other steles from earlier periods used as evidence in contemporary disputes. Disputants made recourse to these inscriptions as evidence to support their claims, and government officials accepted their legitimacy as evidence, often inspecting the stones personally, and even upholding precedents detailed on stones from previous dynastic periods. Furthermore, the order for a stele to be erected was often included explicitly in legal rulings, and in some cases it was ordered that a rubbing of the new stele be submitted to the county yamen for future reference.[28] A stele could thus become the subject of contention in its own right. During a Ming-era property conflict in Quanzhou, one disputant was accused of altering a rubbing of a stone inscription in order to influence the outcome of a legal suit.[29] More drastically, but probably wiser, and much to the chagrin of historians, disputants could destroy a stele outright, thus eliminating any proof of an unfavorable ancient precedent. This was the approach that members of the Ye 葉 family opted for when occupying a communal reservoir in Quanzhou in 1736.[30] Moreover, it was not only disputants who elected to smash stone inscriptions. When a dispute over irrigation erupted in Quanzhou in 1749, "both sides produced ancient steles as evidence [that their

[28] "Beijiang gaitan jinshi bei" 北江海灘禁示碑 [North River Beach Prohibitory Stele], in *Zhangpu lidai beike*, edited by Wang Wenjing, 79.
[29] "Dufu ti niedao fulie xian pi xian shenxiang yan'an" 督撫提臬道府列憲批縣審詳讞案 [The Governor Explicates the Law and Approves the County-Level Ruling on the Case], *Xiamen beizhi huibian*, edited by He Bingzhong, 424.
[30] Ibid., 421.

positions were in line with precedents]." After a military official mediated a resolution, he "ordered that the ancient steles be destroyed" and a new one erected, which the author praised as "an astute consideration, indeed!"[31] When government officials felt that a controversial stone inscription would serve to fuel rather than quell conflict, destruction was always an option. Nevertheless, thousands of stone inscriptions from the late imperial period have survived to the present day, and as I demonstrate below, they constitute crucial sources for historians who seek to understand the dynamics of Chinese state and society at the local level.

Although above I have made reference to a lineage accused of altering a rubbing of a stone inscription in order to win a legal case, on the whole, I agree with late imperial officials that steles are largely trustworthy sources of historical information. As historical sources, I see steles as more trustworthy than, say, contracts, because of their extremely public nature. Steles were meant to be seen, and were often installed in locations that were open to members of particular communities, such as in front or inside of village temples. The purpose of steles that recorded legal rulings or contractual agreements was to preserve their content in a location where all involved parties could view them. Also, these steles often recorded events such as violent conflicts and natural disasters that would have been widely known to many in the surrounding region. When magistrates or officials of higher rank ordered the erection of a stele—this was the case for many of the steles used in this thesis—surely this would have been a noteworthy event in a local area.

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[31] Li Canhuang, ed., *Jinjiang beike xuan*, 129.

It follows that important steles related to control over local resources were probably well known to surrounding inhabitants. With all of this in mind, I believe it would have been far easier to succeed in forging a privately held contract than a publicly displayed stele, a level of confidence that I share with late imperial officials. Nevertheless, as with other sources, in reading steles one must remain vigilant to the potential for bias or deception. Most importantly, one must keep in mind that legal rulings provide a version of events endorsed by the local magistrate, which, in cases of corruption or misjudgment, may not reflect reality. These caveats aside, when treated critically, I am confident that steles are just as trustworthy—and potentially more trustworthy—than many of the other source types used for local historical research.

Chapter One: Case Histories

The Qizai Guan Reservoir

This chapter begins with the Qizai Guan Reservoir 栖栽官陂 and reconstructs the history of several Minnan water management structures in order to serve as reference for analysis in the following sections. A remarkable Qianlong era (1736-1795) stone inscription found in Gaolin 高林 Village, Zhangpu County 漳浦縣, details the history of the Qizai Guan Reservoir from the mid-sixteenth through the mid-eighteenth century.[32] The reservoir was located on the southeastern coast of Zhangpu County. It collected water from a stream that flowed down from Mt. Liang 梁山 (located to the east of the reservoir), and provided irrigation water for fields belonging to residents of a number of villages, including fields located inside of coastal polders. Maintenance of the reservoir required the cooperation of multiple villages and surname groups, and was codified in contracts that were enforced via appeals to government authority.

What renders this stele a particularly unique and rich source is its inclusion of several contracts dating from earlier periods. When the stele was inscribed in 1763 to promulgate a legal ruling regarding an irrigation dispute, earlier contracts used as evidence in the dispute were also chiseled in full onto the surface of the stone—two Ming contracts drafted in 1567 and 1581 respectively, and one Qing

[32] "He gong duanding guanbei shuili bianmin beiji" 何公斷定官陂水例便民碑記 [Magistrate He's Ruling on the Guan Reservoir, for the Benefit of the People] (Longqing contract), in *Zhangpu lidai beike*, edited by Wang Wenjing, 96.

Kangxi era contract drafted in 1670. I have thus been able to piece together the history of the irrigation system over a course of two hundred years. In the present section, based on the contracts and legal ruling preserved by this stele, I reconstruct the history of the Qizai Guan Reservoir, and then, drawing on other inscriptions from the Minnan region, I unpack the implications and significance of the Qizai Guan Reservoir stele as part of a wider consideration of the history of water management in late imperial Minnan.

Founding

The origins of the reservoir remain mysterious. The Kangxi era Zhangpu County Gazetteer (1708) and the Guangxu era expanded version (1885) merely reference the reservoir's existence, though such lack of detail is standard for gazetteer entries on small-scale water management systems.[33] Our understanding of the reservoir's history is thus limited to the contents of the stone inscription found in Gaolin village. In the earliest record of the system—the Ming Longqing era contract (1567)—eight villages and eight individuals are listed as irrigation water users and signatories. It is possible that each individual represented a village.[34] The

[33] Chen Ruxian 陳汝咸 and Shi Xiwei 施錫衛, *Zhangpu Xianzhi* 漳浦縣志, Qing Kangxi era, expanded during the Qing Guangxu era (Zhangpu: Jinpu xinwen fazhan youxian gongsi: 2004).

[34] "… of Zhuangqian Village, Juntou Village, Tangnan Village, Guishan Village, Shali Village, Gaolin Village, Xincheng Village, and Jintang Village, residents Li Guangrong, Lian Qixiang, Li Shangyan, Ceng Zhu, Dai Changchun, Hong Bixiu, Su Yuan and Lu Chengyuan…" … 莊前社，浚頭社，塘南社，龜山社，沙里社，高林社，新城社，晉塘社社眾李光榕，連啓祥， 李尚言， 曾珠， 戴長春， 洪必修， 蘇願，盧誠垣

fields cultivated by these parties were "irrigated by the dam on the stream that flows from Mt. Liang." This dam is referred to as the "Qizai Guan Reservoir" (*Qizai guanbei* 栖栽官陂).[35] We are told that the reservoir was established "in the past" at the base of the mountain "with official certification" (*xinian yejing ping guan kan … shanxia sheli Qicai guanbei* 昔年業經憑官勘□□山下設立栖栽官陂), and that at the side of the reservoir a canal was dug.[36] The term "in the past" indicates that this contract, the earliest, does not pertain to the original construction of the reservoir; rather, it concerns a subsequent repair effort. The phrase "with official certification the Qizai Guan Reservoir was established" suggests government involvement at the time of the reservoir's founding. Given this terminology, it seems likely that locals constructed the reservoir and then invited a government official to undertake an inspection and make a record of the property rights and usage agreements that had been settled on. Dishonest claims and future conflict were thus less likely to arise.

The second, later contract provides a more detailed account of the reservoir's origins, but still leaves many questions unanswered:

> In the forty-fifth year of the Jiajing reign period (1566), parties to the contract Lin Xiaobi, Lin Yanzheng and Lian Xi used over two hundred *liang* of silver to jointly construct three stone reservoirs, located at the villages of Zhuangqian and Jintang, in order to irrigate the fields of monks and commoners [with a combined] yield of over five hundred *dan*, up to outer and inner Yulong… [illegible]…

等… "He gong duanding guanbei shuili bianmin beiji" (Longqing contract), in *Zhangpu lidai beike*, edited by Wang Wenjing, 96.

[35] In the Longqing era contract the reservoir is referred to as the *Qizai guanbei* 栖栽官陂, though in later contracts the first two graphs are changed to 萋栈. Presently, I am unable to account for the reasoning behind this change.

[36] "He gong duanding guanbei shuili bianmin beiji" (Longqing contract), in *Zhangpu lidai beike*, edited by Wang Wenjing, 96.

> 立契人林肖壁，林顏正，連溪，於嘉靖四十五年用銀二百余兩紛築石陂三首，坐址莊前晉塘灌溉僧民田種五百余石小，直至虞壠內外□止…[37]

According to this second contract, construction of the reservoir was financed by three individuals—Lin Xiaobi, Lin Yanzheng and Lian Xi. The reservoir was comprised of three small reservoirs or holding pools.

Because the term "stone reservoir" is used, the above quotation does not provide a definitive answer to the question of the reservoir's origins. That is to say, it is possible that a more rudimentary reservoir was already in use in the past, with this contract merely reflecting an upgrade to a more durable stone structure. Regardless, it can at least be said that by the forty-fifth year of the Jiajing reign-period (1566) a stone reservoir had been constructed (or upgraded) with funding from three individuals. The water from this reservoir irrigated the fields of eight villages.

The first and second contracts both confirm that at the beginning of each year, the villagers who drew on reservoir's water were to pay irrigation rent (*shuizu* 水租), presumably to the three original founders. Each year, these villagers were "willing to contribute four and a half *guan* of grain for every *douzhong* [worth of cultivated land], equating to one hundred and forty *dan* [of grain] in total, in order to provide recompense for the supply [of water] received."[38] The depth of the reservoir water was to be monitored "in accordance with the stone marker in the middle of the reservoir" with the water below the marker being "allowed to

[37] (Wanli contract) Ibid., 95.
[38] (Longqing contract) Ibid., 96.

accumulate in the reservoir for the use of the upper [villages], while the water above the stone is to be allowed to flow down for the use of the lower [villages], [so that] Rong and the others of the eight villages will all be supplied with irrigation water."[39] To the side of the reservoir a canal connected to an opening "one *zhang* and four *cun* in width.[40] It is implied that the above mentioned marker was placed in the first of the three holding pools, and that the allotted amount of water flowed out via the canal and down to the second and third holding pools for the use of the lower villages.

In these earliest two contracts, the proximity of the reservoir to the coast is apparent. Waves from the ocean continually damaged the structure, and from place names—Xiangludai Wan 香爐埭灣 and Neigang Wan 內港—we can see that the plot of land the reservoir was located on stretched to the ocean.

Rebuilding and Leadership Transition

Within a year of construction, one of the three original financers of the stone reservoir made a second contribution. Lian Xi, or "his excellency Lian Laowang" (*lian Laowang xianggong* 連老王相公) lamented that the reservoir was neglected over the course of the year, and "in order to assist in resisting and controlling [the sea water]… he was willing to personally pay for materials and labourers for the construction of a stone reservoir that will collect fresh water …[and serve as a

[39] (Longqing contract) Ibid., 96.
[40] (Longqing contract) Ibid., 96.

barrier against (?)]… salt water."[41] He contributed irrigation rents and property with a value of two hundred taels of silver.[42] Thus, Lian Xi, one of the three original investors in the reservoir's construction, singlehandedly paid to have the structure rebuilt, and was appointed "reservoir-master." It is possible that because the two other original investors were unwilling or unable to finance the latest round of repairs, they relinquished any claim they might have had to the position of reservoir-master, along with their rights to collect irrigation rent, though this is not stated explicitly in the contract.

After Lian purchased the reservoir and surrounding land, the reservoir continued to be damaged "by surges of water from both the sea and the mountain" and another expensive round of repairs was necessary. Now it was Lian who was unwilling or unable to shoulder the financial burden of construction for a third time. Thus, "Li Kunren and others were sought after and discussion was carried out in their homes," and it was decided that Lin Xiaobi and Li Kunren would contribute a combined 220 taels—close to the amount that Lian had contributed previously—to purchase the reservoir and the land that it was situated on, thus assuming responsibility for the latest round of repairs. They then "prepared the labour and funds and had the original reservoir rebuilt from scratch." While Lin Xiaobi had been one of the three original contributors to the reservoir's construction, this is the first time we hear of Li Kunren. However, since in the earliest contract a Li is listed as one of the eight individuals party to the contract, it is likely that Li Kunren was a

41 (Longqing contract) Ibid., 96.
42 (Wanli contract) Ibid., 95.

wealthy member of one of the participating villages. In the Qing Kangxi era contract (1670), the reservoir-master (*beizhu* 陂主) is listed as Li Chengguang 李城光, so it is possible that following Li Kunren's contribution to reservoir repairs, he was appointed reservoir-master and the Li lineage managed to retain the position hereditarily for over one hundred years.

The Ming-Qing Transition, Recovery and Change

The third contract was drafted in the ninth year of the Qing Kangxi era (1670).[43] The contract states that due to the coastal evacuation order, from the eighteenth year of the Qing Shunzhi 順治 reign period (1661) to the time of the contract's drafting, the irrigation system had been abandoned, and the reservoir's sluice-board (*zhaban* 閘板) was damaged. However, by the time this contract was drafted, the coastal evacuation order had been relaxed (*zhanjie* 展界) and reservoir-master Li Chengguang 李城光 was now willing to forward the funds to repair the

[43] This time parties to the contract were listed as individuals from Juntou Village 浚頭社, Zhuangqian Village 莊前社, Tangnan Village 塘南社, Gaoshan Village 高山社, Shali Village 沙里社, Jintang Village 晉塘社, and Xincheng Village 新城社. Guishan 龜山 and Gaolin 高林 Villages were parties to the Longqing contract, but are not listed as parties to the Kangxi contract, while Gaoshan village appears as party to the Kangxi contract, but was not mentioned in previous contracts. Near the end of the contract, the eight villages from the Longqing era contract are listed as recipients of irrigation water, with the exception that Guishan is replaced by Gaoshan. It is possible that this was a case of a village being renamed, though this cannot be confirmed without fieldwork. No explanation for the slight discrepancies between villages in different eras are provided, but on the whole, it appears that the vast majority of villages involved in the water management system during the Ming were still participating during the early Qing.

sluice-board and the banks of the dyke. In return, village residents were willing to pay irrigation-rent as before.[44] The men "arranged an opera performance, established a ritual alliance (*qingxi mengshen* 請戲盟神) and drafted a contract in order to bring an end to all disputes," though no specific "disputes" are elaborated upon.[45]

One important development witnessed in this contract is the appearance of three new villages as recipients of water. The names of all three villages include the graph *dai* 埭, meaning "polder"—Ludai 爐埭, Houdai 后埭, Daizai 埭仔 Villages. The appearance of these villages in a coastal region, combined with their names, strongly suggests that they were constructed on polders, or at least that they were established by individuals who were building polders nearby. According to the contract, when water left the reservoir, it was to flow to the fields of the Chiling Qi Canal 赤嶺琦圳—also unmentioned in previous contracts—for three days and nights, and then to a separate set of villages for three days and three nights, before repeating the cycle. Of the share of water that went to this second group of villages, the three new polder villages were to receive 30%, while the eight villages mentioned in previous contracts were now to receive only 70%.

The contract notes that in the past agreements regarding the irrigation system "had been certified by official inspection." However, since it was possible that in the future some villagers might "rely on their power to resist the payment of irrigation rent, and obstruct the course of the water," the villagers were made to

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[44] (Kangxi contract) Ibid., 96.
[45] (Kangxi contract) Ibid., 96.

"kneel before the god and draft a contract." In the future, if anyone should disobey the above agreement, the villagers are beseeched to "go forth and together attack [those responsible], and call upon government officials to dispense justice." Finally, the contract was to be "entrusted to the reservoir-master to hold as reference in perpetuity." In this Kangxi era contract (1670), it is implied that an irrigation-related dispute had occurred, and thus, the ostensible purpose of the contract was not only to codify a post-evacuation irrigation agreement and to reassert irrigation rent obligations, but also to prevent further conflict. Given the appearance of the Chiling Qi Canal fields and the three new polder villages in this contract, it is reasonable to assume that since the Ming Wanli contract was drafted in 1581, new polders and been constructed and new fields had been brought into cultivation, or at the very least, preexisting polders and fields had been added to the irrigation system. Considering that the original eight villages from the Ming contracts seem to enjoy a much smaller share of reservoir water in the Kangxi era, it is possible that it was the addition of these new fields to the irrigation system that prompted the conflict alluded to in the Kangxi era contract, though this cannot be confirmed based on currently available sources.

The Qianlong Era: Conflict and State Intervention

In the Qing Qianlong era (1736-1795), the Qizai Guan Reservoir was plagued by continuous conflict and legal wrangling. The legal ruling that resulted from these conflicts, which the stele was intended to advertise, is the last Qing era record for

the Qizai Guan Reservoir. The conflict garnered three consecutive instances of government intervention. First, in 1742 a petition was jointly presented to the local magistrate by a number of individuals, many of whom held titles such as national university student (*jiansheng* 監生) and county gentleman (*xiangshen* 鄉紳).[46] The petitioners complained that

> In the sixth year of the Qianlong reign period (1741) the nearby five branches of the Huang family extended [their landholdings (?)] forcefully in all directions, reversing the course of one side of the stream which crossed the grounds of the Ma Temple located below the Hui Tomb in order to create a sandbank and profit from fish[ing].
>
> 據乾隆陸年，附近五宗黃姓強申一方，□將灰墓下媽廟地上溪流逆作沙壇漁利.[47]

Although the term "polder" *dai* 埭 is not used, it is implied that the Huang's were attempting to divert irrigation water in order to build a sandbank, which is a key step in the process of polder building.[48] Several Huangs' appeared in the Kangxi era contract (1670) as signatories and residents of Gaoshan Village 高山社—the one village out of the original eight that was not listed in the earlier Ming contracts. Although the Kangxi era contract indicated that some sort of irrigation-related conflict had taken place, no detail is provided and we do not know what, if any, role

[46] I follow Hucker's translation of *jiansheng* as "National University Student." See Hucker, *Official Titles*, 850.
[47] "He gong duanding guanbei shuili bianmin beiji" (Qianlong ruling), in *Zhangpu lidai beike*, edited by Wang Wenjing, 93-5.
[48] For a description of polder building in neighboring Guangdong, see Liu Zhiwei, "Lineage on the Sands: The Case of Shawan" in *Down to Earth, the Territorial Bond in South China*, edited by David Faure and Helen F. Siu (California: Stanford University Press, 1995), 23.

the Huang's played. It is possible that a long history of antagonism between the Huang's and neighboring villagers existed. Nevertheless, what can be said with certainty is that in the Qianlong (1736-1795) era the Huang's hostile relationship with other irrigation users resulted in litigation.

After a complaint was brought against the Huang's it was "ordered that [the sand bank] be disassembled and that a stele be erected forbidding the extortion of loyal subjects." Regardless, in the following year the Huang's were accused of disobeying the ruling once again by "altering the flow of the upper stream and thus destroying Guan Reservoir" and "stacking limestone horizontally and cutting off the flow of irrigation," causing great harm to local villagers. It is also implied that the Huang's attempted to profit further from their occupation of the reservoir by demanding a fee for water-access. Other users were not impressed. Li Shi, Cai Jin and others "in order to resist [payment of] fees and gain confirmation for the veracity of the old system [of local irrigation]" once again submitted an accusation to Magistrate Zhu 主朱. Magistrate Zhu came to inspect the reservoir in person, and was "disgusted by these crimes." He had "the limestone removed under the light of the stars, and a grass pen was once again used to fill [the reservoir mouth]." The Huang's "were accused of treachery and shackled on the spot" and ordered "once again to create an opening in the center of the mouth of the Guan Reservoir one *zhang* 丈 six *chi* 尺 in width, eight *chi* 尺 in depth" so that water could flow outwards. The reservoir was thus restored to its former state, for the time being.

Twenty-one years would pass before the Huang's attempted to assume control over the reservoir water for a third time. Several Huang's assembled a mob

of over sixty followers and "stacked high mud and stone to cut off the flow of the Guan Reservoir." Again, the villagers lodged a complaint with the local government, and an investigation was launched. Magistrate He 何 went to inspect the reservoir in person. He reviewed the legal ruling made by former Magistrate Zhu over two decades earlier, made further inquiries regarding the history of the dispute, and examined a map of the reservoir. Comparing the current state of the reservoir with the stipulations of Magistrate Zhu's ruling, He found that the Huang's had once again acted unlawfully in cutting off the flow of reservoir water by replacing the reservoir mouth's grass screen with a limestone wall, thus depriving nearby fields of irrigation water. He thus ordered that the reservoir be restored to the condition first dictated by Magistrate Zhu twenty-one years before. Finally, He reflected on the power of the Huang family and the likelihood of further conflict arising and therefore, to our great fortune, declared that a stone inscription should be created to record and promulgate his ruling.

The stele that the above account is based on is remarkable in that it allows us to reconstruct the history of a water management system over the course of nearly two hundred years, from 1567 to 1763. In the following chapter, combined with other evidence, the information this stele provides regarding the organization of the Qizai Guan Reservoir system, the causes and characteristics of the conflicts surrounding it, and government involvement in the system's operations, will be helpful in analyzing the social organization of water management and state-society relations in the wider Minnan context.

Water Management in Jinjiang County

The second case history concerns water management structures in Jinjiang County, located the southeastern coast of Quanzhou Prefecture. Late imperial Jinjiang was a patchwork of lakes, reservoirs, and canals, bordered by ocean on three sides. As in other parts of Minnan, locals used these water management structures to pool fresh water for irrigation in times of scarcity, fend off saline tidal water, and drain excess water in times of overabundance. Unlike gazetteers from other parts of Minnan, the Qianlong and Daoguang era versions of the *Jinjiang County Gazetteer* 晉江縣志 provide in depth information on the histories and social organization of several water management structures. In addition, a detailed set of management regulations for one of these structures has survived. Based on these sources, this second case history focuses on state-society relations and organizational trends in the histories of two management structures in late imperial Jinjiang County—the Guihu 龜湖塘 and Liuli 六里陂 Reservoirs.

Guihu Reservoir

According to the Daoguang era (1830) Jinjiang County Gazetteer, a set of regulations for management of the Guihu reservoir were drafted by Prefect[49] Cai

[49] I follow Hucker's translation of *junshou* as "Prefect." See Hucker, *Official Titles*, 202.

Xiang 蔡襄 during the Song, and expanded on in the Ming by Prefect Tong Hanchen 童漢臣.[50] The Daoguang gazetteer explains that

> [Guihu Reservoir] is located in the twenty-fourth township.[51] It is over 1800 *zhang* in length, 83 *zhang* in width, and one *zhang* in depth. It reaches Tanghou Village in the east, Shishi Pavilion in the west, Tangxia Village to the south, and extends to the sea to the north. [The reservoir] provides irrigation for over 3800 *mu* of fields… Four lineages, the Lin's, Huangs, Su's and Zheng's, oversee the repair of dyke banks.
>
> 在二十四都，長一千八百餘丈，闊八十二丈，深一丈。東至塘后村，西至石獅亭，南至塘岬村，北至大洋。灌田三千八百餘畝… 林，黃，蘇，鄭四姓，管修堤岸。[52]

Arriving in Jinjiang to serve as Prefect during the Ming Jiajing reign period (1522－1566), Tong Hanchen 童漢臣 sought to familiarize himself with the concerns of local residents. He was soon to find that the state of Guihu Reservoir was among the most pressing issues faced by residents in the reservoir's vicinity. Although four local lineages shared the position of reservoir manager in rotation (*lun qian beishou yiming zhangguan* 輪僉陂首一名掌管), locals were unwilling to serve as reservoir workers (*beifu* 陂夫). As Tong explained, reservoir workers were expected to venture into the waves, brave wind and rain, and work day and night without rest for the entire year, all of which resulted in a high casualty rate. Thus, reservoir masters were left to the futile task of managing the reservoir without assistance. A local by the name of Huang Wei 黃偉 pointed out that for other large

[50] "Shuili zhi"水利志 [Water Management], *juan* eight, *Jinjiang xianzhi* 晉江縣志, Qing Daoguang 清道光 (1830), edited by Zhou Xuezeng 周學曾 (reprint, Fuzhou: Fujian renmin chuban she, 1990), 144.
[51] I follow Brook in translating *du* as "township." See Timothy Brook, *The Chinese State in Ming Society*, 20.
[52] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 144.

water management structures in Jinjiang, such as the Xinan Sluicegate 西南斗門 and the Liuli Reservoir 六里塘, labourers were provided via the *junyao* 均徭 corvée system.[53] Huang suggested that the same method be used to supply labour for Guihu Reservoir. Tong inspected the county's corvée records and found that Liuli Reservoir was allotted eighteen labourers, and Xinan Sluicegate eight. He decided to follow the example of Xinan Sluicegate and assign eight labourers to Guihu. [54]

Huang Wei had a second piece of information to share with the new Prefect: in 1187 a set of regulations had been established for the reservoir and an official seal (*yinxin* 印信) and log book (*wenbu* 文簿) had been given to reservoir masters. In the several hundred years that had passed, new regulations came and went and there was no longer a consistent set of guidelines for reservoir operations. Examining the Song era regulations, Tong decided to write an updated version, and reestablish them as the reservoir's official regulations. He also reissued an official seal and logbook to the reservoir master.[55]

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[53] Beginning in 1443, the *junyao* law stipulated that each fiscal household provide labour for corvée service once every ten years, and material supplies and a tax to cover transport expenses during a second year, equaling two years of service per ten year cycle. The previous standard under the *lijia* 里甲 system was the provision of labour and supplies once every ten years. See Ray Huang, *Taxation and Governmental Finance in Sixteenth-Century Ming China* (London: Cambridge University Press, 1974), 142.

[54] "Ming Jiajing jian Quanzhou fu shenming Guihu tang gui wengao" 明嘉靖間泉州府申明龜湖塘規文告 [Statement Regarding the Ming Jiajing Era Proclamation on the Guihu Reservoir Regulations, Quanzhou Prefecture], *Jinjiang shizhi* 晉江市志, edited by Jinjiang shi difangzhi biancuan weiyuan hui (Shanghai: Sanlian shudian, 1994), 1808.

[55] Ibid., 1808.

The Reservoir Regulations

The Guihu Reservoir Regulations contain extensive technical details on topics such as the schedules for opening sluicegates (the full text is provided in the appendix). However, for my purposes, it will suffice to introduce the basic organizational features outlined in the regulations. In the Song version it is mentioned that according to custom, landowning families could each provide a representative to serve as reservoir master. Of the six lineages located close to the vital Haichao Gong Sluice Gate 海潮宮斗門—the Wu's 吳, Huang's 黃, Lin's 林, Cai's 蔡, Su's 蘇 and Zheng's 鄭—humble men of good morals were to be selected. According to a note in the Ming era regulations, historical records indicated that ancestors of these six lineages had donated funds for reservoir repair, which may be why they were appointed hereditary reservoir masters. By the Ming, a number of lineages whose representatives served as reservoir heads had decreased from six to four, a change for which no explanation is provided.

According to the Song regulations, canal masters (*hanshou* 涵首)[56] were to be selected by the people of each canton,[57] to serve under the reservoir master. At the appropriate time, a canal master would receive a wooden tablet (*mupai* 木牌) from the reservoir master, which signified permission to open a sluicegate. Each year in

[56] The graph *han* 涵 actually refers to the openings that connect reservoirs to canals, canals to other canals and so forth. The size of these openings could determine the speed and volume of water flow. For lack of a better term, I refer to *hanshou* as "canal masters."

[57] I follow Brook in translating *xiang* as "canton." See Timothy Brook, "The Spatial Structure of Ming Local Administration," *Late Imperial China*, 6, 1 (June 1985): 1–55.

the first month of the lunar calendar, local residents were to converge to jointly repair water management structures. Essential repairs could be carried out on an ad hoc basis when necessary. Aside from canal masters and the annual repair effort, in the Song guidelines there is no regulation providing for a constant supply of labourers.

The most important innovation in the expanded Ming era regulations was the previously mentioned provision of eight labourers via the *junyao* corvée system. Four labourers were to patrol and maintain the inland banks of the reservoir, while the remaining four were responsible for the banks that separated the inland from the ocean. Also, each canton was to appoint an individual to record the names of all local residents. When joint repairs were to be made, the reservoir master could check the list to ensure that all residents were present. Unfortunately, the Qianlong and Daoguang Jinjiang County gazetteers do not provide further details for the history of the reservoir after the Ming regulations were established.

Liuli Reservoir

The most significant information on the second reservoir considered here, the Liuli Reservoir 六里陂, is found in the Qianlong and Daoguang era Jinjiang County Gazetteers. The reservoir's gazetteer entry is pieced together from various writings and stone inscriptions—many of the original texts have since been lost. According to a Qianlong era (1765) entry in the gazetteer, the reservoir was

… located outside of the prefectural seat's southern fortified gate, [spanning] the twenty-seventh to the thirty-fifth township, in the six subcantons[58] of Yongjing, Hefeng, Yongfu, Yonglu, Shatang and Juren. On its interior it collects water from the mountains, and on its outside it separates [the inland] from the ocean's tides. Accumulating fresh water and expelling saline, in the surrounding ten *li* there is no field that does not draw on [its water] for irrigation…

是陂在郡城南關外，自二十七都至三十五都永靖，和風，永福，永祿，沙塘，聚仁六里，內積山之源流，外隔海之潮汐，納清瀉鹵，環數十里無田不資灌溉 …[59]

The reservoir has over ten sluicegates of various sizes, including three large sluicegates: Liudou men, comprised of six sluice gates—when the water level rises [the gates are] opened and the water is drained in the sea; Shang Fumei, comprised of one sluice gate; Xi Banmei, comprised of two sluicegates—the water level rises, [the gates are] opened, and the water is drained in the lower dyke.

緣此陂，閘有大小十餘所，其閘之大者有三：曰六陡門，有閘六間，水漲則開，放流於海；曰上福湄，有閘一間；曰西坂湄，有閘二間，水漲則開，放流入於下溝。[60]

According to Neo-Confucian thinker and Jinjiang local Chen Chen 陳琛 (1477-1545),[61] in the past any local resident who owned land could be appointed as reservoir master (*beishou* 陂首). The candidate was to be assiduous, capable and esteemed by the people—but no specific information is provided on the process through which he was to be selected. A reservoir master served one three-year term, and was not exempt from corvée duty in exchange for his services. In addition,

[58] I follow Brook in translating *li* as "subcanton." See ibid., 20.
[59] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 149.
[60] Ibid., 149.
[61] Zhang Tingyu 張廷玉, ed., *Ming shi* 明史, "Liezhuan" 列傳 170, *juan* 282 (Beijing: Zhonghua shuju: 1974), 7222, 7234.

forty-two men were appointed via the *junyao* system to serve three-year corvée terms as reservoir workers (*beifu* 陂夫).[62]

Chen Chen explained that by the first half of the sixteenth century, the positions of reservoir master and reservoir workers were seen as so undesirable that they had become difficult to fill. During the Hongzhi reign (1488-1505) period flooding had caused much damage to the Liuli Reservoir and connecting structures. Furthermore, the polder fields (*daitian* 埭田) that fed off of the reservoir were controlled by powerful lineages (*haojia* 毫家) who consumed large amounts of irrigation water in order to rinse their salinized fields. No one dared to challenge these lineages over their ruinous consumption. Chen lamented that management repairs were the responsibility of the reservoir head. However, recent years had seen discord between reservoir masters and the workers who took orders from them. Reservoir masters had fallen victim to false accusations, with the result that most locals were unwilling to fill the position, and the few that were willing were considered undesirable. Chen suggested that in order to encourage volunteers, reservoir heads should be allowed to collect taxes in kind on boats—presumably boats that sailed through the reservoir and its canals—and at harvest time.[63] Furthermore, without a well-provisioned system of centralized management, the Liuli Reservoir and connecting structures were open to the abuse of local toughs,

[62] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 149.
[63] Ibid., 149.

some of whom went as far as to completely remove the boards from sluicegates, with the result that irrigation water flowed directly into the sea.[64]

During the sixteenth century, however, the position of reservoir master came under the hereditary control of three lineages, the Li's 李, Chen's 陳, and Su's 蘇, "each of whose ancestors had performed meritorious deeds for the people" (*qi xianshi ge you gongde yu min* 其先世各有功德於民). These three families held the position in rotation.[65] Unfortunately, little detail is provided on the nature of their power-sharing arrangement. These lineages' dominance is said to have stemmed from the deeds of Li Suxuan 李素軒, Chen Qu 陳衢, and Su Jun 蘇濬, who donated considerable sums of their own money to fund reservoir repairs. Chen Qu was the grandson of Chen Chen, the Ming era interlocutor introduced above who suggested reform of the reservoir's management arrangement.[66] When the reservoir burst in the Ming Zhengtong 正統 era (1436-1449), Li Suxuan's ancestor was selected by local residents to oversee repairs. When the reservoir burst again in 1501, Li Suxuan took up his ancestor's cause and donated his own land to pay for repairs. Afterwards, locals selected Li to lead new repair efforts, and he ordered his youngest son Li Zonglun 李宗綸 to succeed him as leader of local irrigation repair efforts. A prominent member of the Chen family wrote a preface commemorating the meritorious deeds of Li Suxuan, which implies that the Li's and Chen's maintained

[64] Ibid., 149.
[65] Ibid., 149.
[66] Ibid., 149.

cordial relations.[67] By the first half of the seventeenth century a shrine honoring those who had made contributions to water management (*Shuili gongde ci* 水利功德祠) was erected.[68] However, in the second year of the Qing Jiaqing reign period (1797) the temple was destroyed in a flood, and the statues of the gods (*shenxiang* 神像) destroyed.[69]

In the Qing, the three lineages continued to maintain the position of reservoir head. In 1698 Li Weiguan 李為觀 donated money for the repair of the Sandou men 三陡門, and successfully requested that local officials also contribute government funds. The Li's collected a tax on boats that entered the reservoir (*chuanzhi shuitou xiaoshui* 船隻水頭小稅), a precedent established by at least the Ming to recompense reservoir masters. When a boat owner of the Zhu 朱 family refused to pay the tax, Prefect (*Fuzhu* 府主) Wang 王 had him flogged for his obstinacy. In the Kangxi period (1662-1722), County Magistrate Huang 黃公 oversaw the provision of food for reservoir workers, and donated his own salary to buy the altar to the side of Liushi Temple 溜石廟, which he had converted into an shrine commemorating those who had made contributions to the reservoir (*Bei gongde ci* 陂功德祠).[70]

By the early Qing Jiaqing reign period (1796-1820), the operations of Liuli Reservoir and connecting structures had become largely dependent on or controlled

[67] Ibid., 149.
[68] Ibid., 149.
[69] Ibid., 149.
[70] Ibid., 149.

by the most powerful lineage in the vicinity of a given structure. This was not necessarily a negative development. For example, the powerful Ding and Lin lineages behaved responsibly in controlling the Haiwei Han Polder 海尾涵埭. Because they opened and closed the sluicegates at the correct times, the surrounding area was able to withstand extreme episodes of drought. However, in the following years (no specific dates are given) the powerful families that dominated local polders ceased to work in the best interests of the local populace. Sluicegates were left open day and night, and the ocean waters that they were intended to defend against began to creep inland. The powerful Huang lineage controlled one of the sluicegates intended to protect the fields that fed off of the connecting Yanpu Reservoir 湮浦陂, but made no effort to maintain or manage the gate properly. According to the Jinjiang Gazetteer, these structures should have been returned to the control of the Liuli Reservoir master. However, because no one was willing to serve as reservoir workers—forty-two reservoir workers had been appointed earlier in the Ming—it was impossible to manage the local water management system centrally. Locals were unwilling to serve as reservoir workers due to the collapse of the former system under which officials provided food for workers, and workers were allowed to collect tax on boats and at harvest time. There was no longer any incentive for locals to volunteer for these positions, and the entire region suffered as a result.[71] Although Governor General[72] Jue 總督覺公

[71] Ibid., 149.
[72] I follow Hucker's translation of *zongdu* as "Governor General." See Hucker, *Official Titles*, 534.

attempted to establish new regulations for providing food for the reservoir workers, his efforts were ignored by some of the more intransigent lineages. [73]

In the histories of the Guihu and Liuli Reservoirs we see that the management of water management structures was characterized by ever-evolving cooperation and conflict between local officials, elites and residents. The following chapter makes use of evidence regarding the Qizai Guan, Guihu and Liuli Reservoirs as well as other water management structures to establish the primary environmental and social challenges faced in the operation of such structures; the forms of socio-economic organization that were adopted in response to these challenges; the causes and characteristics of social conflict that emerged in the process; and the principles upon which government officials intervened and attempted to resolve these conflicts.

[73] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 149.

Chapter Two: The Lineage and Minnan Water Management

Based on the above case histories and other sources introduced below, in this section I examine water management systems in late imperial Minnan with a focus on social organization and state society relations. One of the most significant trends witnessed in the sources is the dominance or seizure of water management structures by lineages. While there is evidence that other forms of organization of water management systems existed in the late imperial period, in most sufficiently detailed sources we see that structures are already under the control of a lineage, shared between multiple lineages, or in the process of forced occupation by one. Unfortunately, it is difficult to compare this state of events with that of earlier periods, as precious little information on water management structures in the Song and earlier has survived. According to Zheng Zhenman, after the Song, official funding for water management construction projects in Fujian decreased drastically.[74] Indeed, anecdotal evidence in local gazetteers from the Minnan region suggests that there were a considerable number of water management structures built by government officials in the Song and before.[75] In Ming and Qing sources, although there is no shortage of references to sporadic repair efforts led or even

[74] Zheng, "Mingqing Fujian yanhai shuili zhidu yu xiangzu zuzhi," in *Xiangzu yu guojia*, 56-61.

[75] For example, the entry for Jiao Reservoir in the Daoguang era Jinjiang County gazetteer states: "Jiao Reservoir, built by Vice Magistrate Zhao Yanyu in the seventh year of the Song Jiading reign period (1214). Irrigated seventy *qing* of fields…" 菱塘, 宋嘉定七年，邑丞赵彦寓修. 灌田七十顷... "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 137－71.
I follow Hucker in translating *yicheng* as "vice magistrate." See Hucker, *Official Titles*, 243.

funded by government officials, it was rare for new structures to be financed by government, and there is no evidence that government officials directly oversaw the operations of water management systems after repair efforts were completed. Likewise, even when it is stated that a structure was built with government funding in the Song, details regarding management and funding after initial construction are rarely provided. I suspect, as seen in the Guihu case history, that wealthy families had long played a key role in the management of local water management structures. This was the case in Putian, just to the north of Minnan, where many water management structures were founded by powerful families prior to the late imperial period.[76] Regardless, surviving sources (including those introduced below) suggest that by the Ming and Qing eras water management systems throughout Minnan came under the domination or threat of large lineages. What remains is to better understand the relationship between lineages and these water management systems: how and why did powerful lineages come to control water management systems? How did the government respond? How did local residents who did not belong to the dominant lineage in a given region respond?

I argue that in Minnan, aside from gaining control over water management structures by force, there was a tradition in which powerful lineages made contributions to repair efforts, and were thus appointed to leadership positions by surrounding residents. Meanwhile, although in Minnan late imperial governments were far less active than their predecessors in constructing water management systems, they nevertheless played an important role in ensuring that systems were

[76] Dean and Zheng, *Ritual Alliances*, 64.

managed in a way that benefited all local residents. In working toward this goal, local officials cooperated and clashed with powerful lineages as circumstances required. In order to understand the organization of water management systems, and state society relations in the context of water management, the challenges that local residents faced in maintaining such systems must first be examined. The sources indicate that three main social factors placed stress on Minnan water management systems: (1) the building of polders, (2) the sharing of irrigation water, and (3) the need for leadership as well as inputs of capital and labour.

Polders

In Minnan, polder construction took off in coastal counties with the population growth experienced during the Song. Most notably, throughout the late imperial period, in Hui'an 惠安 County thirty coastal polders were constructed; in Zhangpu 漳浦, forty; in Haicheng 海澄, seventy-three; and in Jinjiang, one hundred and twenty.[77] Many of these polders experienced multiple cycles of building and destruction over time. In the above case histories we saw that the construction of polders and the cultivation of the land they contained required considerable inputs of fresh water, and could thus lead to conflict amongst reservoir users. The Kangxi era contract from the Qizai Guan Reservoir stated that several polders enjoyed a thirty percent share of the reservoir water, with the share of the original villages reduced to seventy percent. In the Qianlong era legal ruling, it was the Huang's

[77] Chen and Zhang, *Minnan quyu fazhan shi*, 46.

desire to use irrigation water to construct a polder that prompted the first recorded conflict between them and other reservoir users. In the Liuli reservoir during the sixteenth century, local resident and literatus Chen Chen complained that owners of polders were allowing precious reservoir water to flow into the sea in the process of desalinizing their fields. The Jinjiang gazetteer also provides notes on several polders, with the dominant theme being the cycles of building and collapse that characterized their histories. Without constant maintenance, polders seem to have been reclaimed by the sea with alarming ease.[78]

Although there were many polders in the Minnan region, we know little about their internal organization. In Zhangpu County, however, there is at least one stone inscription that sheds some light on this matter. Erected in 1849, the stele pertains to the Eastern Polder 東埭. The past circumstances of the polder are described, as well as the method through which new funds and labour were to be provided for the latest round of repairs. The stele makes no reference to social groupings—individual plots of land and their owners seem to be the units upon which the polder is organized. This is somewhat frustrating, in that we have no way of knowing whether the landowners belonged to a single or multiple lineages and villages. However, the stone was erected in a village, which may indicate that the polder and the land it contained was owned entirely by the village's residents, though field work will be necessary before this can be confirmed.

The function of the dyke that surrounded the polder was to intercept stream water while protecting against the incursions of ocean water. In 1843 and 1846 the

[78] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 137－71.

dyke suffered damage due to flooding, and after further flooding in 1848 it began to be "swallowed by the sea." By the time this stele was erected in 1849, two repair attempts had already failed. After discussion it was determined that an annual tax of twenty percent would be paid on all fields in the polder for four years in order to fund repairs. Afterwards, the tax established in the past would be continued (details of this tax are not provided), and corvée would be raised during the winter for repairs, as per the "ancient precedent." Thus, at least one nineteenth century Minnan polder featured regular taxation and corvée, with plots of land serving as the units upon which taxation was based. Having suffered serious damage three times within a five-year period, followed by failed repair attempts and finally the institution of a special tax for repairs, the Eastern Polder is a testament to the organizational complexity and endless tribulations encountered in the building of polders.

Water-Sharing

The organization of water sharing was the second major social challenge that Minnan farmers encountered in the maintenance of water management systems. There is evidence that in many Minnan irrigation systems water-sharing agreements were instituted amongst users. However, we also find examples of systems in which water access was unrestricted under normal conditions, with regulations on water usage only coming into play in times of drought. Such a system implies that the construction of a reservoir or dam was enough to ensure the satiety

of nearby fields under normal conditions, so that there was a surplus of water and thus no need for restrictions on consumption. For example, the 1841 and 1872 steles of the Meipu Dam in Tong'an County make no mention of water-access rules, aside from that "in times of drought [access to] irrigation should be rotated; it is not permitted to break the contract and engage in disputes [over water]."[79]

In systems in which water access was restricted, various mechanisms were made recourse to for the division of water amongst users. Below I provide examples of three mechanisms that appear in the sources, often combined in the same irrigation systems: (1) the establishment of an irrigation schedule, in which users were allotted a certain amount of time during which water would be allowed to flow to their fields via a sluicegate; (2) the adjustment of the size of canals or reservoir mouths, to control the volume of water flow to different users; and (3) the monitoring of reservoir water volume, with water being reserved for certain users in times of extraordinary scarcity.

The complex water-sharing schema of the Qizai Guan Reservoir studied above contains examples of both durational and voluminal access mechanisms. Reservoir water was first divided between two sets of up- and downstream villages by reference to a stone marker placed within the reservoir. The water in the top half of the reservoir was allowed to flow down to the fields of the lower villages. Once water levels dropped to the halfway mark, the remaining water was reserved for the fields of the nearby upstream villages. In exchange for access to water, residents of

[79] "Tong'an Meipu xingba gaoshi bei" 同安美埔行壩告示碑 [Tong'an Meipu Dam Declaratory Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 440.

the eight villages agreed to pay an irrigation tax of "four and a half *guan* 管 of grain for every *douzhong* 斗種 [worth of cultivated land], in total equating to one hundred and forty *dan* 石 [of grain]." It is implied that further division of water via sluicegates may have taken place at more local levels, such as the up- and downstream village groupings, or within single villages themselves. The amount of water individual users received would thus reflect their rent contribution. Nevertheless, the earliest contracts pertain to only the overall division of water between the two groupings of villages.

In the Kangxi era contract (1670) we are afforded far greater detail as to what happened to the water once it flowed out from the reservoir. The original villages listed as recipients of irrigation in the Ming era contracts had by then been reduced to receiving seventy percent of a three-day cycle worth of water. This implies that over the decades more users were added to the irrigation system. Also, reference to a "triple-sluice gate" that divided the water before it reached the villages implies that water was further divided into three streams, likely regulated by a rotating irrigation schedule. The Qizai Guan Reservoir thus used all three mechanisms for regulating irrigation water access at different stages in the flow of water: the careful measuring of canal sizes, irrigation schedules, and the monitoring of the reservoir's water volume. This last method, the monitoring of the reservoir's water volume is unique—I have found no evidence of similar mechanisms in the sources. However, as I show below, several examples from other parts of Minnan indicate that the measuring of canal sizes and establishment of irrigation schedules were widespread throughout the region.

In Dakeng Creek 大坑溪, Zhangpu County, we find a clearly articulated example of a durational access irrigation system:

> The water of Dakeng Creek flows forth from the foot of Mt. Liang, to Shagang, Xizhuang, Xishan and Yuanqian Villages, and fields in all directions draw on its waters, which pour in [to the fields] in rotations of seven days and seven nights… beginning with Yuanqian [Village, which receives irrigation water] for two days and one night, followed by Xishan [Village] for two nights and one day, and then Shagang Village, which has many polder-fields, for three days and three nights, and Xizhuang [Village] for one day and one night, after which the cycle begins anew…[80]

> 大坑溪水出自梁麓，沙崗，西莊，西山與院前四處田地俱資波潤，斟酌七日七夜輪番…首院前貳日壹夜，次西山貳夜壹日，又次沙崗埭田種多，叁日叁夜， 西莊壹日夜，周而復始…

Though technologies are not discussed in this passage, it is implied that the four villages which drew on Dakeng Stream employed sluicegates to control the flow of water into their respective irrigation canals. Based on the justification provided for Shagang village's large share of irrigation water—it had "many polder-fields"—we can surmise that the uneven distributions of water reflected the varying consumption needs of the four villages. As in the Qizai Guan Reservoir, the manner in which water was distributed within a single village seems to have been left to each village to determine.

In Nanjing County, we find evidence of a remarkable durational access system in which time allotments are divided down to the hour:

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[80] "Wang yihou shenming shuili bei" 汪邑侯申明水例碑 [Stone Inscription of Magistrate Wang's Declaration on Water Management], in *Zhangpu lidai beike*, edited by Wang Wenjing, 82.

> The Shangfu *shuiwei* fields, [which produce] seventeen *dan* [of grain], [will receive irrigation water] from *mao* (5:00 am) of day one to *wu* (12:00 noon) of day two; the Xinzhai Hupu *shuiwei* fields, twenty-five *dan* of grain, from *wei* (1:00 pm) of the second day to the [end of] the fourth day; the Yuanqian fields, sixteen *dan*, from *chen* (7:00 am) of the fifth day to the [end of] the seventh day; the Miannei and Lingao mountain fields, forty-seven *dan*, from *chen* (7:00 am) of the eighth day to *yin* (3:00 pm) of the sixteenth day…[81]
>
> 上釜水尾田十七石，一日卯起二日午止. 新寨湖樸水尾田二十六石，至二日未起三，四日止. 院前田四二十六石，五日辰起六，七日止. 棉內，林高山田四十七石，八日辰起九，十六日寅止. . . [82]

In this ten-day irrigation cycle, time allotments for the various properties seem to be based on respective grain yields.

In summary, multiple techniques were used for regulating the flow of scarce irrigation water. Contractual agreements were drafted to codify water-sharing agreements between multiple villages, and sometimes even plots of land, with the amount of water permitted to flow to each unit recorded precisely. In some cases, it is explicitly stated that irrigation rents were determined by the amount of irrigated land owned by each user. In other cases, the precise recording of water shares implies that water access was linked to irrigation rents or perhaps labour

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[81] The text of the stele has been transcribed as "until the sixteenth day" (*shiliu ri* 十六日), but I strongly suspect that the six is a transcription error, as such a generous allotment of irrigation time would be out of step with the rest of the irrigation schedule, whereas "the tenth day" would fit perfectly. Reference will have to be made to the original stele for confirmation; regardless, the precise number of days makes little difference to the overall significance of the stele as an example of an irrigation schedule.

[82] "Da Ming Nanjing xian Yin Guo hou xing shuili beiji" 大明南靖縣尹郭侯興水利碑記 [Great Ming Nanjing County, Magistrate Yin Guo Water Management Stele], in *Nanjing shike ji*, edited by Jiang Qingxi, 16.

contributions. By recording the amount of water each village or plot of land was to receive, it was hoped that future conflict over water access could be avoided. Nevertheless, as we will see below, it seems that water sharing was a perennial source of conflict in the Minnan region.

Leadership, Capital and Labour

Natural disaster, gradual erosion and human-induced destruction meant that water management facilities were in need of constant protection and repair. Protection and repair required leadership as well as inputs of capital and labour, and it was the provision of these three necessities that formed the third social challenge in maintaining Minnan's water management structures. In a stele from the Qianlong era (1736) regarding the Muming Reservoir 睦命塘 in Tong'an County 同安縣, we are afforded a glimpse of the problems that occurred when a structure was lacking in leadership, labour or capital. The Muming Reservoir provided water for eleven cantons. The reservoir had a history of conflict resulting in government intervention in the thirteenth year of the Ming Hongzhi reign period (1500), and the thirteenth year of the Qing Yongzheng reign period (1735). In 1735 Magistrate Tang 唐 concluded that the source of the problem was a lack of leadership and sense of responsibility for the reservoir:

> That this irrigation [system] belongs to the residents of all of the cantons is abundantly clear. [However,] because [the reservoir] was the common property of the cantons, no one [took it upon themselves] to manage the banks of the dykes, and as the years passed they collapsed, and once again,

> wealthy toughs surrounded the muddy banks of the dykes [with stones] and converted them into fields for the sake of their personal profits, so that the water in the reservoir decreased by the day and was insufficient for irrigation.
>
> 鄉民之此水灌溉則其為通鄉水利彰彰明矣。 祇因系各鄉公共之物， 堤岸無人經營， 年久坍塌， 復有豪強於堤岸淤灘之處圍築成田， 私為己利， 遂使塘中蓄水日少， 灌溉不敷…

After diagnosing the ailment that plagued Muming reservoir, the Magistrate ordered that in the future each of the eleven cantons should provide labourers for repairs:

> … A number of fiscal households are to take turns serving as manager [of the reservoir] in a cycle of eleven terms, to be determined by the drawing of lots. During the slack season of each year, two or three canton elders are to lead able-bodied men of each canton to clear silt, [re]build the dyke's banks and repair the reservoir mouth. The banks of the dykes must be made sturdy, and the reservoir deep and broad, so that large amounts of water can collect, and further occupation by thugs and other problems might be avoided, leaving no cause for dispute ... It is left to the just leadership of the canton elders to see that effort is exerted and this task is completed to perfection—this is not something that the county [government] is capable of carrying out. The gentlemen of the villages were assembled, and the elders deliberated amongst themselves as to how best to rotate management [of the reservoir], and how to organize [the reservoir's operations]. A set of regulations was drafted and presented to the county government to keep on file, so that [the regulations] would forever be respected. If the current manager is unable to perform repairs in a timely fashion, elders of the eleven cantons should jointly decide on a punishment...
>
> 數尸十一番經管□理鬮拈， 預定每年於農隙之時， 鄉老二三人董率各鄉壯丁， 開淤築岸， 修理涵口， 務使堤岸堅/固， 塘中深廣， 水可多蓄，兼以杜絕棍徒占墾等弊， 庶乎爭端不起… 是則有在該鄉老等之秉公竭力辦理盡善， 而非本縣所能與也。 合該鄉衿士，耆老應共悉心斟酌如何輸值? 如何整理？創設規條， 呈縣存/案， 俾期永遠遵守奉行， □輸番會首不能及時修□，十一鄉鄉老仝議罰…[83]

[83] "Tong'an xian Congshun li kanduan Muming tang yanyu beiji" 同安縣從順里勘斷睦命塘讞語碑記 [Tong'an County, Cong Shun Subcanton, Ruling on Muming Reservoir Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 419.

In this stele, as well as in the above case histories, the challenges faced by local residents in maintaining water management systems are clearly displayed. Muming Reservoir deteriorated under the weight of nature as well as social disorder—left without maintenance the physical structure began to collapse, and was unlawfully seized by local residents. Similar themes recur throughout the other sources considered in this study. In the Zhangpu Qizai Guan Reservoir case history, we saw that the reservoir was constantly threatened by surges of water downwards from the mountains, and saline waves upwards from the ocean. Likewise, flooding and the encroachment of saline water was a perennial threat to Jinjiang's Liuli Reservoir. Damage resulting from social disorder could be equally daunting to water management systems. The seizure of water management structures and their monopolization or conversion into agricultural land was a constant threat in late imperial Minnan. In the Ming-era Guihu Reservoir regulations, it is stipulated that those who previously reclaimed reservoir land illegally would be allowed to continue with cultivation, but in exchange, a tax would be levied on the land in order to fund reservoir maintenance. However, Prefect Tong feared that such leniency would only encourage further seizures:

> When an official reservoir is filled in to become fields, this should be corrected by the law. Presently we yield to the wishes of the masses, and allow [reclaimed reservoir land] to be plowed as before and taxed, so as to provide for the expenses of water management. However, the treacherous and greedy may take this as an opportunity to once again fill in [and reclaim reservoir land]—it is difficult to guarantee that this will not occur. The reservoir master should thus ensure that reservoir workers patrol the area, and if any land is filled in and reclaimed, local residents should be assembled to dig it up…

> 官塘填塞為田，法當改正，今俯順下情，聽其照舊耕納稅銀，固為藉處以補水利之需。但姦貪乘此復行填接者，難保其無。陂首合嚴陂夫周圍巡視，若有復加填接者，即時會眾搬掘…[84]

In most other cases, local officials ordered that land illegally reclaimed from reservoirs be returned to its original state. In addition to land seizure, loss of control over sluicegates could also have grave consequences, as occurred in Liuli Reservoir. In order to facilitate the movements of merchant and fishing boats, sluicegates were often left open for extended periods of time. However, this allowed irrigation water to flow into the ocean unused, and worse yet, saline water to flow inland where it ruined agricultural fields.[85] Natural calamity and social disorder left no water management structure untouched.

When the above challenges were combined with a lack of leadership, disaster resulted. As Magistrate Tang pointed out in the Muming Reservoir stele, the reservoir was originally allowed to decline because none of its users were willing to take responsibility for its maintenance—that is, to provide the necessary labour and capital, and organization for repairs. The Magistrate added that the government itself was not capable of providing for the structure's upkeep. His assertion is in line with Zheng's argument that funding for water management decreased after the Song.[86] Interestingly, in a sixteenth century source on the Liuli Reservoir it is stated that "in the past" labourers were provided via the *junyao* corvée system—the *junyao*

[84] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 144.
[85] Ibid., 149.
[86] Zheng, "Mingqing Fujian yanhai shuili zhidu yu xiangzu zuzhi," in *Xiangzu yu guojia*, 56-61.

system was instituted in the mid-fifteenth century.[87] However, by the following century Jinjiang native Chen Chen could complain that this system had already fallen into desuetude. Maintenance of water management structures could be arduous, dangerous work. Without sufficient enticement or coercion, it was not always possible to assemble labourers. Thus, in the Guihu and Liuli Reservoirs, by the mid-Ming there were no longer any labourers to carry out repairs. It is possible that in other areas of Minnan, Ming corvée and tax systems such as the *junyao* and *lijia*[88] systems were used for the maintenance of large-scale water management systems, though this cannot be confirmed based on currently available sources. If it was indeed the case that other water management systems were also linked to official corvée systems in the early Ming, then it is possible that the collapse of these systems contributed to the power vacuum filled by lineages in the mid- and late Ming.

In summary, the larger issue facing the water management systems considered above was a lack of strong leadership. Without leadership, it was impossible to respond to challenges of flooding and structural degradation, to maintain order, and to ensure timely and sufficient inputs of labour and capital for

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[87] Huang, *Taxation and Governmental Finance*, 142.

[88] *Lijia* 里甲: "Prescribed by the government during the founding reign of Ming, the system in theory designated every 110 households a Community (*li*), whose 10 most affluent households provided a Community Head (*lizhang*) in annual rotation while the remaining 100 households were divided into 10 clusters each with 10 neighboring households constituting a Tithing (*jia*), for which one of the households provided a Tithing Head (*jiashou*). Both Community Heads and Tithing Heads were responsible to their district magistrates (*zhixian*) for the proper conduct of their charges, for settling local disputes, and to some extent for the collection of local land taxes." See Hucker, *Official Titles*, 303.

repairs. The building of polders as well as disputes over water sharing placed further stress on water management systems, making the need for strong leadership all the more pressing. It was lineages that stepped into this leadership vacuum, by invitation or otherwise.

Lineages and Water Management

There is evidence that during the Ming and Qing eras government officials were suggesting multiple approaches to leadership for water management systems, such as three year limited terms as reservoir master (Liuli Reservoir), or leadership by a council of local elders (Muming Reservoir). However, organizations created ad hoc for the management of irrigation systems that required cooperation among large groups of people seem to have been difficult to sustain; meanwhile, temporary appointments of individual reservoir masters transformed into hereditary control by lineages. In the late imperial period, although we have records of government officials recommending or ordering the institution of rotational systems of management—such as in the case of Muming Reservoir, where it was ordered that eleven fiscal households (*hu* 戶) rotate management of repair efforts—we have no evidence that these systems ever operated as planned.

Lineages existed independent of water management systems, were capable of lasting through many generations and accumulating collective wealth, and could operate independent of the state. Many lineages were also keen to bring glory and material benefit to their members by expanding control over local resources.

Lineages were thus well positioned to fill power vacuums that emerged in local water management systems. In the sources studied here, we witness two primary methods through which lineages assumed control over water management structures: the contribution of funds, via philanthropy or purchase of structures (the line between these two acts was at times unclear), and the use of force. Beginning with the former, there is evidence for a tradition in which a wealthy individual would pay for the repair of a local water management structure, such as a reservoir, and in return, be appointed as reservoir master by those who drew on the structure's irrigation water.[89] In several cases, the ancestors of the original donor went on to hold the position hereditarily, so that in effect, a lineage assumed control of the water management system permanently. The reservoir master position of the Liuli Reservoir, for example, was originally intended to be held for a three-year term:

> …in former times, a reservoir master was appointed, a resident of this township who owned land, and was assiduous and capable, and was admired and respected by the people. [The reservoir head] served one three-year term, and was not exempt from corvée duty [in exchange for his services].

[89] In the sources that he examines, Zheng detects a similar pattern. However, Zheng sees lineage funding of local irrigation repairs as an exploitative practice, a mere excuse to monopolize local resources. Conversely, while philanthropy was likely one route to local dominance, I do not believe that the sources always support such a cynical view. In the sources examined and presented in this thesis, there are many cases where it seems just as likely that locals were willing to concede control over irrigation water to powerful lineages or individuals in exchange for the capital that these lineages could offer (such as in the case of the Qizai Guan Reservoir). The lineages increased their influence, while other local residents received improved water management facilities in return. Without direct evidence, it would be injudicious to characterize such instances as exploitation instead of cooperation. See Zheng, "Mingqing Fujian yanhai shuili zhidu yu xiangzu zuzhi," in *Xiangzu yu guojia*, 59.

舊設陂首一名，擇本都有恆產，恆心兼有才幹，人所推服者為之。一任三年，不免差役。[90]

However, after ancestors made personal donations for repairs during the mid-Ming, three lineages came to hold the position of reservoir master permanently (in rotation). Another clear example of this trend can be found in the history of Meipu Dyke 梅埔溝, Tong'an County 同安縣:

> … According to the petition of the government students[91] Ye Cuiying, Ye Lanyu, Ye Linghan, Ye Chuilun, Ye Yuanjia, Dai Shiyan, and Ye Yuanlian, the [construction of] the Great Dam at the mouth of Small Stream was originally advocated by the grandfather of the students and the others, who built a dyke and cleared a path for the irrigation canal, thus providing irrigation for the clansmen of Xiyang Village, the Dai's of Wangcuo Bian [Village], the Lin's of Yuanjiang [Village], the Hong's of Hongxia [Village], and the Zhang Cuo tax registered fields of this village. [Ye's grandfather] took responsibility [for irrigation] as manager, and carried out repairs year after year, as is known to all…
>
> 茲據生員，葉萃英， 葉藍玉， 葉凌寒，葉垂綸，葉元甲，戴士彥， 葉源連等呈稱: 小溪口大壩原系生等祖父首倡， 築堤疏通水圳， 灌溉西洋鄉族人，汪厝邊戴姓， 員江林姓， 洪下洪姓，本社張厝等鄉課田，為首承管， 歷年修理， 遠近周知。[92]

A second stele from the Tongzhi reign period (1862-1874) indicates that because Ye Cuiying's grandfather took responsibility for repairs over a number of years, the Ye's eventually assumed hereditary leadership over the water management system:

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[90] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 149.

[91] I follow Hucker's translation of *shengyuan* as "Government Student." See Hucker, *Official Titles*, 420.

[92] "Tong'an Meipu gouhan gaoshi bei" 同安美埔溝涵告示碑 [Tong'an Meipu Dyke Declaratory Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 434.

> … it has been found that prior to this case stipend student[93] Ye Cuiying and others submitted the following petition: there is a single communal dam, [the water of which] enters the mouth of the small stream from Mt. Daxi. Since the Yongzheng reign period (1723-1735), ancestor Ye Haoguan has expended silver to have [the dam] repaired, and the elders of each village have appointed him as dam-master…
>
> 查此案前據廩生葉萃英等呈稱: 有公共水壩一條， 由大溪山入小溪口， 自雍正年間伊祖葉浩觀出銀修築， 各鄉老舉為壩長…[94]

A local official accepted the Ye's argument that their ancestor had been appointed dam-master. I believe that the case of the Qizai Guan Reservoir in Zhangpu outlined above provides a similar example of lineage dominance, but it is difficult to confirm this suspicion based on currently available sources. Although we cannot be sure that the reservoir was dominated by a lineage, it seems highly possible for two reasons. One, individuals purchased the land on which the reservoir was located, assumed responsibility for repairs, the right to collect irrigation tax, and were appointed as reservoir masters. Since these individuals were only appointed reservoir master after purchasing land, it is likely that the position of reservoir master was intended to be hereditary, like the land itself. Second, as I recounted above, a Li is listed as reservoir head in the later contracts. It is possible that this Li is a member of the same lineage as the Li who bought the reservoir lands in the first contract.[95] Regardless, in most surviving sources on water management-related conflict, when sufficient detail is provided, we see that lineages often acted as instigators.

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[93] I follow Hucker's translation of *linsheng* as "Stipend Student." See Hucker, *Official Titles*, 313.

[94] "Tong'an Meipu xingba gaoshi bei," in *Xiamen beizhi huibian*, edited by He Bingzhong, 440.

[95] "He gong duanding guanbei shuili bianmin beiji" (Longqing contract), in *Zhangpu lidai beike*, edited by Wang Wenjing, 96.

Aside from paying for repairs or buying water management structures, lineages also sought control over water management systems via forced seizure. The previously mentioned stele regarding the history of Dakeng Creek in Zhangpu County provides a typical example:

> The water of Dakeng Creek flows forth from the foot of Mt. Liang, to Shagang, Xizhuang, Xishan and Yuanqian Villages, and fields in all directions draw on its waters, which pour in in rotations of seven days and seven nights; this is the ancient precedent. In the forty-forth year of the Wanli reign period (1616) the Zheng family forcibly broke from the water [management] precedent, and on the first day of the new year Xu Shiqiu led the villagers to submit a petition to the county government...
>
> 大坑溪水出自梁麓，沙崗，西莊，西山與院前四處田地俱資波潤，斟酌七日七夜輪番，古有成例也。募緣萬曆四十四年鄭姓霸截水例，春元許仕求率鄉民匍呈縣府道…
>
> In the fifty-fifth year of the Kangxi reign period (1716) the Zheng family once again broke with precedent, occupied the creek and cut off the flow of its water. Residents of our village went together to submit a complaint, and the county magistrate ordered that the *xiangbao* investigate…
>
> 詎康熙五十五年鄭姓復霸截水例，我社內相率匍呈，蒙本縣主批着鄉保查覆…

The Zheng's were persistent. Three years later in the fifty-eighth year of the Kangxi reign period (1719) they tried to influence the irrigation system once again, but this time more discretely, by pressuring the local *baozhang* 保長 to alter the water sharing schedule.[96]

The Dakeng Creek stele demonstrates that when irrigation disputes erupted, the social fault lines that communities divided along did not always reflect the

[96] "Wang yihou shenming shuili bei," in *Zhangpu lidai beike*, edited by Wang Wenjing, 82.

original social units party to irrigation agreements. Although the Dakeng Creek water-sharing schedule took villages as basic units, it was a lineage, the Zheng's, who broke the agreement. The Qizai Guan Reservoir provides another example of this tendency. Parties to the three contracts were always villages and individuals, and irrigation tax was calculated based on the size of the plots that received irrigation water. However, it was a kinship group, the Huang lineage, who occupied the reservoir and antagonized the other users during the Qianlong reign (1736-1795).[97]

I hypothesize a simple explanation for the discrepancy between social units in times of cooperation and conflict: because the majority of fields cultivated by village residents likely surrounded their respective villages, thus forming a single grouping of fields which water could be delivered to via canal, it was pragmatic to organize water usage agreements along village lines. Indeed, water sharing agreements for most irrigation systems studied here were organized along geographic lines, be they village, or groupings of villages, or individual plots of land. However, in a given region, kinship identity may have been more important than village identity in struggles for socio-economic dominance, so that when conflict over water broke out, a kinship group spanning multiple villages (perhaps villages that included other surnames) could mobilize to occupy a water supply in order to deploy it in the best interests of kinsmen, thus excluding some villages in the region. Perhaps more simply, at times leaders of powerful kinship groups may have acted

[97] Ibid., 82.

opportunistically when they felt that mobilizing along extra-village kinship lines would be more advantageous than adhering to village identity.[98]

In addition to reservoirs, there is evidence that lineages played a significant if not dominant role in the construction and maintenance of polders in late imperial Minnan. The Daoguang Jinjiang County Gazetteer is probably the richest source on polders in the Minnan region. Although entries on most polders are extremely brief, in several cases we are provided just enough information to appreciate the role of lineages in the histories of these structures. During the Ming and Qing, commentators on the Liuli Reservoir complained that the polders that fed off of the reservoir were dominated by powerful lineages whose members consumed water and opened sluicegates without regard for other reservoir users. Likewise, for example, from the Yuan through to at least the Ming, Baiyi Polder 白衣埭 was dominated by the Sun's 孫, while Yongfeng Polder 永豐埭 was controlled by the Huang's 黃, who rented out the fields within, after Huang Nanting had it repaired during the Ming Yongle reign period (1403-1424).[99] A legal ruling inscribed on a stele from Zhangpu recounts the history of a dispute between two lineages that owned fields in neighboring polders—whether they owned the entirety or merely a portion of their respective polders is unclear. The Xie's 謝 bought land in the Ke's 柯

[98] The choice to mobilize along lineage lines can be seen as part of the strategic "practice of kinship," in Michael Szonyi's words. See Michael Szonyi, *Practicing Kinship: Lineage and Descent in Late Imperial China* (Stanford, Calif: Stanford University Press, 2002).

[99] "*Shanchuan*" 山川, *juan* 8, *Quanzhou fuzhi* 泉州府志, Qing Qianlong, edited by Guo Gengwu 郭賡武, Huang Ren 黃任 and Huai Yinbu 懷蔭布 (Shanghai: Shanghai shudian chuban she: 2000), 149－57.

polder, which they believed entitled to them to hunting for crustaceans on the beach in front of the polder. The Ke's disagreed, and a violent conflict erupted between the two lineages. In the end, the county magistrate sided with the Ke's.[100] The episode demonstrates the ability of lineages to mobilize for the protection of polder land, or any land for that matter, though the high capital and labour requirements for polder construction and maintenance (as seen in the stele from the Eastern Polder introduced above) would seem to have put lineages at an advantage over individuals when it came to polder building.

In this section I have argued that in late imperial Minnan, lineages tended to gain control of water management structures either by making contributions towards repairs and thus assuming hereditary control, or by seizing control forcibly. Nevertheless, as the Dakeng Creek and Qizai Guan Reservoir examples demonstrate, even when a large lineage dominated neighboring territory, local residents could still appeal to the government for help in resisting the monopolization of communal resources, such as water management structures. Although local government played a lesser role in funding irrigation projects in the Ming and Qing, official attitudes towards the management of irrigation structures were still important factors in local balances of power.

[100] "Dufu ti niedao fulie xian pi xian shenxiang yan'an" 督撫提臬道府列憲批縣審詳讞案 [The Governor Explicates the Law and Approves the County-Level Ruling on the Case], in *Xiamen beizhi huibian*, edited by He Bingzhong, 424.

Chapter Three: The Official Response

Within the Minnan region the degree of government involvement in water management systems varied greatly. One factor that seemed to influence the extent of involvement was the size of the structures in question. The Guihu and Liuli Reservoirs provided irrigation for scores of villages; consequently, government officials were repeatedly involved in organizational reforms and repair efforts. Conversely, the Meipu Dam and Qizai Guan Reservoir water management systems provided irrigation water for a mere handful of villages. Government involvement was thus limited to land rights certification and intervention in disputes upon the request of locals. Regardless of the size of a water management structure, when disputes arose and operations were disrupted, in some cases locals appealed for official intervention. In this chapter I examine official response to water management-related conflict, with a focus on official attitudes toward the dominance of water management structures by lineages. I argue that the notion of reservoir water as a communal, open-access resource was implicit in both custom and legal decree, even if the land that reservoirs rested upon were privately owned. Although late imperial governments did not directly manage the operation of water management structures, local officials could be appealed to to intervene in water management disputes. These officials played significant roles in protecting access to irrigation water in the face of lineage aggression.

Principles of Adjudication: Communal, Official and Private

In the Minnan region, official rulings in response to irrigation disputes often hinged on concepts of "official," "communal" and "private" property and resources. That is, should the irrigation structure in question be considered the private property of a group or an individual, or an official or communal resource available to all nearby villagers? Viewing the steles that detail irrigation disputes alongside steles regarding other kinds of legal rulings, it becomes clear that officials placed irrigation systems within the larger context of the communal-official-private discourse that pervaded many land and resource-related disputes at the local level. For our purposes, in the Minnan region, I posit three primary categorizations of land ownership: (1) land that was privately owned, often described as *siye* 私業 or as a person or institution's *jiye* 己業; (2) land that was considered "official," often prefixed with the term *guan* 官 (*guandi* 官地, *guantang* 官塘, etcetera); (3) land that was considered communal property, usually described as "communal" or "joint" (*gong* 公 , *gonggong* 公共)—that is, non-government property shared by members of a local community.

The prefix "official" (*guan* 官) placed before a piece of property or resource could signify that the property in question was owned by the government, and that a special tax rate was to be paid for its exploitation.[101] However, "official" could also simply mean that the property in question was the government's and thus in

[101] Chen Guangyan 陳光焱, *Zhongguo caizheng tongshi*, *Mingdai juan* 中國財政通史, 明代卷 (Beijing: Zhongguo caizheng jingji chuban she, 2006), 43.

practice communal, so that no single individual or group was permitted to monopolize or claim ownership of it. Confusingly, in many cases it is also possible that the word *guan* was merely part of a structure's name, with no relation to property rights (more on this below).

Although the concept of "communal" (*gonggong* 公共) property is often overlooked or given short-shrift in works on landownership practices and taxation, in the Minnan region when we shift our focus from local gazetteers to steles regarding resource-related disputes, we find that it was a concept that consistently appeared in the legal rulings of local magistrates. In short, communal resources and properties could be utilized by the "community"—however the "community" might be defined—but monopolized by no single member of the community. In addition to many reservoirs and dams, coastal regions and mountain slopes were also often designated as "communal." Because of the rapidity with which the topography of coastal and riverine areas could be altered via land reclamation, property rights in such regions proved particularly contentious. A Quanzhou stele dating to the Ming Wanli era (1581) provides a glimpse into the logic that underlay deliberation between "private" and "communal":

> … Today a portion of the Dongdi stretch of the coast has been sold to Li Cilian, who in turn resold it to Ke Jin. In general, the fishing …[illegible]… This made local fishermen uneasy, thus their lodging of this complaint. After the contract belonging to Su Junheng was inspected carefully [the following] was determined: in those dispersed regions in the east along the sea and others there are no borders of precincts or wards,[102] there is only Xiangfeng Subcanton. Tong'an's Xiangfeng Subcanton is broad, and contains nine precincts and seventeen wards which are… [illegible]… After checking the

[102] I follow Brook's translation of *tu* as "ward." See Brook, *The Chinese State*, 20.

yellow registers, it is unclear upon what basis Ke and Li could have bought and sold Xiangfeng Subcanton. As there are no rice [tax payments (?)] registered in the yellow registers, this is obviously an official sea (*guanhai* 官海), and the people are permitted to help themselves [to the fish here] without restriction. The treacherous [Su] Junheng did not check the ancient contracts …[illegible]… How is it that previously the fishermen lived together in peace, and yet today they are embroiled in disputes? Junheng must return the original price [that was charged for] the sea to Ke Jin and allow the fishermen to fish as before. A warning stele is to be installed declaring that it is forever forbidden for local toughs to demand taxes…

今東堺洋大海一處， 賣與李次廉， 次廉又轉於柯進， 凡漁□□，/漁民不安，故有是告。細查蘇君恒所費契書云：海坐東散洋等處，並無都圖界址，止說翔風里。 夫同安之翔風廣矣， 內有九都十七圖， 孰為□□乎？ 查黃冊□/翔風者， 遽欲柯， 李授受， 不知憑何推收乎？冊不載米， 明系官海，聽民自取而無禁者也。 而君恒作奸捏無稽古契，以誰人財在李與□□不知□□／已管百餘年矣。 漁民昔何以相安而今何紛紛也？ 合斷君恒備原價還柯進其海， 任漁民照舊取漁， 宜置石碑禁示， 永不許土豪請稅…

…Su Junheng sold a government sea—he is a treacherous subject in the extreme. [It must now be] returned to the community (*tuichu yu gong* 退出與公) and a stele must be erected as a record…

… 蘇君恒以官海賣價，奸民之尤也。 退出與公， 其之立石為記…[103]

In this case, Ke Jin's claim to the coastal land and nearby ocean waters rested on his possession of a contract; however, as the land had never been private property in the first place, and had not been registered with the government for taxation, the contract was considered invalid. It was ruled that the land was in fact open to use by all local residents. Of course, Ke was stripped of the land not solely because of an invalid contract, but because his seizure of the property had angered local fishermen, which was why the complaint was filed against him in the first place. Here, the government was protecting the resources of the local community.

[103] "Tong'an xian jinyu" 同安縣禁諭 [Tong'an County Prohibitory Edict], in *Xiamen beizhi huibian*, edited by He Bingzhong, 417.

Likewise, in the example below from Zhangpu County, fish and crustaceans are cited as communal resources:

> … [in] the mudflats and official moats (*guanhao* 官濠) of the county[104] the obedient masses catch fish and collect shrimp to exchange for rice to sustain themselves, and this is naturally of communal benefit (*gonggong zhi li* 公共之利); could it be tolerated for evil members of the gentry and powerful families to occupy [these lands] as their own property, extort the people and demand the payment of taxes, cause harm and assemble bands of thugs? … [Powerful lineages] are banned from occupying [these lands], and a stele is to be erected and obeyed…
>
> …邑海泥官濠，聽民采捕魚蝦易米資生，此自然公共之利，豈容劣紳巨族占為己業，勒民納稅，貽害編氓… 禁其霸占，勒石遵守…[105]

Protection of communal resources from illegal monopolization was not limited to fish, crustaceans and other water-related resources. Nevertheless, water seemed to make an excellent candidate for communal resource status, as unlike land, water is mobile and difficult to demarcate with precision, and fish and crustaceans provided extra sustenance for peasants.

When reading late imperial texts, it is tempting to select the English term "public" as a translation for the Chinese *gong* 公 or *gonggong* 公共, as one often would when translating from modern Mandarin to English. However, *gonggong* had a localized meaning in Qing Minnan, and probably elsewhere in the Empire, different from the more universal meaning that we today associate with the word "public"; I thus prefer the term "communal" as a translation of *gonggong*. That is to

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104 *Yi* is an "unofficial reference" to "county" (*xian* 縣). See Hucker, *Official Titles*, 265.

105 "Beijiang gaitan jinshi bei" 北江海灘禁示碑 [North River Beach Prohibitory Stele], in *Zhangpu lidai beike*, edited by Wang Wenjing, 79.

say, in the Qing, the status of *gonggong* did not imply that just anyone could make use of the land or resources in question; rather, the term often meant that a resource was to be shared within a closed community based on geographic proximity, kinship relations or village residence. For example, in a 1754 dispute between two families over the ownership of a mountain slope in Quanzhou, it was ruled that "this is the common property of the Kang and Lu families" (*kanglu liangxing gonggong zhi wuye* 康盧兩姓公共之物業).[106] Here, it would be unreasonable to translate *gonggong* as "public," because exploitation of the mountain was not open to just anyone, but rather to these two lineages alone. I thus use the phrase "common property" instead of "public property." This is also the sense of meaning that we find in the Qing Code, where to my knowledge, the term *gonggong* 公共 appears only twice, suggesting similar meanings each time. For example, the first time the term appears it pertains to tomb-land held jointly by a group of kinsmen, which is referred to as "a jointly-held ancestral tomb located on a mountain" (*gonggong zufen shandi* 公共祖墳山地). This phrase seems to have been copied directly from the Wanli era edition (1585) of the Ming Code where the term *gonggong* appears only once, in a similar law regarding the unauthorized disposal of common tomb property by kinsmen.[107] In both of these examples from the Ming and Qing codes, as with the above example from Quanzhou, the term *gonggong* is more

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[106] "Houxi xuzhueng fengxian libei" 後溪許莊奉憲立碑 [Hou Creek Town, Xu Village, Legal Ruling Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 427.

[107] *Da Minglü fuli zhuji jieshi* 大明律附例注集解釋, *juan wu* 卷五, *hulü er* 戶律二, *tianzhai* 田宅, 1585, edited by Yao Siren 姚思仁 (reprint, Beijing: Beijing daxue chuban she, 1993), 339.

appropriately translated as the English "jointly-held" than as "public," because the land in question is only open to the joint use of a specific group of kinsmen.[108] We should thus be alert to the meaning of *gonggong* in other sources as well, where it at times seems that both "public" and "communal" would be suitable translations. With historical context in mind, "communal" or "joint" are often more accurate translations.

Likewise, the use of the term *guan* 官 in the sources can lead to confusion. On one hand, the term is used in a way that implies status as government property. For example, in the entry on Long Lake 龍湖 in the Daoguang era Jinjiang County Gazetteer, it is stated that

> In the past [Long Lake] was an official lake. At the beginning of the Ming [the government] began to levy a fish tax… At the beginning of the Qing [the lake] was seized by a powerful family.
>
> 舊系官湖。明初始徵魚稅… 國初勢家奄為已…[109]

However, in the eighth year of the Yongzheng reign period (1730), a government official once again ordered that the lake be returned to official status (*hu gui guan* 湖歸官), and a tax in rice be paid to the government.[110] Likewise, in the Ming era Guihu Reservoir regulations, it is stated that "when an official reservoir (*guantang* 官塘) is

[108] *Da Qing lüli* 大清律例, *hulü* 戶律, *tianzhai* 田宅, edited by Li Zongfang 李宗昉, Qing Dynasty (reprint, Hainan: Hainan chuban she, 2000), 154.
[109] "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 139.
[110] Ibid., 139.

filled in to become a field, this should be corrected by the law."[111] In a Kangxi era stele from Zhangpu County (1690), it is proclaimed that local residents are free to fish and catch crustaceans in the county's mud lands and "official moats" (*guanhao* 官濠).[112] The most important, direct evidence for the link between the graph *guan* in the names of water management structures and government involvement is found in the republican era Longyan County Gazetteer 龍岩縣志, in which the entry for Guan Reservoir 官陂 states "built by an official, thus its name" (*guan zhu zhi gu ming* 官築之故名), without specifying a date for construction. The entry goes on to recount that in the twelfth year of the Ming Zhengtong reign period (1447), the reservoir was rebuilt under the leadership of a "county resident" (*yiren* 邑人).[113] Thus, Guan Reservoir had to have been built in the early Ming at the latest. I suspect that many of the other water management structures whose names include the graph *guan* also had some relation to officialdom in their early history. Like Guan Reservoir, many of these structures may have come under the leadership or control of commoners later on, thus obscuring the origins of their names.

Zhangpu's Qizai Guan Reservoir 栖栽官陂 also includes the graph *guan* in its title. We are not told why, but it is possible that the term signifies that the reservoir water was not the property of any individual, but rather, the collective property of the entire community. Second, it is possible that because government officials were

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[111] Ming Jiajing jian Quanzhou fu shenming Guihu Tang gui wengao" 明嘉靖間泉州府申明龜湖塘規文告, *Jinjiang shizhi*, edited by Jinjiang shi difangzhi biancuan weiyuan hui, 1808.

[112] "Beijiang gaitan jinshi bei," in *Zhangpu lidai beike*, edited by Wang Wenjing, 79.

[113] Ma Heming 馬鼆鳴, Chen Pixian 陳丕顯, Du Hansheng 杜翰生, eds., *Longyan xianzhi* 龍巖縣志, Republican era (Shanghai: Shanghai shudian chuban she: 2000).

invited to verify and make record of the reservoir's circumstances after initial construction, the term *guan* was included in the reservoir's name. However, local gazetteers are filled with water management structures whose names include the word *guan*, though rarely is enough detail on a structure's history or social organization provided to determine the meaning of *guan*. I suspect that the use of *guan* in the names of these water management structures was a means of clarifying their status as communal property, or perhaps reflects their tax status from the early Ming or before, though without further evidence it is likely impossible to confirm this suspicion for most of the structures in question.

My contention that the status of *guan* was applied to certain resources to protect them from private monopolization is corroborated by Akira Morita's research on water management in Eastern Zhejiang province during the Ming. In order to protect lakes and wetlands from monopolization and reclamation by powerful lineages—thus depriving other residents of irrigation water—local officials declared that the lakes were *guan*—"the lake residents are not permitted to privately sell official lakes" (*humin yi guanhu bude simai* 湖民以官湖不得私賣).[114] Akira's explanation for the use of the term/status of *guan* in Eastern Zhejiang, is that officials applied the term to lakes that were vital for regional irrigation or protection against flooding. Akira quotes a late Ming official, who explicitly states that the status of *guan* can be applied to lakes to protect common people: "if what is left over of the lake is defined as a *guan* lake, poor commoners can [collect] its fish and reeds, and thus sustain themselves" (*ruo yi shenghu ding wei guanhu, ting pinmin yucao,*

[114] Morita, *Qingdai shuili shehui shi yanjiu*, 13.

qizhong du huo 若以剩湖定為官湖，聽貧民魚草，其中度活).[115] The Minnan evidence suggests that officials were using the same tactic to protect commoners' access to water in Minnan.

It is possible that the concept of communal property and resources was related to what David Faure refers to as village "settlement rights."[116] According to Faure, in Hong Kong's New Territories when a family gained permission to settle in a village, they also attained rights enjoyed by other villagers, such as the right to cultivate unclaimed land in the village's vicinity, and to collect timber from nearby woods or mountains. The concept of *gonggong* seen in Minnan stone inscriptions seems to imply a similar meaning—communal usage of resources within a defined group or community.

Government officials explicitly applied the above principles of official, communal and private property and resources to water management related disputes. Many Minnan reservoirs were established prior to the Ming, sometimes by the government or with government involvement. During the Ming and Qing dynasties, wealthy locals could pay for the refurbishment of such structures, and thus be granted the position of reservoir- or dam-master. However, because these structures were seen as vital to local water management, and perhaps also because the wealthy locals were merely repairing and not founding a water management structure, these patrons were not seen as outright owners of the irrigation water.

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[115] Liu Guangfu 劉光復, "Yi cun bihu shenwen"義存泌湖申文, "Jingye guilüe quanshu" 經野規略全書, *shang juan* 上卷, *Huangxue guan luncong* 皇學館論叢, *qishi juan* 七十卷, *yihao* 一號, quoted in Morita, *Qingdai shuili shehui shi yanjiu*, 39.

[116] David Faure, *The Structure of Chinese Rural Society, Lineage and Village in the Eastern New Territories, Hong Kong* (Hong Kong, Oxford 1986), 33-44.

Although in some instances reservoir masters actually owned the land upon which a reservoir was located, and assumed hereditary leadership positions such as dam- or reservoir-master—the Qizai Guan Reservoir provides one such example—neither the local villagers nor the government ever recognized their ownership of the reservoir's water. Water management structures that were vital to the agriculture of a given area were seen as the common inheritance of the local populace.

In the sources there are several explicit references to the "communal" or "official" nature of a given irrigation system, and the right that all villagers in the surrounding region had to water access. The official who intervened in the Muming Reservoir dispute discussed above declared that the reservoir was the common property (*gonggong zhi wu* 公共之物) of residents of the eleven cantons who drew upon its water.[117] Likewise, In Tong'an during the Qing Daoguang reign period (1821-1850) an official declared that in the case of "jointly constructed and used (*zhongzhu gongyong* 眾築公用)" canals, "any nearby fields with urgent need for irrigation canal water should be provided with water without exception and without the least obstruction."[118] Thus, regardless of whether the owners of these "nearby fields" had ever contributed to the construction and upkeep of the irrigation canals, or whether they had been party to prior agreements regarding the canals, the mere location of their fields in the proximity of the canals entitled them to water access. A second Tongzhi era (1862-1874) stele pertaining to this same water management

[117] "Tong'an xian Congshun li kanduan Mingmu tang yanyu beiji" 同安縣從順里勘斷睦命塘讞語碑記 [Tong'an County, Cong Shun Subcanton, Ruling on Muming Reservoir Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 419.

[118] "Tong'an Meipu gouhan gaoshi bei" 同安美埔溝涵告示碑 [Tong'an Meipu Dyke Declaratory Stele], in *Xiamen beizhi huibian*, edited by He Bingzhong, 434.

system uses even more explicit language, referring to one structure as a "communal dam" (*gonggong shuiba* 公共水壩), even while recognizing that a single individual and his descendants had paid for the dam's repairs for over a century.[119] These statements support the view that access to irrigation water was accepted as a "settlement right" for those within geographic proximity of reservoirs or dams, though in some cases users might still be required to contribute irrigation rents.

With official focus on protecting the communal usage of irrigation structures in mind, official responses to assumption of control over irrigation structures by lineages are more comprehensible. In reality, the line between "patron" and "thug" was often unclear, if not altogether irrelevant. This is to say, the way in which a lineage gained control over a water management structure was far less significant than the way in which they managed that structure after assuming control. Nowhere in the sources studied here is a lineage denounced purely for the act of seizing a water management structure. Rather, it was when a lineage seized a structure and preceded to manage it poorly or selfishly that censure ensued.

> …and at the lower ditch, the powerful Ding and Lin lineages controlled the Haiwei Canal Polder, and each conformed to restraints placed upon them, and opened [the sluicegates] at the appropriate times. Thus, in times of extreme drought, [the farmers who feed off of] both the upper and lower [ditches] receive aid, and [water is shared] equally. This state of events lasted for several tens of months…
>
> 而下溝丁，林豪姓暨海尾涵埭，各聽約束，啟閉以時，故雖極亢旱而上下兼濟，內外適均，猶支持十數月不匱…[120]

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119 "Tong'an Meipu xingba gaoshi bei," in *Xiamen beizhi huibian*, edited by He Bingzhong, 440.

120 "Shuili zhi," *Jinjiang xianzhi*, Qing Daoguang, edited by Zhou Xuezeng, 144.

The above quote is significant because the author does not criticize the Ding and Lin lineages for controlling local water management structures by virtue of their strength. So long as these lineages managed the structures in a way that benefited surrounding residents, they could avoid criticism. It was the subsequent mismanagement of reservoir water by other lineages that the author found intolerable.

It is important to remember that members of dominant lineages, or the officials who acquiesced in their dominance, wrote many of the sources studied here. In these sources, depictions of dominant lineages as altruistic patrons do not necessarily reflect the true sentiments of less powerful members and local residents. It is possible that some lineages forcibly seized reservoirs, but also paid for their upkeep and allowed other local residents to continue to use irrigation water. In such cases, local officials may have supported the right of these lineages to maintain their leadership positions even if they had originally seized control of water management structures without official approval or the consent of local residents.

Conflict

When it was determined that a lineage who had taken control of a water management structure was not managing that structure to the benefit of local residents, government intervention might occur. Government officials usually took one of three approaches when intervening in irrigation disputes or building and repair efforts. The first approach—the approach taken by officials in the Qizai Guan Reservoir dispute—was to reassert the legitimacy and legality of the villagers' preexisting irrigation arrangement. In the Qizai Guan Reservoir dispute, based on personal inspections of the irrigation structures in question and examination of contracts, the government official simply ordered that the structures be returned to their original status, as stipulated in the contracts, and that henceforth the original agreements regarding water access and irrigation rent be adhered to.[121]

The second approach was to order villagers to mediate disputes through local institutions such as lineages, and thereafter add the weight of government approval to whatever solution was arrived at. This was the course of action taken by officials in one nineteenth century irrigation dispute from the Quanzhou region:

> … according to the petition submitted by stipend student Ye Cuiying, government students Ye Linghan, Ye Bingwen, Ye Gengsou, Ye Huiwen , Ye Yinan, military students Ye Nianci, Ye Junzhe, village elder Ye Fu, Ye Mi and others, Ying and the others accused Wu Zhou and others of Miaoshan of infringing upon a dam and cutting off [its] flow of water for personal benefit, and a runner was sent to investigate. Wu Zhou thus entrusted his paternal

[121] "He gong duanding guanbei shuili bianmin beiji," in *Zhangpu lidai beike*, edited by Wang Wenjing, 96.

> relative Provincial Graduate[122] Wu Shijing, government student Wu Denglong, Ye Yanqing, and military student Ye Tingcai to mediate…[123]
>
> 據廩生葉萃英， 生員葉凌寒， 葉炳文， 葉賡颼， 葉輝文， 葉以南， 武生葉念茲，葉俊哲， 鄉老葉福， 葉密等僉呈， 竊英等具控廟山吳紂等侵壩斷源， 截流利己一案， 當蒙派丁仝差查勘理處， 昊紂即托公親舉 人吳士敬， 生員吳登龍， 葉彥青， 武生葉廷才等出為調處…[124]

Mediation was successful, so that "both sides were pleased and acquiescent, and an agreement was produced and submitted [to the county yamen] to be kept on file."

The third approach was for an official to design and mandate a new arrangement for leadership and water sharing in a water management system. As I argued above, although we have evidence that officials ordered the institution of various new systems for the operation of water management, we have little evidence that officially mandated systems ever operated as intended.

In summary, the notion of reservoir water as a communal, open-access resource was implicit in both custom and legal decree, even if the land that reservoirs were constructed upon were privately owned. Although late imperial governments lacked the necessary resources to assume full control over water management systems, when disputes arose local officials persistently applied the concepts of "communal" or "official" resources and property to the benefit of less powerful villagers in a region, in order, we may assume, to ensure that villagers could successfully cultivate their land and pay taxes, and also to decrease the

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[122] I follow Hucker's translation of *juren* as "Provincial Graduate." See Hucker, *Official Titles*, 197.
[123] "Tong'an Meipu xingba gaoshi bei," in *Xiamen beizhi huibian*, edited by He Bingzhong, 440.
[124] Ibid., 440.

likelihood of social conflict. There is also evidence that the concepts of "official" and "communal" property were used to protect irrigation users outside of Minnan. For example, in eastern Zhejiang province during the late Ming, local officials declared that sources of irrigation water were "official" in order to prevent their monopolization by powerful local families.[125] The government's use of the concept of "communal" and "official" property and resources as a preventative measure against social conflict and to protect the livelihoods of less powerful subjects is a tendency that has been largely ignored in studies of property rights and taxation.[126]

[125] Morita, *Qingdai shuili shehui shi yanjiu*, 3-34.

[126] Chen Guangyan 陳光焱, *Zhongguo caizheng tongshi*, *Mingdai juan* 中國財政通史, 明代卷 (Beijing: Zhongguo caizheng jingji chuban she, 2006); Chen Guangyan 陳光焱, *Zhongguo caizheng tongshi*, *Qingdai juan* 中國財政通史, 清代卷 (Beijing: Zhongguo caizheng jingji chuban she, 2006); Huang, *Taxation and Governmental Finance in Sixteenth-Century Ming China*; Zhao Gang 趙岡 and Chen Zhongyi 陳鐘毅, *Zhongguo tudi zhidu shi* 中國土地制度史 (Beijing: Xinxing chuban she, 2006).

Conclusion: Minnan in Context

Hunan

I conclude by contextualizing the above findings by means of comparison between water management in late imperial Minnan, Hunan and Taiwan. It is the detailed research that has already been carried out on water management in these latter regions that makes them prime candidates for comparison with Minnan. In his research on water management in the Dongting Lake region of late imperial Hunan, Peter Perdue argues that there was no direct link between the size of water management systems and levels of official involvement.[127] This argument is valid in that government officials did not object to the independent operation of large-scale water management systems by commoners, so long as they were managed in a way that benefited local residents. However, it is difficult to deny that when a water management system broke down, resulting in flooding or drought, the scale of the given system influenced official responses. The scale of Dongting lake—"the second largest lake in China, with an area of approximately 2,700 square km"[128]—and the number of people that depended on the dykes that encroached upon it, combined with the dysfunctional nature of water management in the surrounding region and the frequency of flooding, surely account for the considerable attention that Dongting water management received from officials during the Ming and Qing.

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[127] Peter C. Perdue, *Exhausting the Earth: State and Peasant in Hunan, 1500-1850*, 171.
[128] Ibid., 198.

Dongting's history is thus comparable with some of the larger water management structures in Minnan, such as the Guihu and Liuli Reservoirs. In the early Ming, the management models of all three structures were dictated by government officials, and linked to official tax and corvée regimes. Management in the Dongting region was a responsibility of the *lijia* system. By the mid-Ming, however, a new position had been created to oversee water management independent of the *lijia* system—the "dike administrator." Similarly, at Liuli Reservoir the early Ming practice of providing labour for water management via the *junyao* system had disappeared by the mid-Ming. Aside from a brief period of government funded rebuilding in the early Qing, at Dongting Lake polder construction and dyke building were privately funded during the Qing. Repairs and construction at Liuli Reservoir were also largely privately funded from the mid-Ming on. Both structures thus lost their connection to official tax and corvée systems by the mid-Ming.

Polders were a significant feature of the Minnan coast, but they received little official attention compared to the polders of Dongting Lake. I believe that an explanation for this disparity is to be found in the significance of polders to their surrounding regions. Polders in Dongting garnered a considerable amount of official attention because their construction decreased the water holding capacity of the lake, thus increasing the likelihood of flooding that could devastate the surrounding region.[129] On the other hand, Minnan polders were built on the ocean and therefore did not increase the likelihood of inland flooding. Aside from requiring a source of

[129] Ibid., 204.

fresh water for development, Minnan polders seem to have had little impact on their surrounding region, with the result that they received paltry attention from officials, and are poorly documented in surviving historical sources. However, in Minnan when unauthorized polders were built in reservoirs and lakes used for irrigation, local officials were usually quick to order their destruction. Sharing of fresh water was a more contentious issue than the construction of polders, and therefore, officials were more concerned with the circumstances of reservoirs than polders.

Perdue notes that little is known about the internal organization of polders, except that some belonged to lineages and some to individuals or villages. As I mentioned above, the same can be said of Minnan polders. Regardless, in both cases it is evident that the government was not concerned with the identity of those who built and maintained polders, so much as they were with the impact of those polders on surrounding residents. Likewise, in Hunan and Minnan, officials were less concerned with the identity of those who held leadership positions in water management structures such as reservoirs, so long as water management was organized effectively. That is to say, officials in Hunan were not alarmed by the heredity nature that the "dike administrator" position took on in some communities—what they could not tolerate was malfeasance. In the Minnan examples studied above as well as in the Dongting lake region, official efforts at influencing or even controlling water management came in waves. The state clearly lacked the resources to maintain sustained control over water management structures, so that as a matter of necessity, leadership was left to local actors.

Taiwan

The well-documented water management structures of Taiwan provide a second opportunity for comparison with Minnan. After Zheng Chenggong established his base in Taiwan in the late Ming, Han colonists began to construct their first water management structures.[130] During the Zheng regime, however, construction of irrigation works was limited to land reclaimed by the Zheng government. It was not until after the late Kangxi reign period (1662-1722), with Taiwan integrated into the Qing Empire and migrants flooding in from the mainland, that irrigation became more widespread.[131] After a Han settler, typically hailing from Minnan, reclaimed a previously uncultivated piece of land, the next obvious step was to increase the land's yield by providing it with irrigation water. In southern Taiwan village residents built most irrigation structures jointly, as was often the case back in Minnan.[132] However, as Han settlers pushed forwards into northern Taiwan, far from native village and kinship ties, they often found themselves incapable of singlehandedly bearing the financial burden of reservoir and canal construction. In response to this lack of capital, a multitude of strategies for funding the initial construction of irrigation works emerged. In physical terms, Taiwanese irrigation systems consisted of irrigation canals that connected

[130] A limited number of irrigation structures had been constructed by indigenous peoples and Dutch colonists prior to large scale Han colonization.
[131] Wang Shiqing 王世慶, *Qingdai Taiwan shehui jingji* 清代臺灣社會經濟 (Taipei: Lianjing, 1994), 131-34.
[132] Chen Hongtu 陳鴻圖, *Taiwan shuili shi* 臺灣水利史 (Taipei: Wunan tushu chuban gufen youxian gongsi, 2009), 80-81.

agricultural fields to man-made or natural reservoirs, or directly to rivers. As in Minnan, the supply of irrigation water was limited, so that water-sharing agreements amongst users had to be instituted.

Migrants in Taiwan responded to their new social and ecological context with several key innovations in irrigation management. Compared to their Minnan counterparts Taiwanese water management systems were distinct in three ways: first, polders were not a focal point of Taiwanese water management; second, Taiwanese systems tended to be more commercialized than their Minnan counterparts; and third, in Taiwan, lineages were far less significant to the construction and operation of water management structures. [133]

Beginning with the first point, unlike in Minnan, polders were not a significant feature of Taiwanese water management. This was likely because for much of Qing history in Taiwan, there was still forest that could be reclaimed for agricultural purposes, so that the arduous process of polder building and maintenance was unnecessary. I believe that the availability of uncultivated frontier land, or the ability to buy or seize land from indigenous inhabitants, was the factor that accounts for the divergent nature of water management disputes in Minnan and

[133] I have came to the conclusion that these three factors make Taiwanese water management structures different from their Minnan counterparts based on comparison between the Minnan sources used in this thesis and information contained in works on Taiwan by Wang Shiqing, Chen Hongtu, Chen Qinan, and Cai Zhizhan (listed in the bibliography). However, for my purposes here, Wang's work is particularly useful in classifying and providing organizational details for a large number of Taiwanese water management structures, based on contractual records. Thus, in this section I use evidence presented in Wang's work to support my argument regarding the difference between Minnan and Taiwanese water management.

Taiwan. Most Minnan disputes resulted from the seizure of water sources for the purpose of building polders, or from the misuse of shared irrigation water. On the other hand, sources on water management conflict in Taiwan indicate that most conflicts centered on water access via canals (*zhen* 圳), which along with reservoirs were the most important water management structures in Taiwan.[134]

Second, Taiwanese irrigation systems were highly commercialized in that outside investors often financed construction projects, and irrigation rents were not intended solely as a means to repay patrons or fund repairs, but also as sources of profit to be divided amongst investor shareholders. As the history of the Qizai Guan Reservoir demonstrates, Minnan migrants in Taiwan would already have been accustomed to the domination of irrigation structures by single, wealthy lineages, whose legitimacy depended on the equitable sharing of irrigation water amongst others in the area. It was not a huge leap to invite an outside investor or company in place of a powerful lineage. In most cases involving business firms, local residents first attempted to construct a reservoir or canal by themselves, only to find that they lacked the capital necessary to complete construction or to make subsequent repairs or expansions. Business firms were then invited to fund the project as investors. Such firms were typically based in more settled regions of Taiwan, often without ties to the local area under development. These investor-firms served as managers over the new irrigation systems, and were to be repaid with a share of the yield from benefiting fields.[135]

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[134] Wang, *Qingdai Taiwan shehui jingji*, 184-87.
[135] Ibid., 144-46, 170-72.

Another sign of commercialization in Taiwanese irrigation systems was the widespread use of shares as investment mechanisms. Shares allowed multiple parties to invest in the same irrigation project with the promise of receiving profits from subsequent irrigation rents. For example, in the early Daoguang reign period (1821-1850), a resident of Puli Village 埔里社 in central Taiwan stacked stones in a stream to create a reservoir, and dugout a small canal. Later, in the fourteenth year of the Guangxu reign period (1888), an attempt was made to expand the canal. As it was estimated the project would cost close to three thousand silver taels, twenty-eight shares were created, to be sold at over one hundred silver taels apiece. The shares were purchased by a number of business firms, thus funding construction. However, eleven years later torrential rains damaged the reservoir and canal, and the original investor firms were unable to pay for further repairs. They thus sold their shares at a reduced price to a new firm, who funded repairs and gained the right to collect irrigation rents.[136] This sequence of events is reminiscent of the history of the Qizai Guan Reservoir outlined in the first chapter of this thesis, in which local benefactors bought and sold the property on which the reservoir was located in order to fund new rounds of repairs. However, in the case of Puli Village, local benefactors and hereditary reservoir-masters are replaced by outside investors organized as shareholders. The use of shares was particularly suited to Taiwan's migrant society, where diminished kinship ties necessitated new mechanisms for pooling capital.

[136] Ibid., 149.

Third, lineages were far less significant to water management in Taiwan than in Minnan. In records of water management structure building, buying and selling, and related disputes, lineages are rarely mentioned. Water management structures were more commonly built and operated by groups of individuals and villages. There were likely two reasons for this disparity between Minnan and Taiwan. It is widely accepted that the lineage was a less significant form of organization in Taiwan. In rural Taiwan, village and temple organizations were generally more powerful than lineages, and thus played a more prominent role in the management of irrigation systems.[137] Second, while in the sources on Minnan we see that lineages often took advantage of neglected water management structures, in Taiwan, the highly contractual nature of water structure building and management likely left less opportunity for seizure by outside organizations or individuals.

Throughout the Qing reign in Taiwan, government construction of irrigation works was limited, with the vast majority of structures built by commoners. Although there is no evidence that the Qing government ever required government approval for water management structures, it seems that many commoners actively sought government certification, in order to avoid legal troubles later on. Licenses were sought before and after canals were constructed, when water management structures were bought and sold, and when prior licenses were lost and needed

[137] Chen Qinan 陳其南, *Taiwan de chuantong Zhongguo shehui* 台灣的傳統中國社會 (Taipei: Yunchen wenhua, 1987), 127-53; Zheng Zhenman, *Family Lineage Organization and Social Change in Ming and Qing Fujian*, translated by Michael Szonyi, Kenneth Dean and David Wakefield (Honolulu: University of Hawaii Press, 2001), 241-67.

replacing.[138] I believe that the low rate of government intervention in Taiwanese water management is attributable to two factors. First, as in Minnan, the Qing government did not set aside a significant amount of funds for water management, so that even when local officials were interested in promoting canal construction, they were usually limited to making personal contributions and providing encouragement. Second, because Taiwan was less prone to large scale flooding than other areas of the empire, such as the Dongting region, it is likely that the government did not see a need for investment in and oversight of water management structures.

Conclusion

Comparison between water management in Minnan, Hunan and Taiwan indicates that local geography and availability of land were major factors in shaping regional water management systems as well as levels of state intervention in these systems. In frontier regions where land could be seized or reclaimed, such as Taiwan, local residents had no need to engage in polder building to increase their land holdings. On the contrary, in areas that had been under cultivation for centuries, and where bodies of water were in abundance, such as Minnan and the Dongting lake region, polders were the best option for bringing new land into cultivation, and were thus constantly under construction, regardless of official opinion on the matter.

[138] Wang, *Qingdai Taiwan shehui jingji*, 179-84.

The availability of land and local geography also indirectly shaped government intervention in water management. Because extensive polder building in Dongting Lake could lead to large scale flooding in surrounding areas, government officials were more actively involved in regulating polder construction in this region, even though their efforts remained sporadic and of limited effectiveness. Meanwhile, regional flooding as a result of polder building was less likely in Minnan, where it was the polder builders themselves who incurred the greatest risk in constructing ocean polders. There was thus less government intervention in and regulation of polder building in this region.

Comparison between these three regions also demonstrates that from at least the Mid-Ming on, the organization of local water management structures was regionally diverse—this diversity is most clearly demonstrated by the highly commercialized nature of Taiwanese water management systems. Unwilling and unable to commit the resources necessary to micro-manage water management systems across their territories, the Ming and Qing states acquiesced with this diversity so long as leadership of water management structures was carried out in a way beneficial to local residents.

Thus, in terms of state-society relations, water management in late imperial Minnan represented a third model that can be situated between the extremes of Wittfogel's state-centred hydraulic society and Geertz's autonomous Balinese Subak. As with Peter Perdue's Hunan, in Minnan commoners were the primary driving force behind water management structure repair, construction and conflict. This thesis thus adds to the evidence against Wittfogel's hydraulic society hypothesis—

not all water management systems were dependent upon management via a strong centralized state. On the contrary, in Minnan, lineages came to dominate or threaten many water management structures. Some lineages gained control of structures by funding repairs, while others attempted forced occupation. In cases where lineages funded the repair of water management structures, government officials and the local community were willing to consent to lineage dominance.

Nevertheless, it is clear that the state continued to play a significant *judicial* or *regulatory* role in late imperial Minnan water management. Concepts such as "official" and "communal" property were used by officials to protect resources, such as irrigation water, that they believed should be available to all nearby residents. Again, officials were above all pragmatic, in that they were willing to acquiesce with a range of organizational and ownership patterns for water management systems, so long as the basic needs of nearby residents were met. Although non-official actors such as lineages played the most significant role in maintaining and operating water management systems in late imperial Minnan, compared with Geertz's Subaks, Minnan's water management systems featured a higher level of state involvement. Officials periodically stepped in to fund or oversee repairs, to inspect structures, to adjudicate disputes, and even to dictate new leadership structures. The study of water management in Minnan thus adds depth to our understanding of late imperial state-society relations, the regional diversity of society, economy and governance in the Ming and Qing Empires, and the larger debate on the relationship between water management and state-society relations in world history.

Appendix: Primary Sources

晉江碑刻選， p.122

大總戎咸五張公浚塘功德碑

泉州府正堂加一級劉，為浚塘造田澤及萬井，乞賜文勒石以慰民望事。據晉江縣廿七， 廿八等都監生員，士民，約正，保長等僉呈前事，稱:“民以農為本，田以水為天。泉南蓄水之塘有七，沿塘關係尤大，周圍四十餘里，灌溉數十萬畝。自端明先生創其利，梅溪王先生擴其規，後賢續修，即亢旱亦有餘蓄。近泥閼水淺，草塞岸低，幸逢太公祖太老爺仁澤普遍，憫念民瘼水利，諄勸開浚。是以大總戎咸五張公念沿塘為桑梓之地，慨然以為己任，捐資千金，知會十班，閼者去之，淺者深之，低者築之。自今已往，瀦蓄多而水可長盈，田無竭澤之虞，德莫厚焉，利莫溥焉!

复念都陂顧水繁費，就塘中造田拾餘石， 付十班輪管，免鳩粟斂眾，此又前賢所未及舉，利民之大者也。蒙太老爺屢履其地，親行督視提誨，區畫水道。茲已告竣，合恳嘉賜碑文，垂其永久”等情到底，據此為照。余自蒞任以來，無日不以蓄水為念，邇年亢旱頻仍，收成斂薄，而沿塘一帶為泉郡匯水之區，其利甚溥，屢勸開浚，工苦浩繁，未能舉行。幸海壇鎮大總戎張公毅然以為己任，捐千金遴材董理，浚築維新，蓄泄有法。曾不以纖亳累民，又慮都陂勤勞，斂眾滋擾，复就塘中築田付十班管守，籌畫周詳，區置盡善，誼切桑梓，澤溥萬民。 餘愧助無力，樂善有懷，茲已成工，謹志耳事，用垂不朽，俾後之君子睹斯碑而群興鼓舞云爾。

督工太學生: 陳垌，張文祥，張煥山

闔都貢監生員土庶: 莊際明，杜霽芳，林士輔，林晃前，林斌政，莊延猷，林志熙，莊光璧，莊希印，林斌弟，莊得華，林斌提，李慎微，莊綸澤，陳名珍，李鳳瑞，林中楠，林廷勳，蔡日光，莊希元，陳班侯，王維揚，莊延成，莊延庇，林維業，莊延禎，莊元澤，陳進霞，蔡希昆，林仙晉，林天鑑，林祿祖，林天懋，莊咸澤，林開芳，林志翰，莊延植，林夢鯉，林維新，吳夢熊，陳耀開

保長：魯凡，張侯

農戶：張碧，盧酉，王山，鄭偉，魯聰，李茂 仝頓首拜勒石

康熙五十四年十二月谷旦立

晉江碑刻選， p 129

晋江南仝立水利碑记

重修泗洲塘壩碑記

泗洲塘壩，九溪之末流也。勢本直趨東南人于海。前人利其泉源不涸，堪以灌溉田疇，既築壩為塘，復就塘右辟圳引流東注，由南之溪尾鄉達晉之曾西埭，長約六里許， 中設三閘，以時啓閉而資蓄泄。溯自宋明之季，南若晉實先後經營之云。乾隆戊辰秋苦旱，源流細淺，乃于閘之啟閉日期屬為是競，或執晉七南三之說，或執十一月啟，二月閉之說，各執古碑為徵。郡佐縣尹調停不下。余忝膺守土，得不急為之所？ 爰蒞其處， 周遭睇視，據物理而策之曰: “節流治木，何若培源固本？與為棄有用竟歸無用，蓋更益以勉然，盡收其自然之利溥乎!”金曰:“噫! 信如公言。”顧共拓其源源之勢， 遂亟於舊壩謀新，而諏吉十月二十日興工，趨農隙也; 易沙土以灰石，期鞏固也; 淤塞者淘之，虛浮者實之，廣茹納，防傾圮也。壩不必過高，而又圳□礮閘置板，以備溪水盛發，則外可疏泄，內可諸集也。今計所需之數，晉約出六，南祇出一，以晉于時待澤方殷，故樂捐者頗多，亦謂言歸于好，可無錙銖之必較也。至于舊閘存而不去，無增無減。偶值大旱之時，萬一兩地水不敷用，仍照前具遵依二日一輪啓閉。設若壩有崩決，閘有損壞，務必兩地各舉一人督視協修，以戒推諉，以杜變更。從此晉南之民幸篤桑梓，永消鼠雀，同保持而同懈享，利賴于無窮則得矣。事聞于列憲，皆許可，撫軍諭毀其古碑，優思深而慮遠哉！今十二月望，工竣。用綜厥顛末為記，付諸石。

乾隆十四年二月 谷旦

溫陵郡守長白伊靖阿撰

晉江市志， p. 1808

明嘉靖間泉州府申明龜湖塘規文告

泉州府為申明塘規以垂永久事，案照嘉靖三十二年正月十六日抄蒙巡按福建監察御史趙□批，據本府經歷司呈，為乞恩比例編僉陂夫，以固萬民水利事。承準本府照會，據晉江縣二十四都裡老黃偉等僉呈行。據該縣申稱勘行，本都龜湖鄉一萬七百餘家，本洋田土一千七百餘石，上無溪澗源流，惟賴古設龜湖塘一首，周圍築岸二千五百二十三丈，蓄水以資灌溉，下因迤北一帶近海，潮水不時侵入，築岸一條以為堤防，仍設上下水閘共五間，東西深涵共二口，以備旱潦關洩。就本都林，黃，蘇，鄭四姓，輪僉陂首一名掌管。又將本都得利農戶，議舉一十一名，巡視管顧修築堤防，官給印信，文簿，永為遵守。後因塘，海二岸，正當潮浪沖激，隨築隨崩，陂首屈於官，僉自備酒食募眾修築，加以貶納。本塘無徵魚課一十二石，費銀莫計，困苦無奈。陂夫出沒波濤，衝冒風雨，晝夜不休，終歲勤動，多因喪身，相鑑覆轍，死莫敢赴。以致獨累陂首，力不能支，本都裡老黃偉等，目擊斯難，因見本縣二十七都西南斗門，及二十九都六里塘陂夫，俱於該都該年應差均徭人戶編僉應役，要援比照，及揭查本縣額設均役文冊，內西南斗門共僉陂夫八名，六里塘共僉陂夫一十八名，俱於各年該都該差均徭人戶僉點應役。今龜湖塘較之二塘，本無差等，但

六里塘陂夫名數，似乎太多，合無比照；西南斗門事例，編僉八名，備申到府為照。龜湖塘蓄水灌田不下一千餘石，其利於民不少；又迤北一帶海潮不時侵入，其害於民非輕。原議陂夫巡視管顧，修築堤防，實為民興利防害，其任甚重，誠不可一日無也。但其勞役艱苦，人各避難，私相議舉，誰肯樂從？此本塘之所以竟無陂夫，黃偉等之所以陳言懇切，既經該縣查得西南斗門及六里塘有例，陂夫具於均徭人戶編僉，似應比照合無。候呈詳允，日備行。該縣依議將二十四都龜湖塘陂夫，就於本都該年該差均徭人戶編僉八名應役。惟复別有定奪，照會本司備由具呈，照詳施行。 蒙批：據呈陂夫有益水利，即行該縣查該都相應人戶編僉八名應役繳依。蒙已經行縣查照。編僉八名，每名工食銀一兩二錢，遞年編僉應役。去後，續據黃偉等呈稱：本塘自宋淳熙丁未年本府議立塘規，開載印信，文簿，付與管水陂首，遞官至今，數百餘年，時事變更，不同規約，興革自異。所有合行時宜，並先宋塘規，開具書冊具呈，伏乞參酌刊成書冊，給與陂首輪流收掌，逐款奉行，庶幾可垂永久。陂首得有所按，農民亦不敢違犯，水利可以無憂矣。等因到府，看得管水之有塘規，猶治民之有法律。法律不嚴，則百姓不治；塘規不明，則水利不興。據呈申明塘規一節，誠勸農之首務也。除將本府原給印信，文簿，內載先宋及續議塘規，參詳明白，開列條款，立案備照處，今將塘規刊刻書冊，印管水陂首輪流收掌，永為遵守，毋得紊亂違犯，取究不便。所有書冊順至出給者。

先宋塘規[139]

一本塘周圍二千五百二十餘丈，東取西六百九十丈，南取北二百九十丈，見深六尺以上。東至湖尾溪，西至塘西埔，南至塘甲等地，北至龍泉岩及塘岸。

一本塘東頭水閘一間，閘外水圳一條，直抵南台廟西大橋住。若遇旱澇，陂首當嚴陂夫巡視，量雨及田之乾涸，斟酌開塞，不許走洩水利。

一本塘西頭水閘一間，閘外水圳一條，通本洋大浦直抵海潮宮住。凡遇時雨，陂首當嚴陂夫巡視，斟酌開塞。如遇缺雨，於此放水添洋，當以海潮宮前石婁為則，不許過洩水利。

一本塘水則石閘一所三間，舊例大雨淋降，即將東西水閘開放，塘水噹滿，此則為準若遇禾苗發茂成叢，就於此則上再添八寸大板，陂首合嚴陂夫人等斟酌時宜，不許損洩水利，益寡害眾。

139 It is clear that notes were added to the Song regulations during the Ming, as events dated to the Ming era are referenced. It is possible that some of the latter sentences of some entries date to the Ming, though due to the format of the *Jinjiang City Gazetteer*, and perhaps earlier versions as well, this is difficult to confirm. Regardless, the details in these later sentences make little difference to my use of this source.

一本塘西頭深涵一口，涵外水圳一條，直抵廈瀆今後住。其該灌田土，系塘西廈瀆鄉民耕種，每鄉就於農戶內選舉質實之人，充為涵首，隸於陂首所屬。如遇放水灌田，當於陂首處請給木牌，辰開酉塞。不許擅開，致令走洩水利，違者聽陂首呈舉。

一本塘中涵一口，涵外水圳一條，通於大浦。舊例天旱塘水稀少，西閘流水不敷灌田方許開放。陂首暨老人等務要公同斟酌會議，先聽牛瀆溝高處田土及牛埭溝田土車水一日，後與大浦等處農眾車水。不許以強凌弱，水利不均；如有不服，陂首指實呈舉。

一本塘圍岸一條，長二百八十餘丈，水則石閘一所三間，東西水閘二所各一間，深涵二口。每遇春正月，集眾修理完固。如或遇時不測崩損，隨即修完，不在定限。毋得縱放牛，羊，驢，馬等畜踐踏，致令損陷走失水利，實為大害。違者，陂首合行呈舉。

一本塘上岸一條，自東至西二百八十四丈，系本都及十九都農民砌築。洪武癸亥年被水沖崩，人力不敷，妨誤歲計。陂首黃福等呈府差官監築，方得完固。隨與十九都農民議分地界，自中涵起丈量至於西三十三丈，豎石為志。厥後農民務要照依均定地界管禁，不許懶力推誤，走失水利。違者，陂首指名呈舉。

一各涵閘舊例每年立冬盡行填塞，至來春二月中旬方開，非時不許因利盜洩，有虧來歲之用。陂首合嚴陂夫巡視禁約，務在益寡利眾。

一本塘灌注洋田種子七百六十石七鬥，東至隔林圳為界，西至袱田洋新塘溝上為界南至塘岸及塘西下瀆浦為界，北至海潮宮大路為界。如遇缺雨之時，陂首合嚴陂夫巡視界限，不許盜洩水利過界。敢有以本塘所注水盜取過界，定驗水痕下落，指名呈治。

一本塘瀦積潦水灌溉農田，不許於涵圳下張笱捕魚。缺雨之時攔障，水利不得通流，致令下田失水。及雨水稍足，彼則擅開捕魚，損洩水利，塘水稍涸，彼則依眾下塘，施張網罟，捕魚取蝦，踐害塘水，致成泥滓，農田失望。陂首合關陂夫前去約束，如有不服者，指定姓名，當以先下塘者為首，以聞於官懲治。

一本塘若遇天旱缺雨，塘水稀少，涵圳尚流，不許就於塘內車水，有妨下田水利。其十九都塘甲等處農民，並不預本洋田土，隸築塘岸者少。缺雨之時，周圍塘湄田所，止許首段臨水去處車水，餘田並不許侵奪塘下民利。陂首合嚴陂夫巡視，各下灰號為記，違者指實呈舉。

一本塘臨水處，各有高阜地，舊存專一防備暴雨時降，洪水沖激，塘岸崩壞，此於取土修築，諸人不許濫開為田。

一海潮宮斗門水閘三間。舊例潦則洩水下海，旱則關閘。如遇暴雨時降，洪水氾溢，疏放不逮，將本處玉欄舍東沙尾隙岸開掘。水疏通消，當即嚴令陂夫鳩工填築如故。

一塘司春夏祈穀。舊例就眾農戶裒錢，各委幹當人知當，保禳則輪田戶主之

一塘司鼓一面，水閘二間，水則三間，海潮宮水閘三間，各有閘板完全，系幹當人收掌起工日以次交付，或有疏失，就於上次取足。

一塘始系築岸瀦積孤山等處潦水，下蔭龜湖洋田土。舊例係塘下都份有產之家充為陂首，農眾告官僉舉二十四都近於緊要海潮宮斗門鄉吳，黃，林，蔡，蘇，鄭六族內，選舉德行淳樸，識達時務者，輪為陂首。

一海潮宮斗門，系本塘尾間衝要之地，疏塞不時。每年正月農閒之時，陂首鳩工多取泥土，積頓宮旁備用。毋得臨期缺泥，致令走洩水利。

續議塘規

一本塘陂夫八名，每名工食銀一兩三錢，每年正月初一應役，本年十二月終役。滿日陂首合將本府發去滿票板，遞年查照刷印，填寫“役滿”字樣，蓋以私記圖書，給與陂夫收照，以憑調查。

一本塘原議陂夫必欲本都相應人戶者，以其均有農務之寄，及諳本塘地勢水性故也如編到陂夫不諳風浪水性，募人代當，聽從其便。其所募之人，亦須諳熟風浪及知農務水性者，方聽；違者陂首指名呈治。

一塘，海二岸，相去數里，波濤衝激不時，陂夫巡視往來，不無瞻前失後。凡遇應役之時，陂首即與分撥四名看守塘岸，四名看守海岸，各依撥定處所，常川巡視管顧。責任既專，不許互相推調，致妨水利。違者，陂首指名呈治。

一陂夫應役，陂首合將本府給去木牌八面，每名各給一面，看守塘岸者給“塘”字，海岸者給“海”字。朝給暮納，俱聽陂首查點，如有不到者，指名呈治。

一本塘西涵涵首，舊規就於廈瀆，塘西二鄉農戶舉充。如遇放水灌田，當於陂首請給木牌，辰開酉塞，蓋欲約束，使無過洩水利之患。必選舉得人，法始不滯。今後陂首先將本涵涵首就於二鄉輪舉誠實農戶一名，呈官拘令給帖應役，三年一替，照依舊規就於陂首處請給木牌放水灌田，非時及無牌不許擅自開放。再違，陂首即時呈究。

一本塘周圍塘湄臨水去處，田土系十九都塘甲，湖邊，前坑，及二十四都塘后，塘邊等鄉農民耕種。舊規缺雨之時，塘水稀少，止許首段臨水去處車水，餘田並不許侵奪。此蓋因其不預本洋田土，不築塘岸，故立禁限然也。自為民父母者，視之均

為赤子，且其田濱於塘湄，取水尤為近易，欲嚴以禁之亦難。但利欲共享，功宜共成，苟欲使他人用力築岸，而自己坐享其利，此又理之所必無者。今後周圍塘湄，得利諸鄉農戶，每鄉僉舉農甲一名，通將本鄉農戶姓名開報，一聽陂首約束，應工築岸。如有不聽陂首約束及頑鯁不應工者，聽陂首指名呈治。

一本塘周圍處所，弘治七年十九都民林嗣六等填塞為田，陂首黃甫湜院司告行，本府委典史楊仙搬掘改正，仍復填塞。嘉靖辛丑年陂首林原憲，黃懷雅，蘇以洪，鄭邦瑞等，縣告已經署本府推官葉□親詣，及委晉江縣縣丞羅汝燦踏勘丈量議處明白，且經歲久業成，似難更議搬掘，姑準照舊田耕，不許私相典賣。每年種一斗，照依原議止追銀五分，以充修理斗門及補納魚課等用。遞年陂首務要置簿一扇，將該年收過田銀若干，何項支用若干，逐一登記。若用有餘則存留以為下年之用；不足則會議處補。三年滿日，通計明白，遞付接管之人。

一官塘填塞為田，法當改正，今俯順下情，聽其照舊耕納稅銀，固為藉處以補水利之需。但姦貪乘此復行填接者，難保其無。陂首合嚴陂夫周圍巡視，若有復加填接者，即時會眾搬掘，抗者呈治，不許姑息致久成業。 (有將田間水道填塞者，亦如之。)

一田土昇科納糧，固有益於公家，但本塘填田乃萬夫水利之所，若科以益國稅，誠推官葉□所謂秉把之遺，寡婦之利耳。且藉以為口實而益延廣之，田日以多，而塘日以隘矣，未增數畝之稅，先遺萬夫之害，其幾不可長也。今後止照原議不許昇科。(若有買賣及受產者提問，田價入官)。

一上下塘海水，閘門，斗門，多有奸徒乘人莫知，盜洩水利，以濟己私。陂首合將本府發去看水木牌貳面，每面每夜輪撥農戶各一名給與看守，一夜一替，如巡視有不到者，量罰示儆。

一近海一帶海岸，一以關攔內水利，一以防禦外海潮，使此岸不顧，海水淹入，則塘與田皆成斥鹵矣。凡十九都塘西，廈瀆，二十四都龜湖，塘邊，塘后，二十五都浦邊等鄉農民，利害惟均，甘苦當共者也。查得宋淳熙癸卯年，海岸被潮衝崩，鹹水入侵田禾，甚為農患。有鰲峰保吳秀才，鋪錦裡黃里正，桃林保林細，孫福安，蔡時望，蘇景福，鄭欽叟共捐己財，買石砌築。近以年久崩圮，又有奸人將石盜去己用，前患復見。今後陂首務要督同十九等都，塘西等鄉農民，協力修築，仍令陂夫嚴加防範。

一龜湖洋諸家及周圍塘湄諸鄉得利農戶，陂首置立文簿一扇，填寫農戶姓名。凡遇農隙及應修築堤岸之日，陂首揭示，陂夫預先一日鳴鼓，次日應工，朝作夕退，陂首照簿點名，如有不到者呈官懲治。

一農戶應工，務要精壯，不許婦女，老弱虛應故事。陂首給酒勞之一，塘海二岸春來生長草木，賴以遮蔽風浪，岸得不崩。陂首合嚴禁約，不許諸人盜鏟及縱放牛羊等畜踐食殃害。違者，輕則量罰，重則呈官懲治。

一本處商船舊例在玉攔浦大橋外灣泊。近年客商船戶徑將船隻放入橋內海潮宮，及玉攔浦舍東沙尾隙等處，發卸物貨，海岸因之崩壞，延累農戶修築，誠為民患。今後商船，止許照舊灣泊大橋外，違者陂首即時呈究。

一塘海二岸小有崩壞，照常鳩工修築；如二岸一時崩壞，務要就緊要處多撥人夫，不許去勞就逸。倘大崩壞，人力不支，陂首即時設法處置，買備杉木攔築。

一本塘原額魚課，除見存漁戶辦納外，其絕戶無徵課米一十七石，正德戊寅年陂首黃建猷告豁，尚有未盡，歷□□□陂首皮納據呈。往年附塘諸人，私置魚網混與漁戶下塘捕魚，致妨水利，誠屬可惡。今後陂首合將本府發去木牌，俾漁戶請給下塘捕魚。陂夫不時巡視，如有在塘捕魚而無木牌者，即拿送官懲治。查系私置罾網，仍照舊收科。

一本塘漁戶，魚具，各載本縣河泊所課冊，明白其所執魚具，受課有多寡之分別。該漁戶務照原報課冊魚具下塘捕魚。敢有原系笱籠戶卻執罾網，罾網卻執鐵腳網之具以亂成規者，聽陂首即時拿送，究治施行。

晉江縣志， 水利志 (清道光) ， p. 149

龜湖塘

在二十四都，長一千八百餘丈，闊八十二丈，深一丈。東至塘后村，西至石獅亭，南至塘岬村，北至大洋。灌田三千八百餘畝。宋郡守蔡襄定塘規，明嘉靖間郡守童漢臣增立塘規，林，黃，蘇，鄭四姓，管修堤岸。萬曆壬子，林學梧修堤閘以捍怒潮，至國朝壬子，林孕隆重修之。晉令李元琳刻塘規，俾掌陂者世守。〔明王慎中龜湖頌德碑記〕：邑東南鄉之田，皆仰水於湖。其浸鉅而灌溥者，龜湖為最。環湖而廬且萬家，支村析聚，櫛比衽聯，總其鄉之名曰龜湖，蓋以湖名其鄉也。寶蓋，金鞍，玉屏諸山之水，灑為四溪，流入於湖。瀕湖仰水之田，度萬餘畝，民蒙其利而不能知其始所由作。惟蓄洩之節，淤決之禁，臚列科條，謂之塘規者，知其始於宋蔡忠惠公襄守泉時所留也。號湖以塘，蓋笆俗方言雲。湖水之利於田若是博，故有堤以捍海，堰以陘潦，坊以瀦止，庸以宣流，而嚙淫潰洟之害，必有資於人力，歲治月修，然後無水害。庸之啟閉，有惰以妨時，有姦以病眾，而豪右之侵爭，狂狡之盜詭，皆所以為湖之患。其具不得不出於政刑，所謂規者，實於是取之。由宋至今，殆五百年，守陂之夫雖具，而官弗予直，故守者常怠而廢事。屬南衡童公來守郡，以事行治屬，問民利病，而龜湖首及焉。民方欲言，公顧就而問之，即符下晉江無留牘。又盡民之所言繙牘，得所為增議塘規二十九條，行之其鄉。公善以寬

碩接其民，使樂於有為，不待撻罰而相誡以率禁。其勤也，無斗酒尺帛之勞而自勸，湖以無患。比歲洊登，田入羨倍，粟溢他鄉。人皆以侯之福我也，相與伐石勒公之德，且期以申勅是規之詳於不廢也。觀古治民之吏，以循良見稱，其善非一，而水利之興修為最。鄴之白渠，蜀之離堆，楚之芍陂，越之鑑湖，尤其著者也。作者非不欲為無窮之利，而修復之功，每有待於後人。蓋民庶乖分，世序遷易則弊萌，蠹穴伏於其間。如芍陂作於孫叔敖，至何武，鄧艾，劉頌，魏欣，趙軌，歷數世皆以有功於陂，為民所記。而馬臻，孟凱尤有記於越，以鑑之功也。觀其所為，如伐木通榛以納眾流，增闢水門益廣灌溉，計功受分，使大小戮力，與夫禁民壅湖為田，立水約以裁貪爭，皆於續規吻合。蓋古今異便，而水利興修之宜不越此也。斯規之有裨於湖，而不足恃以不廢，法固有待乎人者。故予特為記之，非徒副民之請以述童侯之德，將以遺後之為政看於無窮雲。國朝乾隆壬辰秋，霖雨岸崩百餘丈，鋪錦鄉鄉賓黃汝燾暨侄時芳修築，費白銀八百餘兩，鄉人欲伐碑紀德，燾力辭之。

六里陂此條須與下六陡門，三陡門，湮浦埭以及西坂湄，上福湄等參看。是陂在郡城南關外，自二十七都至三十五都永靖，和風，永福，永祿，沙塘，聚仁六里，內積山之源流，外隔海之潮汐，納清瀉鹵，環數十里無田不資灌溉，設有陂夫，陂首。明陳衢，李俊育葺陂有功，至今陂首皆三李，陳，蘇五姓為之。詳見諸陡門。〔明陳琛寓金陵論六里陂水利與王石岡侍御書〕晉江縣二十九都，有灌田溝水，名曰六里陂，其實不止六里，迂迴曲折有四十餘里也。陂在本縣，為水利之最大者。其餘陂塘，不能當其百分之一。水旱荒歉，民之飢飽，官之徵科攸系。舊設陂首一名，擇本都有恆產，恆心兼有才幹，人所推服者為之。一任三年，不免差役。陂夫四十二名，多是下戶寡丁，一役三年，甚為勞苦，例於該年均徭內編排。其他小陂塘，不得比例。緣此陂，閘有大小十餘所，其閘之大者有三：曰六陡門，有閘六間，水漲則開，放流於海；曰上福湄，有閘一間；曰西坂湄，有閘二間，水漲則開，放流入於下溝。下溝屬本縣二十七都裡班，會於西坂湄。閘之上約曰：上溝水深，直有一丈則放下一尺，水深五尺則放下五寸，大率十分與一，永為定規。蓋下溝短淺，容受不多，而灌溉亦無幾也。近年下溝有一二豪民，遇天旱則率眾執兇，夜到閘上，用斧破開板鑰，將閘板盡底取起，船載去家，上溝將涸猶不肯還。及下溝容受不得，則放下於海，甚可惜也。夫自為民父母者言之，則彼此皆赤子，安有上溝多水而不分以與下溝？但欲適均耳。天作旱，意不豫密關而混漏洩，惟恃上溝有水以為無恐。至上下俱竭，乃謀力爭，此何理也？又瀕海咸潤埭田，其岸亦不預先修整，為海水擊崩。及岸既補，則大開埭閘，多取溝水洗咸而放下於海。且埭田多是豪家之產，以故二家管水陂首，皆不敢禁止。又上溝六陡門閘於弘治年間曾被洪潦沖倒，府縣委官起集丁夫千餘人，費銀千餘兩，修補五六年，不得完密，農夫困甚。今觀西坂湄閘兩邊土石亦已傾墜，若不先加修補，一旦壞倒，其害可勝言哉！此皆為陂首者之責也。近年陂首以陂夫不齊，又被奸惡告誣，以故都民多不肯為，而願為者又不可人意，將如之何？蓋陂首三年一換，亦甚辛苦。不有所利，其誰肯為？倘為此者能而且勤，或旱或水，開閉不失其時，則其於農也，尚亦有利哉。既能利人，亦當使之自利。其於船隻木頭小稅，及收成時丐取禾把，亦是土俗舊例。官府可定為之限，陂首不得多取，挾怨不得妄告。至於陡門崩壞，海埭漏洩，兩溝爭

水，或至殺人，則責有攸歸，而陂首亦不得辭其責矣。若陂夫人數亦當照舊編排，免其差役，始肯向前受勞。其保立陂首，須得通都裡老當官保結，不得徇私。大凡有職事者，須得才乾之人辦之，若徒謹厚與富豪不可也。有才肯幹事，不問貧富皆可。因執事者周詢民瘼，下及芻蕘，故敢據事直敘，不能以文。又使節催忙，不能盡所欲道，尚容告歸面陳為惠。〔又與張堯軒大尹書〕仁，生理也，庭草交翠，陽之動也。此濂溪先生作圖之本也。故萬物得所，謂之春。一夫失所，謂不足以盡仁。伊尹，周公之相天下，龔，黃，卓，魯之治郡縣，貽芳傳美於汗青而不使之朽者，非有他道也。完養其方寸間之生生者耳。執事治吾晉江三載，始則人畏，中則人敬，今其兼畏敬而且甚愛者，蓋向也以義濟仁，得子產水弱火烈之喻。今則陽春和煦，抽萬木萌芽於嚴霜凍雪之餘也。然堂府深嚴，雲樹掩映，外邊之寒亦有不盡知者矣，敢恃愛一達：敝郡有六里陂，上承九十九溪之水，下涸數万餘畝之田，耀金沉壁則萬姓嘯歌，赤地滔天則一方憔悴，其所繫蓋不小也。舊時官設陂夫計有四十餘名，夜則行巡溪潦江潮，晝則補砌長湄巨岸，衝冒風雪，出沒波濤，其勞亦云甚矣。故小民中稍有智力能趨避者，多方逃走，不就此役；其受此役者，皆丁力貧寡昏懦無告之人也。蓋其為役甚勞而又有三年之久。夫以至愚極困之民，當最勞甚久之役，已為可哀；而該圖裡老之犴猾者，又欲要其酒食之盛，然後為之呈禀免役，不爾則雖有明文下帖，亦無由上達於父母之庭，盡棄前功，复編新役。欲告訴則口澁舌頑，見吏胥則魂驚膽落，徒爾呼號天地，默說艱難，無可奈何。典其風日不蔽之茅，甚不得已鬻其乳哺將成之子，此皆目見，實亦動情。匪有希圖為之解釋，伏維興哀於無用之地，垂德於不報之所，不曰編排已定，務使枯槁復回，則豈惟召伯之棠，百年春茂，行將見燕山之桂，五折秋香。〔陳讓等奏通水利呈〕福建等處承宣布政使司泉州府晉江縣二十九都軍民等籍陳讓等謹奏，為懇乞天恩，俯從民便，疏通水利以備旱傷，拯救生靈事。臣等住居閩越，在京師萬里之外。本府襟山帶海，西南千山之水，東奔海而不及，逗而為溝，匯而為浦，袤延五十餘里，灌田數万餘頃。臣等環居水匯，計四十三鄉，約丁口五十餘萬，皆以農為生，以水為命。近因地道變盈流謙，溝浦日漸平漲，附近勢家惟圖自利，因高為田，以致水積不深，灌注不廣，雨集則傾卮之勢莫遏，雨霽則焦釜之形遂成。重以旱嘆為災，農民重困飢餒，餓莩枕藉。溝壑利害迫切，控訴無門。告諸府縣則為豪家所阻，不得疏浚。雖經上司屢行禁革，而天高地遠，前弊益滋。臣等雖居海外，蚩蠢無知，皆知皇上是至神極聖天子，專以撫卹小民為心，不忍棄一赤子於非命。故敢匍匐萬里，赴恕闕下。伏乞憫念元元，勅下都察院行該巡按衙門，著該府州縣督令臣等附近得利小民自行設法。合力疏浚，瀦水灌田，以供國稅而養父母妻孥。其一二高漲不堪浚導去處，亦與臣等四十三鄉小民分畫耕種，以補前功。或以補納本都無挨糧米，永為定規。其餘侵占，盡數量出，一體施行。則臣等數万餘命，世世全活，皆陛下之賜。臣等無任螻蟻望生之願。〔知高州府陳賸贈李素軒諱珏世掌水利有功序〕天下之大本係於農，農之大本係於水利。蓋自稷之播種必資禹之治水，然後蒸民乃粒，萬世永賴。水利所繫之大，有自來矣。晉邑之南，舊設水利，陂曰六里，內積山之源流，外隔海之潮汐，大溝小澮，支分派別，環數十里之內，無田不資灌溉，晉人生養之源，蓋半於斯焉。然自昔以來，其患有二：淹則洪水氾濫，而六里數千丈之地狹隘，洩或後時，遂崩潰無餘；旱則源流有限，而上溝數千頃之田仰給，守或不謹，遂盜洩一空。於是乎溝澮皆涸而飢者弗食矣，於是乎工役歲興而勞者弗息

矣！於是乎不均不和而爭奪者弗可得而御矣！惟我鳳池素軒李公，憫民苦窮，世任其事，以除斯患，實天生德以祐一方者乎！蓋是陂一崩於正統壬戌，乃祖淵泉公諱瓘為眾推舉，首董其事，起一邑之力，勞心焦思，經年始成其功。再崩於弘治辛酉，狼狽尤甚！公乃上接祖武，捐己貲為一邑之倡，相地宜為遠久之圖，歷星霜，冒風雨，變舊基而改築之。是陂視昔為益固，崩潰之患於是平息焉。繼是之後，眾又舉公董之，乃命季子宗綸復任其責。時尚苦於盜洩也，公乃曲為區處，令當適南之橋，重築一壩？七分堤壅以為六里之利，三分中流以為下溝之資，上下兼濟，內外適均，且舟楫亦不至於阻隔，人皆便之，盜洩之患於是乎息焉。於戲！公之任責，以淵泉為之祖，以宗綸為之子，前作後述，一家之仁也。公之成功，於崩潰則既固，於盜洩則既防，安居粒食，萬民之利也。積一家之仁，以為萬民之利，盡萬民之利而賴公之一人，所就豈其微哉？吾知德厚流光，功深報遠，公之乃子乃孫，奎聚黌宮，振拔淬勵，將必不日拔茅而進。推充發洩，舉天下之生民而安養之，公之仁不止乎一家，公之利不止乎一邑，公之食報以福以壽，當悠遠而無窮也。余少與公遊，涵泳於公之仁也深矣。茲因士大夫大參李公諱汝嘉，乃弟汝升等，相與祝公之壽而嘉公水利之仁，故樂道而表章之，以俟他日觀風之採，且以期待公之子孫者。

三陡門　此主入者，在潤石。古有渠，廢自宋朝，塞二百餘載。萬曆初，觀察楊公際會，以六里陂所灌田居邑之半而源不遠，始尋故渠疏之。〔蘇濬為記〕周禮司徒氏建步立畝，通原陵藪澤之利，別封畛，疏畎澮，雖亢不菑，其備豫也。後世若史起之於鄴，鄭國之於秦，白公之於趙，類皆注填閼於高邱，化舄鹵為沃壤。故民歌曰：“趙國在前，白渠起後。舉臿為雲，決渠為雨。且溉且糞，長我禾黍。”亦庶幾乎古之遺烈哉！吾郡故有新橋溪。合南安，安溪，永春之水而東注之海，其流甚鉅而所溉田無幾。由新橋而東南為六里陂，所溉田居邑之半而水源不甚遠。蓋嘗有欲決金雞上流以分南鄉餘溉者，至塹山谷，壞廬墓，利未及興，病者相踵，遂竟報罷。今年祝融為政，鄉多涸澤，觀察楊公日憂雲漢，詢民瘼，而浚適以計吏過家，謀之老，更求興水利以効芻蕘萬一。有謂溜石故渠可通活水者，即往眡之。彼此相距僅數百武，無陵谷相限，無壞人廬，無移人塚。有陡門圮，弗治，可新之。故跡宛然，疏之易易耳。遂聞之觀察公，公忻然納焉。即日檄郡邑委官董役。而郡刺史汪公，佐守姚公，陸公，劉公，各樂成其事。都民聞之，權呼恐後，執畚持耨，不戒雲集，甫十日而告竣功。公同黃懋新憲副及浚觀焉，但見流水下注，清可鑑發，沮洳之澤，俱為巨浸矣。是日也，裡正，農夫環而歌者億計。公賜之酒食，齎以花幣，人人爭加額，謂公來何暮也。浚聞溜石之渠，廢自前朝，郡乘不載，故老靡詳，湮塞二百載，即銳意水利者，不求故道之易而為鑿山塹谷之艱，豈天閟之耶？今不費一公帑，不煩一公旬，萬年之利，一旦頓興，無亦公之精神竅於山川，故數百年未聞之利，直俟公而成之乎？浚方與公婆娑樹下，忽報新水方漲，又長四尺強。因取酌而歌曰：風習習兮水泱泱，水泱泱兮生稻粱。江流萬里指扶桑，與公坐兮水中央。借江流兮泛霞觴，閒鷗洛鷺晚相將。遡餘波兮流且長，何以贈之蘭為裳。懋新君和曰：溜石之水清且旨，一瀉汪洋幾千里。百年湮沒人不知，疏渠自我楊侯始。楊侯一語萬民趨，神為役兮鬼為驅。變瘠土兮為膏腴，公來視兮樂於於！歌竟，因識之，以補郡乘之缺者。後陳衢築陡門一坎，李焻，莊際昌增築二坎。〔李叔元敘陳衢功德碑雲〕晉江六里陂水利，紫峯先生論之詳矣。大約謂此陂上承九十九溪

水，下潤數十萬畝田，必擇有恆產恆心才且勤者掌之。水旱蓄洩以時，既能利農亦當使之自利。如舟木小稅及秋成取禾把之類，官為畫一。掌陂者不得多取，兩挾怨者不得妄訐。此先生留心民瘼忠恕之言也。今去先生未百載，人心不古，掌陂之役，自好者不為，而為之者往往先利而後義。惟孔伸陳君不可及，君諱衢，紫峯先生孫也。其掌六里陂，自萬曆已卯至壬午始，壬寅，癸卯又掌焉，戊申至今癸丑又掌焉，皆強而後出，固辭而不獲。其掌陂也，豫水旱而為之備。雨則竟夕不寐，策杖觀水勢，督陂夫啟放，瞬息不少緩。故久雨，驟雨而無浸湧之患。霽則急閉之。旱則晝夜巡行，無敢漏洩者。故汲灌足供三時，鄰壤亦分餘瀝焉。若茲可謂才且勤矣。至於木石船貨，有過閘之稅。或畝取其禾，或家徵其穀，或設罟以收魚蝦，曩所視為固然者，一切禁革。或曰：為宰而辭粟，贖人不受金，得無過乎？君曰：吾以無愧于心耳。憲之粟其名曰與，賜之金其名曰受。今斂則非與也，稅則非受也。曾見夫閉閘而稅者，稅入而後閘開，則鄰於要也。遺秉滯穗，其與幾何？強者爭而弱者誶，則鄰於攫也。吾不敢為要且攫，非以為廉也。若茲則利農而不自利矣。陂夫稍食，分給如期，值官未及頒，則取諸懷而與之。陂岸崩，自捐三十餘金砌築，不煩裡旅。陡梁缺，亦如之，至鬻田以充焉。或曰：費哉惠也。君曰：吾以盡吾心焉耳。捐數畝之田而貽鄰里鄉黨數十萬里之秋，孰與夫胥而槁也？曾見夫醵金而齟齬難合者，曾見夫鳩工而嗷嗷莫應者，吾不能為其難，寧為其易耳。若茲則損己以利農，紫峯先生猶難之矣。薈紫峯有萬物一體之懷，未得大佈於天下，而拳拳桑梓利病，凡三致意焉。今君克紹厥志，四子皆有聲庠序，將大紫峯之澤未艾也。鄉髦倪德君甚相與，伐石垂不朽而徵餘言。餘惟今之豎碑於途者相望也，亦有如此石之無愧辭者乎？遂忻忻載筆焉。〔丁之典序李，莊二公功德錄雲〕溜石廟前陡門，建自萬曆癸丑，涵江陳象西諱衢，督學紫峰公裔孫捐資新築一坎，浚導溪流，少卿李公鹿巢諱叔元為之立石郡南道左。鄉人念其德澤，建祠塑像祀之，而溪流猶未廣也。逮天啟二年，會狀莊公羹若諱際昌捐田，兵科李公唐谷諱焻為春元時，構石伐木，鳩眾經營，拓增陡門為三坎，數月告成，其利有倍於昔，其功堪垂不朽雲。國朝康熙三年，八年，兩遭洪水沖決，焻子廷碩捐工修築。〔張潛夫記〕自創建三陡門以來，澤及百鄉，凡享其利者，謳頌不衰。邇因甲辰洪水，陡門左右臂崩潰，己酉復大決，任陂者委卸其責，父老相顧，不知所出。幸諫議唐谷李先生長公諱廷碩者，念先績傾頹，自取祖山栢木二百株，复捐工，捐銀為倡，諸鄉協力樂助。時六月興役，霖雨洊至，眾議讙成功之難，獨李長公識堅志銳，謂天祐下民，必無雨患。履危歷險，曝暑日中以董其役。果爾夏雨無波，海潮縮退，兩月之間，竟成厥功。既成之日，斷橋再完，水流复滿，渡濟之利，既已宏遠，灌注之貽，殆將千里。昔人有云，農忭於野，商歌於市，況如斯役者又當如何耶？夫諫議公之拓造，在南宮未魁之日，厥後名位勳業爛然，天之報施善人不爽也如斯。茲者克紹前業，無愧群望，其受祐寧有涯哉？是歲秋冬大旱三月，四野俱無粒收，惟百鄉受此灌注者全獲西成之利，即下溝十三鄉，錢嶼三四鄉，俱得分澤沾惠，歡頌遍野，其可恍惚呂公陂耶？蘇公堤耶？後之視今，亦猶今之視昔焉。餘忝在懿親，稔知其略，欣從眾情，為文以銘其事於石，將以存厥跡於不忘云爾。三十七年，郡守李大章，晉令李元霖，里人李為觀，各捐金重修。其淮渠內有三山，澇至瀠匯，提督藍理設為湮浦埭田，以淹上鄉。諸涵漏洩，網漁難於節制，始築湮浦陡門。官定五日一放，辰開酉壅。溜石廟邊有藍提督生祠。六十年，令黃錫策捐買，通詳為水利功德祠，以祀陳琛，蘇濬，陳衢，李焻，

莊際昌，以棲陂夫。复詳定陂夫工食。雍正四年，陡門兩岸崩壞，知縣葉祖烈重加修築。其後祠館沒為塘汛，娼之裔孫李保，復於乾隆二十五年就祠地新築陂館二間，以為陂夫棲宿之所。〔李協仁梓五姓公修陡門壩埠碑記錄〕晉江六里陂水務，歷代為本都三李，陳，蘇五姓輪掌，其先世各有功德於民，或載郡乘，或勒碑石，或詳之縉紳先生序文，班班可考也。後人繼序，雖極艱難，不敢推卸。康熙三十七年間，三陡門傾圮，族紳李諱為觀時掌其事，捐白鏹五十兩為士民倡，請之中丞宮公，郡守李公大章，邑令李公元霖，委員督造，計費百五十金，悉出大府李公所捐。抵今堅固，皆賴其力焉。其船隻水頭小稅，原是舊例。船戶朱姓，負嵎溜石，吝其小稅，輒與陂首構釁；府主王公，以頑杖之。又有侵占陂地蓋屋者，邑主黃公錫策達之製憲覺公，著令毀拆，時康熙六十年，六十一年事也。黃公留心水務，詳定看陂工食數目。復將溜石廟側藍祠，捐俸官買，為建陂功德祠。黃公之厚澤，足為奕世頂戴而屍祝矣。六陡門西岸，雍正四年，洪水沖陷，深十餘丈，闊八九丈，萬民哀號，竭澤須臾難緩。五姓紳士，乃相與籲請縣主葉公祖烈，公借帑金百兩，協力修築，後如數繳還，悉自五姓樂輸。是歲民歌大有，咸頌葉公之義舉不衰。凡此皆餘親與其事，故特表而彰之。其各姓碑記序文，年久遺落，十居七八，存者又字跡模糊。雁山興運李君，文學士也，搜錄存稿；餘懼久复磨滅，取而梓之，以垂不朽，俾有心水利者，便於觀覽焉。國朝嘉慶二年，陡門及岸被水沖壞，功德祠及神像亦剝落。蘇厝鄉鄉賓蘇宗英倡修，親督三年，始竣功焉。守徐汝瀾褒之。二十九都五姓紳衿士庶陳利害，總序六里陂陡門，上接溪流，下通海潮，郡志載溉田千八百頃，計三分縣田之一，前輩鄉先生言之詳矣。第此水所以利者，賴湮浦一埭，地面廣闊，容納得多。而下溝丁，林豪姓暨海尾涵埭，各聽約束，啟閉以時，故雄極亢旱而上下兼濟，內外適均，猶支持十數月不匱。今本埭多被豪家佔墾，藍宦提閩，复割三分之一填砌成田，而地道流謙，溝浦日就高平，此間溝水易盈易涸，弊率由此。其最害者孤坑，橋上宮畔原有一涵在溝岸半間，向因海上煽起，都人星散，海尾庵上豪猾乘時藉勢，將涵移置溝底。湮浦有水，涓滴難留。都人因其不道，目曰棺木涵，憤恨極矣！下流一帶埭田，皆勢豪砌管，涵甲借洗咸為名，日夜開閘，網取魚蝦，不可禁詰。間被捉獲，勢頭極大，將奈之何？秋高風起，每遇中秋，重陽，屆期必有翻流之水？從三陡門入，直達涵江洋，至池店洋，潘湖洋。緣宮畔此涵最邇，三陡門開放無禁，所入潮水已耗消三分之二矣，其溉上流有幾？對涵有一陡門，乃藍提新築以捍湮浦田者，近亦為庵上鄉黃姓所掌，寸板不設，與海尾涵甲通同作姦。必將此陡門付掌六里坡水務者看守，並此涵依舊在中間開浚，依時啟閉，庶免漏洩之患也。夫畏難不任，怯也。前人有令德而不克繼述，弗類也。但每逢瓜期，五姓率視為畏途，莫肯向前，何歟？舊制陂夫四十二名，皆官給稍食，晝夜更代，巡捉不休。其船隻水頭例有小稅，及收成時丐取禾把，一以酬陂首之勞，一以備修葺陡門埭岸，買置閘板等費。紫峯先生所謂既能利人，亦當使之自利是也。今稍食之製既廢，陂夫裁減，三陡門附在溜石鄉，朱姓多丁強夥，出入船隻，十居八九，遇開閘，輒擁眾而造，或從夜間偷渡。雖經總督覺公按縣詳請酌定管陂工食數目，終視若弁髦，莫肯遵行。稍拂其意，則將閘板丟放溪流。橫頑如此，又將奈之何哉？噫嘻，掌是陂者，責任極大，辛苦極重，非惟無利，抑且自損，宜乎自好者不為，而為之者祇遷延卒歲以塞責也。所望地方列憲，府公祖，縣父母，軫念民瘼，檄召本都有恆產恆心，才且勤者，使董其事。凡系水利有事，有叩則應，共鋤莠秕。或有

采風之使，訪悉此方要害，民間疾苦，繪入入陳，勅諸司興利剔弊，庶幾沿陂而居者億萬民命，其有瘳乎。

南靖石刻集， p.16

大明南靖縣尹郭侯興水利碑記

習賢里北山，古溪一道，灌溉田土，浚足民安。后被洪水衝崩，田土失殘，人民困苦。幸蒙賜進士，本縣父母郭侯，東游海陽，蒞任以來，撫恤民疾，相率陳情，帖委鄉老周君鵬，義官黃良□，徐元煥，督同社首林□明，徐□淵，黃良淵，周志沖，黃大卿，徐元侃，黃汝煥等，募眾就于土名林陂砌築石陂一所，取水灌田。工成完備，萬民受惠，刻石以垂后世。

上釜水尾田十七石，一日卯起二日午止。新寨湖樸水尾田二十六石，至二日未起三，四日止。院前田四二十六石，五日辰起六，七日止。棉內，林高山田四十七石，八日辰起九，十六日寅止。六小月在內分過日時，為之違約呈洽。

時嘉靖二十二年歲次癸卯春吉旦立。

廈門碑志匯編， p. 417

同安縣禁諭

同安縣為欺國事，蒙/分巡興泉道朱批。據本縣石潯澳漁民王應狀告，蒙批：仰糧館查報。隨蒙／本府通判陸抄詞發縣，拘提蘇君恒， 柯一會， 李次廉等到官。 審得同安之海有二米。 潮至為水， 潮退為地， 產蟶蛤者， 塘米也。 塘之水深處，魚蝦出沒， 網□□ ／魚，不分塘蕩，聽民下網者，課米也。 若夫汪洋大海，非惟民不得而禁之，即官亦不得而取之矣。今東堶洋大海一處， 賣與李次廉， 次廉又轉於柯進， 凡漁□□，/漁民不安，故有是告。細查蘇君恒所費契書云： 海坐東散洋等處，並無都圖界址， 止說翔風里。 夫同安之翔風廣矣， 內有九都十七圖，孰為□□乎？ 查黃冊□/翔風者， 遽欲柯， 李授受， 不知憑何推收乎？冊不載米，明系官海， 聽民自取而無禁者也。 而君恒作奸捏無稽古契，以誰人財在李與□□不知□□／已管百餘年矣。 漁民昔何以相安而今何紛紛也？ 合斷君恒備原價還柯進其海， 任漁民照舊取漁， 宜置石碑禁示， 永不許土豪請稅，上□□□□□□□□□。 /本府帶管督糧同知楊轉詳， /帶管興泉道右參政俞。 蒙批： 蘇君恒以官海賣價，奸民之尤也。 退出與公， 其之立石為記，餘如照依。 蒙備行本縣遵照， 一而立牌禁示等□□□□。／

同安負山帶海， 山居者耕， 襪居者漁， 各任其職以供貢賦。 昔謂四民之中農最勤苦， 不佞獨謂四民之外， 漁苦尤甚。 一葦孤航， 出入□□□□□□□□□/命謀，視耕食者出而作，入而息，何如? 且也□糧兩稅之外， 農無別徵， 漁今則上下交徵矣。 蓋曩者漁尸有課無餉，惟□旁及船□通□□□□□□□□□/與因并征餉至

六百餘金有奇， 視通省縣獨多， 漁民始於兩稅外， 輸課重輸餉矣。 農之徵二， 漁之徵四， 若巳□堪而有券無□， 界冊無 址， 坐□□□□□□□/父母洪大夫於李甫之告抑之不得， 特示禁之不得， 漁民愬於/觀察朱公，行之府縣， 縣大夫王公考志冊， 詳利病讞爰於上， 大人見而韙之， 可其議， 勒之石。彼欲以二人 □一縣之利， 禁□塘， 上□□課， □補□□□□□/等遵示立石。 以不佞水居， 獨知漁民之苦， 請次其事而志之。 不佞誼不敢辭。 /縣大夫王公諱世德，號迴溪，金華永康人。 年方壯， 聯登辛丑進上。 初仕同安，視民如子，而此其一端，□□□□□□□□□□ 。/

萬曆豐拾貳年甲辰孟眷之吉，浦四海叟林一材記。通懊漁尸□□□。

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同安縣從順里勘斷睦命塘讞語碑記

築養命， 故名曰睦命塘。 弘治十三年， 奉給司照勒碑。 雍正/十三年， 被富豪葉照， 許禹， 張仰， 張太， 石良，張祉， 張倩， 許生等占墾， 旱則蓄水日少， 潦則沌崩堤岸， 灌概不敷。 乾隆元 年， 三/都生監陳□， 陳逢泰， 陳雲行， 陳應瑞， 陳良瑛， 陳起鳳，陳起蛟， 陳必超， 陳必濟` 陳犬振，陳廷弼， 陳方旋，林師開，王雲章， 鄉老陳/繩武， 王旁，曾丙良， 林九俊， 林好， 葉生，鄭良等呈控， 蒙/青天廉明太老爺唐親勘， 兩次定界， 將葉照等占墾掘毀築岸， 立讞通報在案， 勒石遵守。 /

特授泉州府同安縣正堂， 加四級唐， 看得西界睦命一塘， 為 從順三都十一鄉公共蓄水灌田之所' 現有前明弘治十三年奉給司 照， 勤碑/永守， 雖終變革之後' 奸徒乘機竊占， 私相售買， 究 不能禁止。 鄉民之此水灌溉' 則其為通鄉水利〉 彰彰明矣。 祇因系各鄉公共之物， 堤岸無人經營， 年久坍塌， 復有豪強於堤岸淤灘之處圍築成田， 私為己利， 遂使塘中蓄水日少， 灌溉不敷， 深可痛恨。 是此/一塘，詭同邑有利當興， 有害當除之急務也。

乾隆元年二月， 據陳繩武等以葉照， 張仰諸人違禁占墾呈縣， 本縣以水利為民命攸/關，親行兩次踏勘插牌定界。 除燒灰橋上久年占墾， 并無關大害者外， 准照舊耕作， 其葉照等新占開墾之地， 立押掘毀取土填築/若岸。 不忍偏庇， 數尸十一番經管□理鬮拈， 預定每年於農隙之時， 鄉老二三人董率各鄉壯丁， 開淤築岸， 修理涵口， 務使堤岸堅/固， 塘中深廣， 水可多蓄，兼以杜絕棍徒占墾等弊，庶乎爭端不起， 永保無虞， 長享其利， 有符於昔人睦命名塘之美意。 是則有/在該鄉老等之秉公竭力辦理盡善， 而非本縣所能與也。 合該鄉衿士，耆老應共悉心斟酌如何輸值? 如何整理？創設規條， 呈縣存/案， 俾期永遠遵守奉行， □輸番會首不能及時修□，十一鄉鄉老仝議罰， 或有不遵， 鳴/官究處立案。 約正: 陳章，葉爾耀， 耆老: 林羨， 王窗， 陳榮， 陳大信， 曾 □□， 林藝， 洪佑。

計開各鄉工項: 西洲二十九工; 西湖塘三十七工； 雲頭三十工; 小壇十四工， 石埕十工； 林爐， 浦頭共七工; 山頭七工； 顏 厝上五工: 卓厝上/二工; 圳邊七工。 /每月二輪□引用。 /

乾隆元年八月 日上石。

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仁明太老爺唐勘斷馬塘讞語

同安縣長興里□保安爐鄉眾開公築水塘一□， 名曰馬塘，貯水分灌田苗， 課命攸關， 勒石禁決。 由來/緣此塘在大族嶺葉門首。 被其滅碑毀岸。 康熙三十七年。 安爐鄉一甲， 二甲眾民修築塘圳， 輸番分灌公/ □。 詎惡葉蕩， 葉宏， 葉蒲， 葉通， 葉郡， 棄祥， 葉閣， 葉錫， 葉啟，葉讓， 葉球等恃強侵占， 將塘埔占墾為私田，□□/占築為私池。 據此塘面縮狹， 水利日少' 灌溉不敷， 課命維艱， 歷任縣主控之不睬。 乾隆元年， 通鄉顏士彩， □/暘， 顏若坤， 葉待觀， 葉淡心， 顏孝煥， 顏扶卿， 顏國助， 江姜， 鄭省， 黃鄰， 劉乞， 鐘浩， 蔡伍， 陳明等呈控' 蒙/責天廉明太老爺唐 八月初二日示禁， 着葉蕩， 葉宏等將原塘逐一清還。 蕩等恃強藐斷不理。 九月廿九□/親臨踏勘， 水塘現占。 目睹心傷。 葉宏， 葉蕩，葉通， 葉黨控斷， 遂即鎖押' 帶縣訊究。 諭安爐鄉眾民將葉□□/塘窟之池掘毀以通水源； 所墾塘埔之田掘毀以廣蓄水。 將所掘之十填築塘岸。 蕩等橫強， 黨眾阻止□□／斷。 二年三月初二日 ， 爺臺□親臨再勘， 清還原塘界址， 斷得水塘涵圳原系安爐鄉灌注之所， 與葉□ /無干， 即差皂頭莊，快頭李' 立喚安爐鄉民將塘被葉姓強占塘埔作田拾叁丘， 塘窟作池伍□， 壹盡□□/塘岸廣額， 嗣後不許葉姓等再恃強， 占水取魚， 致害課命□ 其水塘聽憑 (安) 爐鄉聚民承管， 蓄水灌田， □□□/□立石以垂永久。 士彩鄉老等公同原差遵斷， 丈得周圍弓丈肆百叁拾弓， 塘中長貳百拾肆弓， □□□/□□葉蕩門□， 闊叁拾弓， 西涵至小厝， 闊伍拾肆弓， 塘尾闊拾乙弓。 葉宏假契抗□， 蒙枷肆十□□□□/罰灌概三十工，報□在案。 其塘東涵大圳壹條， 小圳柒條， 西涵大圳貳條， 小圳伍條， 照舊輸番 □□□□/許鄉老督率壯丁開淤築岸， 修理塘圳涵田， 務使堤岸 堅固， 塘中深廣。 蓄水日多，長享其利， □□□□□/墾等弊， 輪番會首， □鄉老公仝呈官究治立案/

乾隆貳年貳月 日立石。

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後溪許莊奉憲立碑

奉憲

本薏康沐， 康詩等造契謀蠢弊占盧鑾， 盧士等世管山地樹木， 乾隆五年至十/五年歷控未伸， 越十六年八月內， 赴/前任福建巡撫部院藩制憲嗚冤， 奉發/福建分巡興泉永道憲白查詢， 隨奉吊案提犯， 於十七年八月初三日堂審： 山地樹木奉/斷對半分管; 縣丞張達掌嘴， 當堂立讞。 查康， 盧兩姓所繳山契均屬年遠無征，但兩家各繳葉姓原契為據， 則此山為康， 盧/公共之物業。盧契已抹銷，康契亦抹銷， 着原差協同該地保， 鄉老及兩造族長到山周圍/丈明所存樹木， 逐一查明勻配，近盧墳者歸盧， 近康墳者歸康。 山地照現在葬墳處所不拘/斜直，只要及近均勻， 各半分管，插立界石， 書明丈尺， 造具清冊二本， 各畫押報繳蓋印， 以杜/日後箏端； 縣丞張達另候發落。 /憲差黃名登， 地保劉秉義， 鄉老劉日淑，兩造族長盧月淑， 康潔淑等遵憲同到盧，康公山周圍/踏明均分； 以牛心石， 官寨，客仔嶺至狗湖尾， 中崙垂下羊棡崙脊分水， 琢晝界石， 南面一帶有康墳/亦有盧墳， 其山地樹亦分為康管。 豬母運，釋迦棚，紗帽山內有康墳亦有盧墳，山地亦分為康管。 /又以狗湖尾， 中崙垂下羊棡崙脊分水起，至 觀音崙及龍溪山一帶，系盧墳，盧姓住屋， 山地樹木/分為盧菅。 所有樸船崙等處山地有盧墳， 亦有培植松木， 亦分盧管。 登明冊內造具二本繳報/道憲親裁。 現奉印發二比承領管業績， 奉搬行/ 縣主太老爺明□，為賂蠹情確等事， 奉/前任撫部院藩面發: 該縣保民盧鑾等告康沐等爭山一案到道， 業行該縣檢送原卷， 前來 /當堂鞫訊， 查驗盧，康兩姓所繳山契俱屬明季葉姓出賣，年遠無徵， 其中界址亦難遽定。 後/因該山栽插木楨長大， 彼此互爭， 歷控不休， 則此山從前當為盧，康公共之物業， 廬契已經抹銷， 康/契亦抹銷， 附卷隨着原卷， 協同地保長， 鄉老并兩造族長到山周圍丈明所存樹木， 逐一查□勻/配， 近廬墳者歸盧， 近康墳者歸康， 山地樹木照現在葬墳處所， 不拘斜直，只要及近均勻，各半分/管， 插立界石， 書明丈尺，造具清冊二本， 各□花押報， 繳蓋印， 以杜日後爭端。 去後續保長劉秉羲， /鄉老劉日淑， 族長盧月淑， 康潔淑等到山分界， 造冊， 繳查并報盧， 康兩姓各具遵 依。 前案效此， /餘將遵依。存卷造繳山冊印發二比各執為據外， 所有吊查縣卷并盧抹銷契單合能發回。 /為此牌仰該縣官吏照依事理， 即將發來原卷計一十六宗并盧抹銷契單推批輿二抵， 遵/ 查收存案， 以杜兩姓日後爭端。 縣丞張達控改卷字， 所即重責二十板發落， 報查本案。 /

乾隆拾玖年叁月 日着語， 白昌書

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督撫提臬道府列憲批縣審詳讞案

督撫提臬道府例憲批縣審詳獻案 (篆書碑額)

海澄縣三都長嶼社柯氏始祖祐立公世掌社前， 社後課泊， 界自大埭迄逞， 南抵陳宮嶼， 西烏斯港， 過嵩嶼， 烏礁， 白嶼， 斯坑洲， 象嶼等處， 前朝被豪強侵占，至九世孫挺， 萬曆發解， 控巡海道陶批分府沈斷還舊掌。 迨乾隆十二年， 復被石塘社巨旗謝創， 謝興， 謝享， 謝奇萬等恃強侵占斯坑洲， 象嶼兩處。 裔孫貢生

薰等出控， 蒙廉明本縣主太老爺汪批送糧廳張審勘確情， 出示飭禁。乾隆十三年五月二十三日， 謝創等黨眾謝排， 謝榮， 謝顒， 謝天， 謝順， 謝頗裕， 謝突等抄山掠海， 經排頭汛防驗. 報水師提督軍門張飭查實， 被通咨總督部院喀， 巡撫部院潘行司轉飭府， 縣究審， 律擬通詳，將謝創等各克分刑枷責， 追賠贓銀， 斷定海泊歸柯姓照舊掌管。今奉憲抄案勒碑。

漳州府海澄縣正堂， 加三級汪為具報事。 乾隆十三年七月十七日蒙本府正堂，加一級， 紀錄十六次金信牌， 蒙按察使司憲牌， 奉宮保， 總督閩浙部院喀憲牌，案準水師提督軍門張咨開， 據本標前營游擊吳稟報，據長嶼社民柯榮進喊稟: 被巨族謝姓占圍世掌課泊，抗違縣禁。本年五月廿三日，黨眾抄山掠海，擊碎房屋等情，具報到提督軍門。據此相應咨達，請煩察照，希賜徹嚴究，以儆刁風等因，到本部院。准此，為查: 黨罕黨眾肆橫，屢經示禁，謝享等膽敢糾夥執械，碎屋割苗， 甚屬不法，行司查究， 分別首， 從， 按擬詳報， 不得姑寬等因， 奉此。又奉巡撫都察院潘憲牌， 咨同前因，為查: 大族糾眾行凶，有干例禁，謝創等身/為約保族正，乃敢主令率眾擊碎房屋，洗割谷種，地瓜，蚶苗，不法已極。行司飛飭嚴查，將在場有名各要犯查拘到案，先行重責四十板. 逐一究課，按例分別議擬通詳， 毋縱玩等因， 奉此備票行府，仰縣立即按名嚴拘謝創，謝彩，謝月，謝享，謝奇萬，謝順， 謝排， 謝榮， 謝林， 謝聳， 謝相， 謝顒， 謝科， 謝預， 謝莒， 謝總，謝天， 謝佑等， 并究出餘黨到案， 先行重責四十板，錄供通詳等因，蒙此。

乾隆十四年二月廿二日， 蒙縣主汪親勘審看: 柯姓所居長， 嶼社三面環海，自西南轉東周圍海泊， 俱屬/長民課業， 前明萬曆年間勒碑確據。 原納米八斗，至康熙年間又增納米八斗四升。 謝姓住居東坑社， 其海泊系伊社前， 與柯姓悔泊中隔象嶼一山不相連接， 緣謝/姓於雍正五年買柯姓東埭岸內之田， 遂於埭外圍埕采捕。 貢生柯薰呈請示禁， 業據謝享等投具遵依退還。 上年五 月廿三日謝姓以海泊蚶蟶系其下種，前往洗/蚶，柯姓出阻。 輒稱有港東， 港西之分，并乘柯姓抄繳碑文內有 “東至東埭安岸為界” 字樣， 指其改換碑墓抵制。 今訊， 據柯薰供稱: “實因碑刻年遠， 字跡模糊， 以致錯填， 並/非有心改換。” 查驗碑文界址，原開 “西至烏斯港為界， 東則吾長民有也”， 則東埭岸盡屬柯業甚明。 況埭內之田， 現系柯姓出賣， 是謝姓只有東埭岸內之課田并無東/ 埭岸外之課田，不得以柯姓錯填碑摹，口指其為影射也。至謝創等黨眾毀苗碎屋之處， 訊據謝姓各犯照不承認。查柯姓當日挑有地瓜藤繳驗，縣丞到地查勘， 有/碎屋 口跡。口口口口口柯姓瓦屋， 現有新瓦收整處所， 則柯姓所控豈圖無因? 除將謝創， 謝排， 謝榮，謝顒，謝天， 不行阻止之練保邱志誠已經分別責懲外…

<u>廈門碑志匯編， p. 434</u>

同安美埔溝涵告示碑

溝涵告示

調署泉州府同安縣正堂，議敘加二級，隨帶加二級，紀錄五，次裕， 為/曉諭爭。照得栽種課田全賴水圳灌溉， 第圳有一人築之圳， 有眾築公用之圳，於應照約車用， /不容私截。 茲據生員，葉萃英， 葉藍玉， 葉凌寒，葉垂綸，葉元甲，戴士彥， 葉源連等呈稱: 小溪口大壩/原系生等祖父首倡， 築堤疏通水圳， 灌溉西洋鄉族人，汪厝邊戴姓， 員江林姓， 洪下洪姓，本社張/厝等鄉課田，為首承管， 歷年修理， 遠近周知。 禍綠溝涵在西洋鄉門首，上下田畝， 悉系族人戴， 林/等姓耕業。 生等課田在雙圳下流， 每逢亢旱，屢被恃強占踞水頭， 夜決日截， 每致曝苗枯槁，現附/旱乾之慘。 英與分較不已。 瀝情僉懇為國為民，恩准示禁強戴水源， 肥己磽人，立碑杜禍等情。 批/此，查該生等田業既在雙圳下流， 灌溉田畝，自應就壩車水以應急用。 除批示外， 合行出示嚴禁。 /為此示仰該鄉民人等知悉: 爾等自示之後， 凡有附近田畝需用圳水者，務當一律聽其灌慨， 毋/得稍有阻截。如敢抗違， 仍復占據霸截， 利己損人者， /定行指名拏究， 決不寬貸， 勿違，特示!

道光貳拾壹年玖月十六日，給。

厦門碑志匯編， p. 440

同安美埔行壩告示碑

行灞告示

即補分府直隸州， 攝理泉州府同安縣正堂， 加十級， 紀錄十次胡， 為/出示諭禁事。 本年三月二十三日， 據廩生葉萃英， 生員葉凌寒， 葉炳文， 葉賡颼， 葉輝文， 葉以南， 武生/葉念茲， 葉俊哲， 鄉老葉福， 葉密等僉呈， 竊英等具控廟山吳紂等侵壩斷源， 截流利己一案， 當蒙派/丁仝差查勘理處， 昊紂即托公親舉人吳士敬， 生員吳登龍， 葉彥青， 武生葉廷才等出為調處。願將 /所侵公壩，水道清還; 臼基所造水磨去水， 仍歸公壩; 新築之壩聽其拆毀; 貪食之涵， 抵用升涵。 兩皆/悅服， 各具依結， 呈 繳在案。 惟是壩雖灌乎數鄉， 地實轄夫一隅，誠恐日久玩生， 仍蹈前轍， 呈請示禁/等情。據此， 查此案前據廩生葉萃英等呈稱: 有公共水壩一條， 由大溪山入小溪口， 自雍正年間伊／祖葉浩觀出銀修築，各鄉老舉為壩長， 立約遇旱分車灌溉， 不訐違約混 爭。 後有吳才等築堤截流，/私造水磨， 并祓西洋鄉強截肥己， 均經控蒙委員勘辦示禁。 現在復被吳紂等截流轉磨， 并就壩頂/ 新築一壩， 灌溉私田， 又將公壩， 水道占開田地等情， 并據鄉老 李啟等僉呈到縣， 即經飭處丁□到/地查勘， 邀集理明取具， 兩 造依結， 呈送附卷完案。 茲據續呈前情， 除批示外， 合行出示諭禁。為此示/仰該處附近居民人等知悉: 爾等當知栽種， 課田均賴壩水灌慨， 何得私截來源， 損人利己? 嗣示

之後/， 務照舉人吳士敬等所處， 永遠遵瓣。 如敢仍蹈前轍， 定行指名擎究， 決不寬貸。 毋違， 特示!

同治拾壹年四月初二日， 給。

漳浦歷代碑刻， p. 79

北江海灘禁示碑

漳州府漳浦縣為違禁私占網利害民事，康熙貳拾玖年柒月貳拾貳日蒙。

本府□稟，步政使司憲牌奉，總督閩浙部院興，批司呈詳，詔邑海泥官濠，聽民采捕魚蝦易米資生，此自然公共之利，豈容劣紳巨族占為己業，勒民納稅，貽害編氓，相應允從府縣所謂公之黎庶，禁其霸占，勒石遵守，以垂永遠可也等緣由，奉批，豪強霸占海泥不容黎庶采捕，深為民害，如詳通飭沿海州縣一體勒石永禁取具各尊依及碑模送查。仍候撫院批示繳，奉此，本日又奉總督閩浙部院署理福建巡撫事務興，批同前由，奉批，每泥公利豈容私為己業，如詳飭行沿海，各屬通行，勒石永禁，以除積弊，仍候，督部院批行繳，奉此，批司行府仰縣官吏照依，兩院批行事理，速將沿海涂□聽民采捕，不許豪強霸占，仍通飭各地方一體遵照，該縣刻即立石，永禁備具尊依及碑送府轉報等，因蒙此本縣遵即備具遵依及碑模申報外，合就撥模勒石永禁， 如違許賓民稟究，須至碑者。

康熙貳拾玖年捌月 日給洋山保北江甲竪立

漳浦歷代碑刻， p. 82

汪邑候申明水例碑

大坑溪水出自梁麓，沙崗，西莊，西山與院前四處田地俱資波潤，斟酌七日七夜輪番，古有成例也。募緣萬曆四十四年鄭姓霸截水例，春元許仕求率鄉民匍呈 縣府道，可以致拘提究處，仍照古例七日七夜輪番，首院前貳日壹夜，次西山貳夜壹日，又次沙崗埭田種多，叁日叁夜， 西莊壹日夜，周而復始，祭示鈐印付照，時鄭甫，鄭以才，鄭日顯，鄭漠等依古年結立合國，押號為據，自是霸截之害遂息。詎 康熙五十五年鄭姓復霸截水例，我社內相率匍呈，蒙本縣主批着鄉保查覆，鄉保憑公確覆，並吊前朝告示，合同驗明，復給示申明古例，永遠遵循，眾等感戴，立德政名旗以揚大德。越五十八年三月內鄭姓又誑稟，蒙批鄭保等，久經定案，不必混稟，案疊昭彰，似難施巧，詎八月間重賂鰐棍八人，佞捏保長林錫，陳統薦創公議，均平讒語，欲幾古例，賜給新示，竊思昔日酌定日期番次，盡善盡美，若妄增減，則沙崗，西莊，西山田居水末，泥涂鹽答，一遇小旱，禾苗立枯，國課民命何賴，我社內探知，復相率匍呈，蒙廉明本縣主老爺

汪當堂立斷，重責鄉鰐外，批仰后立押鄉長李結速將鄭卯，鄭忠等告示即繳銷，如敢稽延不繳，該設即拘鄭卯等前來究追，時鄭抗不肯繳，再援奸黨入呈，蒙批鄭卯等並非公議，混行請示，現在吊銷，不必多瀆，鄭姓懼罪，隨即繳銷。依照古例七日七夜輪番，霸截之謀終無所施，然猶有慮者，后來人心叵測，告示蠹壞，欲變例如若輩者不為不少，又相寧，□明立石，蒙批準立石遵守可也，批示煌煌，古例俞定，遂斂財延工勒之貞珉，以垂不朽，俾頑梗者不得萌霸截之謀，而斥鹵均沾灌溉之利矣，是為志。

計開申明古例日期番次周而復始

首陂院前貳日壹夜，次西山貳夜壹日，又次沙崗埭田種多叁日叁夜，又次西山莊壹日夜。三社與呈

太學生林紹伯 居民林□ 徐暢 林張 陳好 林姐 蔡轉 林德 林吉士 林佐 林培 林夢鯨 蒲喜 林青選 蔡眾 林子千 林紹儀 盧文□ 林陳 林臺 林泥 林美 莊理 林重 陳應 林訓 鄭普 林元 林錫瑚

康熙五十九年荔月谷旦，沙崗西莊西山三社仝立

<u>漳浦歷代碑刻， p. 95</u>

立契人林肖壁，林顏正，連溪，於嘉靖四十五年用銀二百余兩紛築石陂三首，坐址莊前晉塘灌溉僧民田種五百余石小，直至虞壠內外□止，鳩率眾佃結立合同，迎年供納水租一百四十石小。 向后蓮溪切見水陂年久理無常新，托中將石陂三首水租一百四十石小， 帶外堂荒埔一所，下至香爐埭灣， 又帶內港灣一條，上至高山石橋下止，蓮帶隄岸一百余文，另小厝二間，細園二丘，廁二口，實出時價絲銀二百兩正，掌管外，近因水陂屢被山海二水沖損，工力活煩， 弟恐重砌不就，歸怨一人托，中招得李昆仁等到宅講議，兩願照工平價銀二百二備足承買，其契內登帶等處二賣終作寸石寸土，悉付不黃許仁等，乘時備工本，將原陂□重新砌築，旱潦有備，則糧餉有賴， 其外埔□□通年取□濟修隄岸障御秋潮不許別□取用，亦不許大小船只灣泊沖櫝堤岸，內港灣一條過又不測，便□水災，不許諸人乘強築□□塞為田，禍延丘方，立照。

萬歷玖年玖月十六日給

林肖壁，李昆仁大銀二百二十兩正　又入銀八十兩正附照。

仝立合同人莊前社，浚頭社，塘南社，龜山社，沙里社，高林社，新城社，晉塘社社眾李光榕，連啓祥， 李尚言， 曾珠， 戴長春， 洪必修， 蘇願，盧誠垣等，所耕田地，壩資梁山溪水灌溉，昔年業經憑官勘□□山下設立栖栽官陂，陂邊浚杏□二尺伍寸八分，陂嘴留缺廣一丈四尺，深俱照陂中鼎蓋石為準，蓋石以下之水許蓄陂內，以資上用，蓋石以上之水任其流下，以資下用，榕等八社灌溉俱各有資，但

水路順流而下，任聽歸海，則亢旱莫備，且當秋潮之會潮水時侵也，宜障御束，有連老王相公情願獨出工木，砌築石陂蓄淡□潮，榕等僧民田種各受其澤，旱潦有備，願每斗種出粟四管過半，其計粟一百四十石小，以為酬受之資，僧子及孫不得有違，誠恐日后法廢皆涵不納，合情鳩率結立合同一紙，送與陂立收執為詔。

隆慶元年叁月　日同立合同人李光榕，李尚言，洪必修，連啓祥，戴長春，盧誠垣，曾珠，蘇願。

仝立字人浚頭社連千石，鄭登高，莊前社李御賓，李百珩，李春讀，李啓鼎，塘南社李芳贊，李其結；高山社黃元益，黃子澤；沙里社戴論光，□臺；晉塘社盧豪光，盧德泗，連可暢； 新城社蘇厝，蘇芳琪，劉委郎等，為請戲盟神立字付照，以杜后爭事，石等終社所耕田地悉□梁山溪水灌溉，溪中設立陵門石陂以閘溪水，每斗田每冬撿粟四管以酬陂主，水旱防閘之勞。自順治十八年廢墜，至今日久，閘板無杚，今幸展界， 所有田地皆資陂首水，玆陂主李城光情願出本修治閘板堤岸，眾等自應照舊輸納水租，至于上流山下設有萋栈官陂所函廣二尺五寸八分，圳水從大平山鄉流出，灌溉赤嶺琦圳之田，及訓底埋碢田墩三日夜之例，官陂口闊一丈四尺，通水順流至考溪分作雙溪，三七分流，三分去灌溉爐埭，后埭，埭仔社之田為界其七分之水仍從大溪順流至三間陡門，以灌溉高山，塘南，浚頭，莊前，高林，沙里，晉塘，新城等社田地，業經憑官勘定，相安無事，但后日不肖之徒不照禁約，社眾出頭共攻，鳴官究治， 不得推委，旱潦有備，國課有領，立字付陂主永執存照。

康熙九年八月 日仝立字人連千石 李其結 劉委郎 戴論光 蘇芳琪 盧豪光 李春讀 連可暢 鄭登高 黃子澤 黃元益 李芳贊 洪合 盧議光 李御賓 李百珩 蘇次 盧德泗 李啓鼎書約字人李百珩

漳浦縣正堂异候升加五級紀錄五次記功十五次何 為既蒙勘斷押拆，乞全恩示禁，以勒貞氓以息訟端事，乾隆貳拾捌年肆月初拾日據監生蔡長灡，陳時敏，鄉紳李大登，禁戶李若，千戶秉忠，李兌，農民盧先，李國，李元，盧逸，壇總李顯，居民柯順，洪瑞，李背，張喜等具呈前事，詞稱，灡等南山，隆濟兩保課田皆賴梁山發源灌溉，先人就山下虞隆□設立萋栈官陂陂東圳，碢廣二尺六寸，以灌赤嶺洋崎洲之田，陂嘴中央留缺闊一丈四尺，以灌南山，隆濟等田深洋，俱見陂中鼎敢石為準，敢石下之水，許蓄陂內以資山田，敢石上之水任其流下，以濟下用，前朝印契合約，據乾隆陸年，附近五宗黃姓強申一方，□將灰墓下媽廟地上溪流逆作沙壇漁利，經李士，蔡縉等控，蒙薛 朱 二主出示押拆嚴禁，並準勒石，緣年抄，未勒貞氓，乾隆柒年春，黃姓給控復移上流官陂毀滅，要我疊砌灰石橫截流水，將以餓弊一方民命，致李士，蔡縉等以抗金批實古制再控　前主朱，蒙批親勘，惡俱罪，星夜拆去灰石，仍用草栈填築，遂以仍舊修葺訴勘黃逆當場鎖押，黃又就官陂中央押拆陂嘴闊一丈六尺，深八尺，以通下流，嘲示又據相安已久，豈盧強逆，甚上年捌月內黃獅，黃覺，黃森，黃由，黃勸結伙陸拾余棍，復將官陂逆用涂石高砌絕流，

所有水利盡從陂東圳硱灌低田地外賣□田墩，后過壇廈盧洋強家收利致富，滷等鳩呈 署主邵 批勘未勘 天臺榮任，滷等呈批便途勘理覺等俱罪，拾壹月拾叁以巧變塞案事瞞批，仰捕衙覆奉並發，滷等以得如詭語事匍呈，蒙批仰捕衙並勘覆

朱前任勘案並發各等因，捕主虞叁月拾叁日親諸高山保虞隆社勘明官陂備得前情稟詳，查問原案，官陂系木棧萋草填築，供圖確鑿，乾隆陸年黃姓所作灰墓不沙壇已蒙 前憲朱 押拆，毋庸議外，今勘官陂所砌鵝旦石塊，復用草坯填補，對面均是新蓋情形，兼陂口一直並無留出，前斷陂嘴滴瀝不踈，李蔡雜性之田絕水灌溉，將為石田斷令，應請飭押黃姓將橫砌官陂石塊拆去，仍用木栈萋草以填陂嘴深闊遵照 前憲朱 斷案立明□限以通下流□，灌李蔡雜性之田等因，奉批，既據勘明陂中開流歷有成規，黃獅等邊議砌截殊屬不合，如稟押金卷去立界通流，念系取陰起見，免其徵處，仍取尊依送查此鄉卷圖存合約發領隨蒙將□覆發回捕聽押拆，隨經□□虞出草嚴押，黃獅等橫砌官陂石塊拆去，仍用木栈茅草沙填，飭取黃獅等嗣后不敢壇用涂石高砌截流，永尊□栈，陂嘴深闊遵照 前憲朱斷案定例，尊依在案，蒙此，是憲恩己極優渥，而滷等南山，隆濟兩保民人皆受更□□慶矣，但黃姓保五宗合一，滷等則小姓難支付，彼又負嵎肆惡，滷等則遠處不敵，若不陳明請禁，難免貽害將九，謹□□率匍呈叩，乞恩準給示，俾勒貞氓，以息訟端，以淳風化，則功與梁峰鼎峙，澤偕溪交流，一筆施恩，千秋載德等情到縣，據此，案查先據其告業經批仰捕衙查勘詳覆，黃獅等抗違前斷，橫砌官陂截流確情前來，當批既據勘明陂嘴開流，歷有成規，黃獅等違議砌截，殊屬不合，如稟押全拆去立界通流，念系取陰起見，免其征處，仍取尊依送查此□□圖存合約，發領在案，玆據監生蔡長滷等具呈前來，合行出示嚴禁，為此示仰附陂黃姓人等知悉，嗣后永尊斷案，拆去石塊，官陂處所仍用木栈萋草沙填，陂嘴深闊悉照 朱前任斷案定例留缺流通下疏。勻灌李蔡雜性之田，不許久后生端，擅用涂石高砌截流，病田叛斷以及賣水漁利等項，如再抗違，除嚴押拆卸外，定行究處，特示尊。

乾隆貳拾捌年肆月　　日給

<u>漳浦歷代碑刻， p. 100</u>

東埭埭稅碑

東埭一所，上拒溪而下鄰海，堤防之設可不慎哉，爾年以來，洪水橫流，始壞于癸卯之秋，既而丙午再壞戊申之壞，戊申之壞，先遭溪濫，后患海淹，兩築不成，群束手于莫可如何，然前之人既已經締造于先，后之人自當竭力圖維于繼，況下長橫岸又四方人往來要道，爰鳩眾議，權借工用定田園則二八抽分，以償息母，定埭稅則，四載公收，以供填補，聞者喜樂，故自十一月興工以至五月告竣，共費銅錢肆佰伍拾余千文，此雖一時權計，實為救急良規，爰勒之石，用志不忘且，俾公平好義者因時制宜，補所未備，則未雨綢繆之道存焉矣。並列規約于左：一 田園抽分

息母償外不許抽分兮。一埭稅公收四載外，仍然輪流掌執，惟前人所定稅例存之以供公用，不許異議。一填補之期準古人冬役之法，冬至后次第興工，不許延遲。一埭稅糧粿完清則當相視緩急興工，不許異議。 一埭內田園為上，漁水次之，水之蓄泄須照水辦，不許偏執。一埭內每年收埭稅若干，費用若干，歲終當開列粘壁示眾，勿使退有后言。

時 道光已西年陽月 日公議立石

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