

“Fire and Society in Modern China: Fire Disasters and Natural Landscapes in East Asian Environmental History” (1820-1965)

Jack Patrick Hayes

Abstract: Land clearance and agriculture have long been associated with fire. Open fire, whether from natural or human ignition, has changed the face of many natural landscapes, especially in frontier regions. Much of modern China’s landscape has been shaped by fire, yet fire has usually been treated as a conflagration or disaster (*huozai*) in official literature. However, fire in Chinese agriculture also played a positive role in the development of regional economies. This essay will review the different meanings of fire disasters in recent Chinese environmental history by analyzing a few illustrative examples of late Imperial to Mao-era agricultural development, warfare, and legal institutions. By examining these elements of Chinese fire regimes, this paper considers problems and management practices in Chinese environmental history, especially ethnic, regional, and temporal trends in legal and administrative forms of fire control. These examples enable us to examine aspects of Chinese military, agricultural, social, and political history that lend themselves to cross cultural and environmental comparison.

Keywords Chinese history; fire, environment; warfare; agriculture; law

USING FIRE TO TEACH ENVIRONMENTAL HISTORY

Fire is an amazing natural and unnatural force—it has existed on Earth for hundreds of millions of years and it is one of the most anthropocentric forces that humans can employ in the natural environment and on one another. All that a fire requires is fuel, oxygen, and an ignition source. However, the ecology of fire in the natural world is only one facet of the ecology of fire in environmental history. Humans can and have manufactured fire almost at will for millennia, and exerted a tremendous power over the natural environment (especially forests and grasslands) ever since. In particular, humans have used fire to clear land permanently and maintain it for farming and herding, as well as for heating and cooking. With industrialization, anthropocentric fire in the form of fossil biomass (coal, oil, etc.), and not just surface biomass like trees and grasses, fueled the machinery that runs our world. These kinds of fires, from agriculture to industry, are “good fires” that help define our world and act as catalysts of economic and human development. However, there are also “bad fires,” disasters, conflagrations, and accidents — both devastating and horrifying when they serve other purposes. A history of these good and bad fires, which includes an environmental history of both the positive and negative aspects of conflagrations, can serve several teaching purposes.

This study of fire in recent Chinese history examines the ramifications of rural and urban conflagrations from approximately the mid nineteenth to mid twentieth century. It outlines how fire in China can reveal patterns of natural, social, and political causes, tied to the both the destructive effects of rebellion, warfare, and human carelessness, as well as the

Jack Patrick Hayes is an Assistant Professor of History in the Department of History & Political Science at Norwich University.

constructive processes of land clearance for agriculture, politics, and legal innovation that have prompted conservation or preventative efforts to protect from fires. Through three broad themes of fire and war, fire and agriculture, and fire and politics (of which there will be a more extensive discussion in roughly chronological order), this essay begins to plot a countrywide map of environments, conditions, and the historical issues of conflagrations. Taken together, these three themes begin to define a kind of “Chinese fire regime,” or system of patterns of fire engendered by local environmental and social conditions specific to China, especially the political and administrative meanings of various kinds of conflagrations.

What the environmental history of fire demonstrates best in the Chinese context is that there are a wide variety of attitudes and interpretations of fire and disaster, with wide-ranging consequences for not only the natural environment, but also society in general. Fire has been one of the most important tools of environmental, social, and political manipulation throughout China’s history, either as a negative, destructive force, or as positive one in both utilitarian and symbolic ways in living and attempting to improve individual and collective ways of life. Much of China’s landscape has been shaped by fire, and fire has normally been considered a conflagration or disaster (*huozai*) in Chinese official and popular literature (Zhong 2004: 1). Yet, fire has also been one of the chief sources of land clearance for settlement, for economic gain, and for seasonal agriculture among China’s diverse ethnic groups. In order to address this seeming contradiction, this essay establishes that the process of limiting the effects of uncontrolled fire or its environmental and social threat has been a central, if often unsuccessful, part of Chinese legal and political administration. In addition, efforts to control fire were never a simple effort of mastery, but an uneven process of complex military, social, and political negotiation over constant, general fire use throughout rural *and* urban areas. By elucidating a Chinese fire regime in this fashion, this essay begins to explain and outline the role of conflagration and fire use in the social and environmental history of China.

FIRES, WAR, AND REBELLION IN CHINA

China offers some excellent examples of how to talk about unique aspects of the creative and destructive nature of fire in history, not just as an environmental force, but as a social and administrative force as well. The two faces of fire—good and bad, destructive or constructive, risk factor versus catalyst for change—have informed centuries of discussion about the core and periphery of Chinese civilization and people. It has also informed century-long conflicts between bandits and military forces, rural farmers and urban administrators, and ethnic minorities and state authorities. Two brief examples from the 19th century Chinese periphery begin to illustrate these forces, especially the military aspect of fire in natural and social environments.

In 1860s northern Sichuan, a series of fire disasters descended upon the Sino-Tibetan frontier prefecture of Songpan and counties of the northern Sichuan Basin. One such revolt, “The Tibetan Rebellion in the Gengshen Year [1860]” (*Songpan Gazetteer* 1924) describes a number of Han and Tibetan “rebel” military actions that led to significant urban and rural conflagrations that illustrate at least one primary aspect of Chinese conflagrations as a weapon of war *and* agent of landscape development and change. In the wake of the Opium Wars (1839-42) and beginning of the Taiping Rebellion (1860), grain tax burdens in China increased as the state sought to pay for its expanding military actions and defeats. Between 1859 and 1862, at least three major conflicts broke out between Han Chinese garrisons stationed in and around Jin’an (the district seat of Songpan Prefecture government

and military, northern Sichuan) and Tibetans, who lived in the surrounding agricultural and uplands areas. The *Songpan Gazetteer* (1924) describes how these conflicts involved the fiery destruction of urban properties and buildings, including a local Confucian school, several Han Chinese temples in Jin'an and surrounding garrison towns, government buildings, and most of the town itself at one point.¹ Han Chinese properties and overt symbols of Chinese authority and culture, in the case of this uprising, were particularly targeted by the Tibetans.

The rebels, however, were not the only ones using fire. Chinese troops were dispatched to fire the countryside in an effort to disable the rebellion. This was not a new tactic in the Sino-Tibetan borderlands, but dated back to at least 1851 in this region, when Chinese troops were dispatched regularly to "...cut and burn [trees] in surrounding mountains... and strategic passes and approaches to the district seat."² Setting major fires (conflagrations) to prevent banditry and barbarian uprisings was something the Qing state approved of, not just in the borderlands, but throughout the country until its fall in 1911, in much the same manner as earlier dynasties. Chinese authorities and military in many incarnations dealt with banditry, rebellion, and potential raids on trade caravans and traveling officials by firing the countryside when it suited their purpose. Fire was employed to burn out trees, shrubs, and forests, especially near major roads and paths, but more generally as well—whether the areas in question were known to harbor bandits or not.³ These descriptions of firing the hillsides and forests can, naturally, also be read in a more constructive light, as they cleared more land for agriculture or grazing. Firing was linked to both constructive agricultural use and solving ethnic or administrative issues. For example, in the multiethnic Mao County, just to the south, soldier-lit conflagrations that burned out so-called bandits and the local Qiang ethnic minority in the 19th century were equally credited with "... opening up land for agriculture... and settlers."

Conflagrations were thus used creatively and destructively for military purposes and rebellion depending on the interpretation that official Chinese narratives might give them. The rate of fire disasters from the warlord to civil war period (1911-1949), including World War II, certainly supports this (for example, see Chart 1 on Sichuan fire disasters). This rate also skews a total analysis of fires from rural areas to predominantly urban settings during the three decades of the Warlord-WWII-Chinese Civil War. The industrialization of war and new methods of delivering fire to cities (aerial bombing in particular) highlighted this trend,⁴ as did increased human carelessness in war-time urban concentrations of population. However, in outlining a fire history for China in general, military or bandit origins usually make up the most common descriptions and sources for major conflagrations in both urban and rural areas. For Zhong Maohua (2004), any analysis of fires must assign the primary causes of conflagration in Chinese history to warfare and bandit and rebel suppression. In his analysis, one in four fires in recorded Chinese history from 220 B.C.E. to 1949 originated in a military action—whether anti-bandit, open rebellion, invasion, or subversive in nature. However, setting fires in the fields, forests and towns was more than simply a time honored military tradition of numerous imperial Chinese states through the early 20th century when fighting "bandits" or protesting peasants, who themselves often used conflagrations as a tactic in war. The prevalence of military/bandit-related fire disasters during the late Qing especially demonstrates at least a late imperial process of trying to incorporate and maintain control of borderland and bandit-prone regions through the creative and destructive use of fire and a military fire regime—if not a long-term practice of using fire as a tool of control and reprisal.

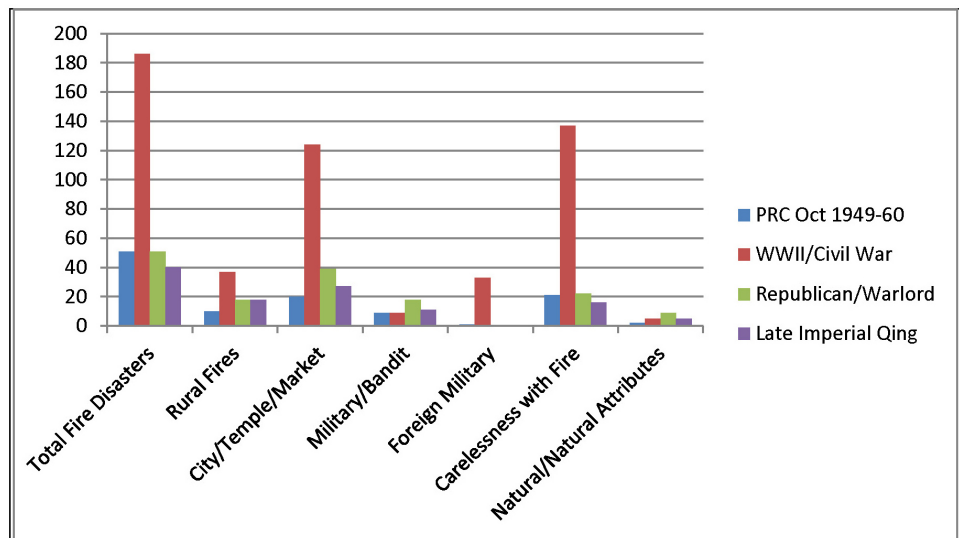
AGRICULTURE AND FIRE IN CHINESE HISTORY

During the 19th and early 20th centuries, however, major fires not only sprang out of banditry, military reprisals, and sometimes poor inter-ethnic relations, but also from agricultural pursuits. Conflagrations were not simply military fire regimes in China, but could also act as catalysts for change and development—a fire environment is just as likely to occur in a natural forest or grassland setting as it is in an agricultural field or urban setting. In western China’s Sichuan and Gansu Provinces, numerous counties’ production of tobacco, poppies, wheat, and other agricultural products was often aided by creative and widespread use of fire. However, fires could and would regularly rage out of control when peasants in rural districts set spring fires to clear land and trees, burn off the previous year’s stubble, or clear waterways for late spring and summer agriculture.⁵

Regardless of negative discussions in some official materials, fire played a nearly constant constructive role in Chinese agriculture and rangeland management. As one can see from the nature of fire disasters in Charts 1 and 2 (below), fully one quarter of all fire disasters, and over half of the “rural fire disasters” in late imperial and early 20th century Sichuan Province can be traced or related to rural field-agriculture fires (linked to both rural occurrence and human carelessness). Specific examples from early and late imperial Chinese history of fire in agriculture use, especially from Wang Zhen’s *Nongshu* (Treatise on Agriculture) and its later editions, describe fire use in the countryside as a nearly human implement of farming. According to Francesca Bray’s excellent overview of agriculture (in part based on the Wang’s treatise, among others), crop field fires, a common practice in Chinese agriculture, burned relatively small areas and were especially common in the months leading up to the late spring and summer wet season (Bray 1984: 93-8).

AGGREGATE SAMPLE FIRE DISASTERS IN SICHUAN, 1820-1960

Chart 1: Sichuan Province Fire Disaster Data (52 Counties and Prefectures)



In crop field fires outside of forest plots (Menzie’s 1996; Bray 1984: 98-101), farmers often burned the standing vegetation in the plot they intended to cultivate. The vegetation may have been uncultivated grassland, fallow fields, or short-fallow fields covered in grass, weeds and crop stubble. After burning a plot, farmers would spade or hoe the upper layer of soil, thus burying the nutritious ashes. Throughout Chinese history and in most provinces, ashes from burned over plots, along with human and animal manure, were considered a part of the agricultural routine to prepare agricultural plots, including in swidden-agricul-

tural areas of southern China (like Akha and Han agricultural areas in Yunnan Province). In rice growing areas, piles of dry rice straw or cut grasses were burned in dry paddies destined to be flooded and used as rice nurseries to provide fertilizer input. Wheat fields and other cereal crop fields were also regularly burned to clear the previous year's chaff and provide ash for the plowing and planting season. Fire was and remains one of the most economical (in terms of time and effort) ways to rid farmers of leftover organic materials, a seasonal byproduct of harvesting not always (but sometimes) gathered for animal fodder or home/hearth fuel purposes.

Other agricultural fires were related more specifically to seasonal irrigation. First, fire in catchment basins above rice paddies could encourage the erosion of important nutrients and soil into the paddies. Farmers thus manipulated fire and erosion to concentrate nutrients or soil where they would be most productive. Second, fire in the catchment basin above rice paddies could also facilitate quicker runoff during the first rains, aiding the all-important quest to fill farmers' rice paddies or water catchment basins with water. Finally, farmers lit fires to clean irrigation canals and field edges. Just like Joe Mondragon's New Mexico father in the *Milagro Beanfield War* (Nichols 1974), farmers fired irrigation ditches to clear them of grasses and other materials that hampered the flow of water.

In terms of rangeland, pasture and range (or grassland) burning also had a clear logic—to defend rangelands from bush and tree encroachment and ensure animal survival by providing extensive supplies of rangeland fodder. Regular firing of rangeland also helped protect hills and grasslands against unpredictable and destructive wildfires. Most burning was accomplished through an opportunistic strategy of temporal and spatial rotation. That is, people would burn pastures in patches, and at different times, taking advantage of the best seasonal, ecological, and political times to do what many Chinese authorities frowned upon. People might burn upland meadowland in late spring, for example, to help control weeds in later summer pasturage, and so on. By September and early October, after harvests in the lowland and upland areas of Sichuan and Gansu, burns were clearly destined to “fill in” unburned patches. For Tibetans and Hui, burns were necessary in sunny-slope ranges and grassland areas to clear unwanted trees or summer re-growth for the following year, in addition to numerous field burns for crop clearance.

The opportunism of rangeland fire management by Tibetans Han and Hui in north and western Sichuan was often seen by Chinese officials and foreign observers as casual and careless, or even irrational and pyromaniac. “Careless” was an epithet thrown not only at Chinese farmers in rural areas, but especially at ethnic minorities in more pastoral environments—just as it has been flung at fire users around the world, such as African herdsmen, Californian sheepmen, Native American hunters and gatherers, and European peasants (Pyne 1995; 1997). Chart 1 demonstrates in a concrete sense how powerful “carelessness” could be in describing the nature of fire disasters. However, whether “careless” was a fair generalization or not, fire was a necessary, seasonal, and important part of the agricultural and pastoral year. Fire in this sense was “good.” People ignited fires in western China in winter months for heating and to initiate backfires to control potential wildfires. They also ignited fires in early spring to prepare land for pasturage and farming, and to maintain woodlands (usually without much risk of punishment as most lightning fires and natural fires seemed to take place at approximately the same time). As Stephen Pyne (1997: 90) demonstrates elsewhere, wildfires and land clearance fires had the tendency to spread quickly to untended, overgrown sites, and the solution was “good housekeeping,” including burning land in patches and burning the patches at different times.

Despite this seeming constructive and extensive use of fire in rural and wasteland areas,

however, most official Chinese sources outside of agricultural treatises had little good to say about fire as a natural or human force. In part, this was a function of political and administrative notions of authority, but it was also related to rural-urban beliefs about the nature of the human use of fire. Urban fire was seen as a detrimental, disastrous force—where the fire regime caused property loss, disruption of commerce, and a potential and real threat to many lives. The urban or urbanized elites that made up the majority of the late imperial authority structure rarely perceived the beneficial qualities of a natural or unnatural conflagration. The authorities created human systems to combat such hazards, focusing especially on the human dimension of urban and rural fire systems embedded in social systems such as regulations and punishments.

POLITICS AND FIRE: LATE IMPERIAL TO MAO ERA CHINESE FIRE LEGISLATION

Fire is not just a hazard, potential weapon of war, or tool for agricultural development—it is also a political phenomenon. Fires, conflagrations, and their origins have played a consistent role in Chinese environmental history, especially in administrative and legal history. The nature of these laws and legal norms are also very comparable across cultures. Wherever people have cleared land with fire to permanently maintain it for farming or herding, they have also devised some sense of land ownership, whether communal or individual. Thus, despite its historical role as a tool for land clearance, fire was more often seen as a destructive force that had to be contained and constrained. An examination of the roles of legality and authority in controlling (and punishing) fire use is particularly illustrative in the Chinese case, as it highlights not only an interesting ethnic but also rural-urban divide in the politics of fire. It also demonstrates that fire regimes change as political regimes change.

Analyzing the nature of fire disasters and regulation in China is challenging, considering the scarcity of documentary records and the emphasis of Chinese and non-Chinese scholars on agricultural and especially urban settings in eastern China. However, a variety of different sources do demonstrate that *human* fire use was usually subject to strict control through statutory and customary law. For the most part, traditional statutory and customary laws of the late Qing dynasty were utilized through the end of the Republican era. Qing era Chinese statutory laws, as William Jones and Jiang Yonglin note, were derived from the *Great Ming Code* (*Da Ming Lu*), itself a derivation of earlier Chinese legal codes (Jones 1994: 12; Jiang 2005: xxxiii). In the *Ming Code* (and the later *Qing Code*), fires and fire disasters were discussed in terms of prescriptions against and punishments for arson (Article 16, Jiang 2005: 406, 407), looting during a fire disaster (Article 291), and criminal responsibility for hurting someone with or through fire (i.e. causing a fire disaster made one liable for any injuries to persons or properties even if it was not an overt act of arson; Article 326, Jiang 2005: 27, 160, 180, 219-20).

Fires and conflagrations were the responsibility of local officials, who were expected to assert state authority and combat the dangers of fire and fire use regardless of local practices. Urban Chinese were especially expected to adhere to the regulations regarding fires as their highly flammable urban domains and dense concentrations of houses only needed a wayward spark to trigger a severe conflagration. Yet, despite the hazard, laws and prescriptions related to fires and conflagrations were treated in several different areas of the code rather than a single section or cohesive fashion. These laws were also often rigorously applied to countryside. This was a real problem for China's urban and peri-urban authorities, as the general population invariably used fire in the urban *and* rural hearth and home, throughout the agricultural countryside, and in the loosely governed ethnic border

and rangelands. In the end, legal statutes on fire control from the highest authorities were articulated and applied, especially in the urban setting. Individuals and families hurt, killed, or who had lost property due to urban conflagrations could use these statutes to seek redress through the late Qing court system.⁶ Rural and borderland fire regime legislation was a bit more complex.

In addition to state and urban legal codes, there were local magistrate handbooks and other forms of local regulation during the late imperial period to deal with fire control. Good examples of these rural legal norms could be found in magistrate's guides, including one translation of late Ming Dynasty local laws in semi-rural/peri-urban eastern China. In this handbook, fires, conflagrations, and fire prevention receive their own complete subsection (Chu 1984: 501-03). The author discusses fire as a major calamity usually caused by human carelessness. He addresses the nature of urban fires, how to prevent them, and how to fight them. He also charges magistrates and the masses to fight fire with vigor or risk losing everything. In important ways, this points to a significant political aspect of an historical Chinese fire regime—that fires were discussed as primarily urban, human events, and the historiography of conflagrations focused on primarily Han Chinese, urban populations.

Of course, Tibetans, Yi, Hui, and other ethnic groups of China did have their own ways to legislate and deal with fire disasters. Like the Han Chinese, they had legal codes to quantify punishments and practices after a fire disaster. In addition to reliance on state authority and Chinese legal codes, customary law was especially important as a mechanism for communities and populations to exert control over land and resources. There is some evidence of common property systems, especially in Hui and Tibetan communities of Sichuan and Gansu, under which the members of a community had rights to use a specified resource or an area of land, sometimes referred to as “unenclosed” (*wei she weizhang*) land. When something happened to the land or property by fire, for example, local people could seek redress from whoever ignited the fire. Where some form of commons existed, restrictions were imposed on access to and utilization of land to combat overuse or destructive use, especially for grazing, but mechanisms for monitoring and enforcing these regulations were rarely mentioned (Wu, 1962; 2.4.39a/b). Most of the agricultural land, forests, range, and grasslands used by ethnic minorities were not recognized as having individual owners, but were in fact protected or managed under some monastic/temple, kinship, or community collective.

One Qing dynasty military campaign manual describes the control and maintenance of rangelands falling into three areas: individual tenure of hay and fodder fields near towns and villages, large tracts of rangelands owned and controlled by monasteries or community councils, and community agreements on how to bring stock in from far pastures through individually and communally owned land (Yan Ruyi 1934). In the case of local hayfields located most often very near to villages, individuals owned and controlled their use through earth and stone fences. Fires that crossed over the fences were the responsibility of the ignition site. Monasteries and communities dominated by kinship groups would allow individuals to use their rangelands in exchange for a percentage of the resulting food or material products, and they also helped manage discussions or arguments over responsibility for the regular wildfires or land clearance fires started by locals (Chang 1997; 230-31, 240-41). Individuals who ignored communal or monastic land management would not be allowed to use near-community pastures and rangeland the following year, and might face even more stringent punishments or fines. In addition to communal practices, more formal political norms to deal with conflagrations existed. Some foreign and 20th century Han Chinese comments to the contrary, ethnic minority villages and regional headmen had legal

systems in place to combat improper fire use. In Sichuan and Gansu Tibetan areas, Buddhist and Bon temples and local headmen usually settled rangeland and agricultural fire-related disputes (Zhang 1993: 14-5). Two Sichuan Tibetan examples of fire laws, like their Han Chinese counterparts in urban areas, stand out.

In late imperial and Republican era (post-1911) northern Sichuan, local headmen in Dege had a series of customary and statutory laws to deal with banditry and one of its related practices, careless or intentional fire use. If bandits or local Tibetans carelessly used fire and created a fire disaster on the grasslands, in forested areas, or in towns and villages, they were liable for blood money fines and property damage; they could even be sold into slavery or executed (Zhang 1993: 146-57). The Badihe Mountain village(s) *tusi* had similar laws governing grassland use and grassfires, an accepted method of grass regeneration as long as they did not get out of hand and burn too widely, damaging personal property or endangering lives (Zhang 1993: 148-49). Not only did local regulations and customary laws recognize the dangers of fire on the grasslands, they also put a series of graded fees and punishments in place for careless or widespread fire use on the grasslands and highland meadows that were integral to regional herding practices. Four out of nine regulations regarding herding and rangeland of various sorts referenced fire disasters or careless fire use; in contrast, the same local leaders had only a single fire-related customary law for towns, agricultural land, and land clearance (Zhang 1993: 151; 154-55).

In southern Gansu Province, Tibetan temples were the primary guiding force behind fire prevention and deciding disputes related to common fire disasters. Like Tibetan north Sichuan, similar practices prevailed, although there was an additional statute in the Tewa and Maqu *tusi* areas against monks or visitors causing fires in Tibetan temples—one of the “16 Laws” (*Shiliu fadian*) regarding major monastic centers, those living in them, and visitors (Zhou 1996: 412-14, 417-18). Fire was not only a necessary part of the daily monastic regime, from food preparation to daily ceremonies, it was also recognized as one of the key dangers to personal safety and the monastic center itself. Gannan Tibetans also had one of the more comprehensive discussions of fire use and regulations, which included carelessness with fire when burning off fields or grasslands. In particular, if local Tibetans were careless during the spring dry season (when they usually fired fields to prepare for late spring planting), they could be fined if their fires spread to neighboring fields, temple lands, or the local rangelands. When examining the laws and regulations regarding fire, it is also important to note that most of the foregoing legal and regulatory material relates to urban and semi-urban areas and temples, as well as territory and fires along established trade routes. While late Qing and Republican era laws could be (and according to several Chinese authors were) applied to a wider range of improper fire use in the countryside,⁷ local customary laws usually played an even greater role in fire use and fire prevention beyond the urban and semi-urban areas.

With few exceptions, statutory Republican era laws covering forest and rangeland use and fires were not effectively implemented in western China. However, pre-1949 sources for a limited number of statutory laws and a corpus of language to deal with fire disasters did exist. In Sichuan Province these laws targeted, in particular, what most Chinese considered poor ethnic minority land use management leading to fire disasters, in almost all cases without referencing land clearance policies used by Han Chinese on the Chengdu Plain or in valley bottom agricultural areas. The first such “modern” law was passed in 1910, the “Statute Protecting Forests and Grasslands,” which outlined a number of fees, jail time, and other sentences for improper use of fires in upland regions of Sichuan. Another set of statutes followed in 1937, *Senlin fa* (Forestry Regulations), which discussed forested areas

in largely minority regions of Sichuan (*Sichuan Linye zhi*, 311). These regulations were not regularly enforced, and by 1943, fire disasters in rural agricultural areas and upland forest areas were so serious that the Republican government of Chiang Kai Shek gathered over 180 administrators and ethnic minority leaders in Chongqing to discuss the issue of widespread fire damage to forests and agricultural land in the highlands and on the plain.

Starting in late 1940s, a new actor stepped into the fire legislation arena—the People’s Republic of China, run by the Chinese Communist Party’s local representatives in the form of cadres, military personnel, and/or state forestry representatives. In western China, beginning in 1951, the new state codified laws that regulated fire use. These new laws were rife with a series of assumptions about fire use, abuse, and disasters, constituting a new legal fire regime in comparison to late imperial and Republican legal norms. In Sichuan, this took the form of general regulations such as the “Baohu senlin, fazhan linye” (Protect Forest, Develop Forestry) and “Baohu caodi, fazhan muye” (Protect Grasslands, Develop Animal Husbandry) campaigns, whose regulations were intended to popularize natural resource protection (*Sichuan linye*, 311). Like many of the Nationalist era laws and discussions about fire disasters, the locus of fire problems was perceived to be local people, and very rarely, natural ignition.

In order to protect newly confiscated/expropriated natural resources in the countryside, Mao’s socialist government laid down laws that targeted local practices—particularly those of ethnic minorities—while often ignoring the creation of new legislation in the Han dominated countryside. In 1956 this took a new turn in minority-dominated areas of Sichuan by the establishment of public security bureaus to monitor local activities in natural resource rich areas with regard to fire regulations and the campaign legislation “Six Don’ts with Fire” (*Liu bu shao*). The “Six Don’ts” would be the mainstay of fire regulation not just in minority areas, but Han dominated areas of the countryside as well, until the late 1970s, but it was first developed in ethnic minority areas. Among other things, two of the “Six Don’ts” regard grass and field clearance, often destructive to natural resources owned by the state (trees, cattle/yaks, etc.) after the mid-1950s.

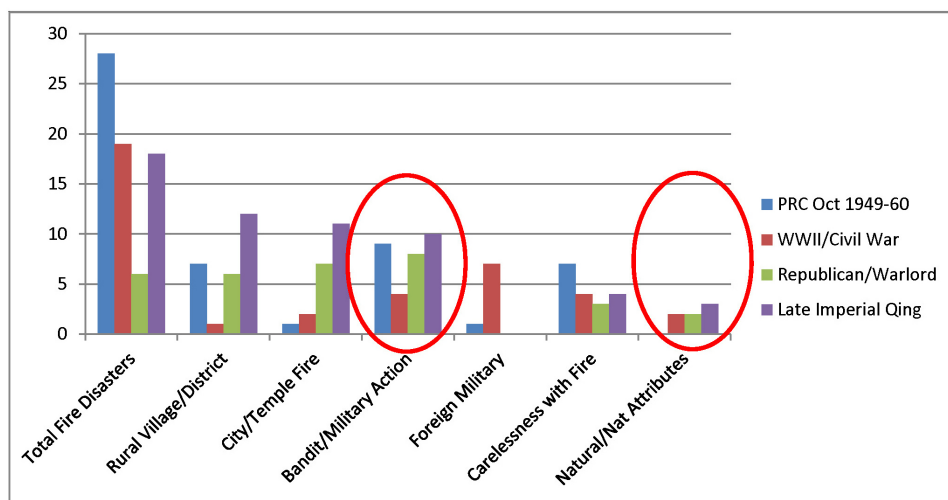
Sichuan Province provides some further examples of a new Chinese fire regime. There were two primary “fire areas” in western China, and after 1955 laws and regulations on fire that separated plains from mountain/up-country fires (Han versus Tibetan, Yi, etc.) were divided along ethnic and ecological lines, as were punishments and definitions of fault. Fines and other punishments for fires, carelessness, and conflagrations were raised for minorities in forested, grassland and agricultural areas. It should be noted, however, that fires, even major ones, that were “accidentally” caused by state industries and their personnel were rarely punished. Such disparate treatment existed for two reasons. First, as of 1955, the state (or its representatives in the provinces) officially took ownership of all natural resources from people on the ground,⁸ including agricultural products, grasslands and the grass on them, trees in forests, and so forth, including in minority areas of Sichuan Province. Second, starting in 1956, Tibetans and Yi, in particular, began to fight government control of their daily lives and property, particularly the confiscation of temple land, the closure of religious institutions, and the confiscation of previously undeveloped land and resources.

Part of the push to further criminalize extraneous fire use and punish fire disasters was that many Tibetans and Yi violently resisted state authorities and military personnel by torching the very resources the state attempted to claim, and otherwise resisting the new politics of land and fire management that did not take local conditions or traditions into account.⁹ Land reform, in conjunction with sweeping state regulations concerning natural

resource ownership and fire use and management, all helped feed existing cultural, political, and ethnic tensions over land management. The result was a tremendous amount of violence and widespread destruction of property, homes, trees, rangeland, and lives in the fire disasters of the mid- to late-1950s northern Sichuan. Chart 2 illustrates this trend; military action/bandit suppression was a significant cause of fire after 1949, while there were no reported cases of natural fire disasters.¹⁰

SICHUAN ETHNIC MINORITY AREAS FIRE DISASTERS, 1821-1960

Chart 2: Sample: Lipan, Songpan, Xiaojin, Pengshui, Xiyang, Qianjiang, Xiushan, E'bian, Xundian, Wenchuan, Kangding, Jinchuan, Nanping, Aba, Heishui, Ma'erkang, Yuexi, Shihua, and Liangshan Yi Counties.



Fire, forest, and rangeland laws before the late 1970s were more a statement of policy and exhortation than they were prescriptive. Instead of formal laws to control various uses of the wastelands, laws, policies, and regulations were ambiguous and gave local, provincial, and state officials great flexibility and administrative oversight on how to implement and understand the existing legal structures. Instead of formal legislation, control and land use policies toward the wastelands were determined by a program of campaigns (*yundong*).¹¹ The initial law that treated forests and their products was based on a program of campaigns and called for the establishment of organizations to introduce fire control, afforestation programs, and wasteland reclamation. Many such “campaign documents” and regulations limiting access to forest and rangeland areas, prohibiting fuel gathering, urging fire protection, and so forth, were followed throughout the 1950s and ’60s.

It is important to note that despite a few academic studies that discuss fire control and prevention through prescriptive fines and punishments, the vast majority of Mao era (post 1949) discussion about fire does not recognize rural people, much less ethnic minorities, as having the wherewithal, legal structures, or authority to prevent disasters. As part of its agenda to increase local control of people, resources, and sources of authority, the new state (and its subsequent incarnations up to the present), did not recognize alternative interpretations of fire use, fire control, and fire disasters. Key examples of how this came to pass included the fact that neither the *Sichuan Forestry Gazetteer*, nor official discussion of grass and rangeland fire disasters in the *Grassland Tibetan Investigation Materials*, recognized Tibetan customary laws (in place for generations if not hundreds of years), as legislating against or attempting to control fire use and related disasters (*Sichuan Linye* 1994: 311-12; *Caodi zangzu* 1984).

GOOD FIRE, BAD FIRE, CHINESE FIRES...

Fire disasters in Chinese environmental history are not simple black and white, social and environmental evils. Fire use was complex—conflagrations and large and small-scale fires could have both positive and negative consequences for people, authorities, and natural landscapes. However, in Chinese literature the vast majority of fires were considered disasters. In recent Chinese history, a significant portion of major fires have been most often attributed to either banditry, military activities, or to human carelessness. This emphasis on a military fire regime was certainly a legitimate explanation for the frequency of fire disasters. Given the number of wars and rebellions, and especially their effect on urban areas, it also helps explain a large number of the urban conflagrations of recent Chinese history. However, the social and political aspects of fire disasters (issues of authority, resource control, and landscape management) equally point to more constructive as well as hegemonic and authoritarian aspects of fires, fire control, and fire interpretation. In other words, this duality highlights a complex of Chinese military, agricultural, and political fire regimes.

While one should not downplay the destructive nature or devastating damage of fires, one should also recognize that both Chinese and minority “authorities” recognized the prevalence of fire in their societies and culture, and made widespread use of this tool in both urban and rural areas. They regulated it through statutes, customary laws, and practices in the hopes that it would not get out of hand and cause significant loss of life or property. However, far from always being a clear good, fire was a complex and multifaceted process and tool with significant environmental and social consequences. As politics and population centers changed, fire regimes changed too.

Another pattern in the legal and political structures to mitigate fire disasters was the nature of authority over fire—in other words, authority over the message of fire disasters. State control was evident in how fire disasters were reported. The very nature of sources and materials points to how and why various authorities have reported on, disapproved of, and legislated fire. Part of this pattern of Chinese political fire regimes was linked to evolving patterns of Chinese governance and the nature of an urban-rural divide, but in the end, it was also related to human carelessness with fire. While some of these patterns may be self-evident, they also obscure another principal pattern that this research has only begun to shape—that the nature of fire and natural sources of ignition more or less took a back seat in how people tried to explain the reasons for fire disasters. In this sense, natural forces and sources of ignition in conflagrations play far too minor a role in this fire history. At least to some degree, there is an overemphasis on the scale and breadth attributed to fire as an almost purely human action.

Chinese fire history is more than an event—it is a process. By examining just a few of the possible fire regimes of recent Chinese history, we not only begin to see contrasting and complementary urban-rural and urban-forest fire regimes, we also begin to perceive some of the unique political, military, ethnic, and temporal trends that are imminently comparable to other historical world fire regimes.

BIBLIOGRAPHY

WORKS IN CHINESE:

Caodi zangzu diaocha ziliao [Grassland Tibetan Investigation Materials], Southwest Nationalities College Minority Research Office, 1984.

Chen Qiaoyi, 1983. “Lishi shang Zhejiang shengdi shan di kenzhi yu shanlin pohuai” [Historical reclamation of mountain land and destruction of mountain forests in Zhejiang

Province]. *Zhongguo Shehui Kexue*, 4 (1983), 207-17.

Da Qing Luli [Statutes and Substatutes of the Great Qing Code] (1740). *Qianlong huidian* (1764), printed in 1786 *Qingding da Qing huidian* [Supplementary regulations and sub-statutes], 920 *juan*, (reprinted Shanghai, 1919).

Fu Chongqu and Xu Xiang, *Songpan Xianzhi* [Songpan County Gazetteer] (MS format, Minguo 13 [1924], 8 *juan*).

Fu Yiling, 1980. "Qingdai zhongye chuan shaan hu san sheng bianqu jingji xintaidibianhua," [Changes in the economic situation of the Sichuan, Shaanxi, Hubeiborder region during the middle of the Qing Dynasty]. *DuoSuo*, 5 (1980), 43-52.

-----, 1961. *Ming Qing nongcun shehui jingji* [The rural social economy of the Ming and Qing Dynasties]. Beijing: San Lian chubanshe, 1961.

Mao xianzhi [Mao County Gazetteer]. Beijing: Fangzhi chubanshe, 2010.

Sichuan linye zhi [Sichuan Forestry Gazetteer], 2 vms. Chengdu: Sichuan kexue jishuchubanshe, 1994.

Yan Ruyi, reprint 1934. *San sheng bianfang beilan* [Complete Survey of Border Defense in Three Provinces]. 1806, reprint as *Chuan Shaan E bianfang ji*, Nanchang: Guomindang Military Commission, 1934.

Zhang Jimin, *Qinghai zangqu buluo xiguan fa ziliao ji* [Materials on the Laws and Customs of the Tribes of Tibetan Regions of Qinghai]. Xining: Qinghai renmin chubanshe, 1993.

Zhongguo huozai dadian [Grand Collection of Chinese Fire Disasters], 3 vols. Shanghai: Shanghai kexue jishu, 1998.

Zhong Maohua, 2005. "Zhongguo huozai shi (Qin shi-1949) jianxi" [An Analysis of Fire Disasters in China from the Qin Period to 1949], *Zhongguo Anquan kexue xuebao*, 5 (2004).

Zhou Ta, *Gansu Zangzu buluo de shehui yu lishi yanjiu* [Research on the Customary Legal Society and History of Gansu Tibetan Areas]. Lanzhou: Gansu minzu chubanshe, 1996.

WORKS IN WESTERN LANGUAGES:

Bray, Francesca, *Science and Civilisation in China: Vol. 6, Part II: Agriculture*. Cambridge: Cambridge University Press, 1984.

Chu, Djang, 1984. *A Complete Book Concerning Happiness and Benevolence*. Tucson: Univ. of Arizona Press, 1984.

Elvin, M. and T.S. Liu (eds.), 1998. *Sediments of Time: Environment and Society in Chinese History*. Cambridge: Cambridge Univ. Press, 1998.

Jiang Yonglin, *The Great Ming Code (Da Ming lu)*. Seattle: Univ. of Washington Press, 2005.

William C. Jones, *The Great Qing Code (Da Qing lu)*. Cambridge: Oxford University Press, 1994.

Christian Kull, 2004. *Isle of Fire: The Political Ecology of Landscape Burning in Madagascar*. Chicago: Univ. of Chicago Press, 2004.

Menzies, Nicholas and Christian Daniels, 1996. *Science and Civilisation in China: Vol 6, Part III: Agroindustries and Forestry*. Cambridge: Cambridge Univ. Press, 1996.

Stephen Pyne, 1997. *Fire in America: A Cultural History of Wildland and Rural Fire*. Seattle: University of Washington Press, 1997.

-----, 1995. *World Fire: The Culture of Fire on Earth*. Seattle: Univ. of Washington Press, 1995.

Shapiro, Judith, 2000. *Mao's War Against Nature*. Cambridge: Cambridge University Press, 2000.

NOTES

1. Fu Chongqu and Xu Xiang, *Songpan Xianzhi* (1924), juan 3:3.7-65b. See also, *Zhongguo huozai dadian* [Grand Collection of Chinese Fire Disasters] (1997): 1505-06. Hereafter HZDD.
2. *Songpan xianzhi* (1924): juan 3:70-71b, 8:40-41. Also HZDD: 1310, 1506, 2893-95. There are numerous other examples of troops dispatched to clear trees or deal with bandits where fires raged out of control in Tibetan, Hui and Qiang areas of northern, western and southern Sichuan, and southern Gansu. See HZDD: (Hui areas) 1590, 1625; (Tibetan areas) 1628, 1698.
3. There is a long tradition of burning out bandits in forested areas of China that goes back to popular literature, including “Romance of the Three Kingdoms” and “Outlaws of the Marsh.” More practically, military manuals like Yan Ruyi’s study of the Sichuan-Gansu-Shanxi borderlands called for regular use of fire to control banditry by firing grasslands and forests. Yan Ruyi, *Sansheng bianfang beilan* [A Complete Survey of Defense in the Border Region of the Three Provinces] (1806), MS Sichuan Archive, juan 4 (Reprinted as *Chuan Shaan E bianfang ji*, Nanchang: Guomindang Military Commission, 1934).
4. Fully one-quarter of conflagrations for Sichuan Province between 1916-1948 can be traced to aerial bombardments, especially by the Japanese between 1937-45—skewing any statistical analysis of fires not only toward urban areas, but taking China as a whole, toward urban areas dominated by Chiang Kai Shek’s government. HZDD: 3034-4689.
5. Of the numerous examples of crop fires and field burning conflagrations, Fuling County in May 1864 and again in May 1869 in surrounding tobacco fields and village districts stand out for scale and devastation. HZDD: 1634, 1693.
6. An overview of official Chinese laws and their use regarding fires is also in HZDD vl. 3, 6048-50. A complete set of the *Great Qing Code Substatutes* (*Da Qing huidian*, juan 278) follows on HZDD: 6053-54.
7. See HZDD 6044-55 which include basic law codes and criminal procedures related to fire disasters.
8. This was particularly problematic for Tibetans and Yi (as well as other minorities like Akha, Miao, Qiang, etc.) as they practiced both a form of swidden agriculture (regular land clearance with fire, then rotating on to a new area to allow cleared land to regenerate after agro-production had exhausted the soil) and regular firing of grass-rangeland areas to help regenerate grazed and overgrazed grasses.
9. Hayes Spring 2005: Interviews with local Tibetans in Maqu (Gansu), Labrang (Gansu), Songpan (Sichuan), Mao’er gai (Sichuan), Hongyuan (Sichuan), and Jiuzhaigou (Sichuan). According to Steve Harrell, fire issues were also an issue in the Liangshan Yi region in southwestern Sichuan. Hayes-Harrell personal communication, Fall 2005.
10. In official forestry studies after 1952 the Bureau of Forestry in China began to collect forest and grass fire data stemming from natural causes for the first time—this data was, however, not widely known or accessible.
11. One of the best overall treatments of various campaigns from the 1950s and ‘60s in English is Judith Shapiro’s *Mao’s War Against Nature*, Cambridge, 2000. The two campaigns mentioned above, “Baohu senlin, fazhan linye” [Protect Forest, Develop Forestry] and “Baohu caodi, fazhan muye” [Protect Grasslands, Develop Animal Husbandry], were the earliest campaigns to target fire culture and fire management/disaster issues. Other campaigns followed in 1955 and 1956: “Controlling Forest Fire Disasters in Regions” and “Controlling Forest Fire Disasters in Villages.” Both sets of regulations targeted Tibetans in particular as they were considered to “hate” trees and constantly set these new state commodities and strategic resources on fire. This naturally ignored centuries of land clearance practices for rangeland and preventative fire setting to control detritus in dry years. See *Sichuan linye zhi*, 1994: 331-32; *Sichuan Senlin*, 1992: 1254-55.