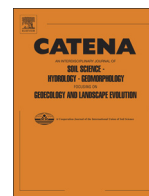




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The relationship between the spread of the Catholic Church and the shifting agro-pastoral line in the Chahar Region of northern China

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ABSTRACT

The Great Wall of China roughly follows a transition belt between subhumid region and arid/semiarid region, often thought of as a boundary between agricultural and pastoral area. However, in the mid-18th century, the farming activity began to cross the Great Wall and infiltrate the pastoral region. The agro-pastoral line moved substantially northwards and westwards resulting in a changing landscape beyond the Great Wall. The Catholic Church, which had been proselytizing in Inner Mongolia since the turn of the 18th century, played an important role in this historical process. This paper evaluates the role of Catholic churches in this shift of the agro-pastoral line in Chahar Region in the 19th century.

Chahar, a semi-arid region in the southeastern Mongolia Plateau, had a significant Catholic activity after 1700s. As congregation obtained land from the Mongols, missionaries converted local Han Chinese to Catholicism while lending land, housing and farm implements. By 1952 most people living there had been converted. As a result of intensive land management by the Catholic missions, the semiarid landscapes, formerly used for grazing lands, were changed to more intensive agricultural use. This study examines the important role of the practices of an authoritarian religious organization on the movement of the agro-pastoral line and the relationship between those religious missions and environmental change. This study shows that when the missionaries began preaching to the impoverished Han people coming from within the Great Wall rather than the local Mongols of the Chahar Region, increasing numbers of Han Catholic villages appeared beyond the Great Wall, cultivating what used to be grazing land. Meanwhile, to manage these Han people, the local administrative system was transformed from the Meng-Banner system into Banner-county system. As the name suggests, this latter system was based on Mongol-controlled Banners and Han-controlled counties. Thus the boundary between Banner and county hints at the movement of the agro-pastoral line. By tracking this movement we found that the agro-pastoral line in Chahar region shifted in the late Qing Dynasty. Meanwhile, Catholic villages became more concentrated in the counties, indicating that the Catholic Church had played an important role in this movement of the agro-pastoral line.

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1. Introduction

For centuries, a belt roughly following the line of the Great Wall, separating sub-humid regions from the semi-arid regions beyond, has been thought of as the transitional boundary between cultivated lands and the realm of nomads. Although the political forces of various, Chinese governments and the powers of nomadic tribes might impact the movement of the agro-pastoral line over time, it had been roughly fixed along this belt for over 2000 years. However, masses of Han Chinese had crossed the Great Wall during the late Qing Dynasty (1644–1912 AD),

with the boundary between farming and animal husbandry shifting northwards and westwards on the Mongolia Plateau at the substantial rate of about 3–6 miles a year since 1840 (Van Melckebeke, 1950). The Catholic Church, which began missionary activities in the region since the early eighteenth century, played an important role in this change and environmental consequences.

In the study of the Catholic Church in Inner Mongolia, much attention has been paid to its proselytization and social works, including economic activities, educational institutions, and medical and health infrastructure, mostly dominated by the Roman Catholic Congregation of the Immaculate Heart of Mary (CICM, Zhao, 1985; Sheng, 1999; Berg, 2002; Verhelst, 2002; Tang and Ma, 2003; Taveirne, 2004; Zhang, 2006). Catholics had changed local society by establishing churches, schools and clinics in the Catholic villages along the Great Wall. Less attention has been paid to the role of the Catholic Church modifying the natural ecosystem, as Han Chinese converts changed grassland to farmland where nomadic Mongols had lived before (Tiedemann, 1994; Zhang et al., 2009).

Abbreviations: CM, Congregation of Priests of the Mission (Lazarites); CICM, Congregation of the Immaculate Heart of Mary (Congregatio Immaculati Cordis Mariae); Kalgan, City and region name, located in the southern Chahar Region, closes to the Great Wall; Shezhiju, Administrative region, used in the Republican China.

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As little is known about the role played by the Catholic Church in the movement of the agro-pastoral line, we have chosen to examine the Chahar area, located in the southeastern Mongolia Plateau, to show how the Catholic church impacted the shifting of the agro-pastoral line and otherwise impacted environmental evolution along the Great Wall from the mid-Qing period (circa 1730) to the end of the Republican era (1949) (Zhao, 1985; Sheng, 1999).

2. Regional setting

The Chahar area refers to the region dominated by the nomadic Chahar Mongol tribe during the Qing dynasty and the early Republic of China. In 1928 the region became Chahar Province, an administrative division that lasted until 1952. And it was almost considered as the Central Mongolia Vicariate, founded by the Belgium-based Congregation of the Immaculate Heart of Mary (CICM) in 1883 (Fig. 1).

Lying between the Inner Mongolia Plateau and the North China Plain, the elevation of the Chahar area gradually increases in a north-eastern direction from 800 m above sea level in the southwest to 1800 m in the northeast (Fujino, 1932; Department of Geography in Inner Mongolia Normal University, 1965; Gazette editorial Board of

Table 1
Statistics of Mongolia Vicariate in middle of 19th century.

Papalists	16,000
Convert in 1844	30
Missionaries	5
Native priests	8
Chapels	7

Hebei Province, 1993). There are low mountains and hills in the eastern and southern parts, and upland grassland in the west and the north. The Hunshandake Desert, in which there are many stabilized dunes and semi-stabilized dunes, passes from northwest to southeast in the center of the region (Yang et al., 2013). Rivers flow through the eastern and southern parts of the region (Department of Geography in Inner Mongolia Normal University, 1965; Gazette editorial Board of Hebei Province, 1993).

Chahar is characterized by a semi-arid, continental monsoon climate. The mean annual temperature is in the range of 1.0 to 2.0 °C. The mean temperature in January falls between −18 °C and −22 °C, with extreme temperatures as low as −42.4 °C recorded. The mean temperature in July is between 18.6 °C to 22.6 °C, with extreme

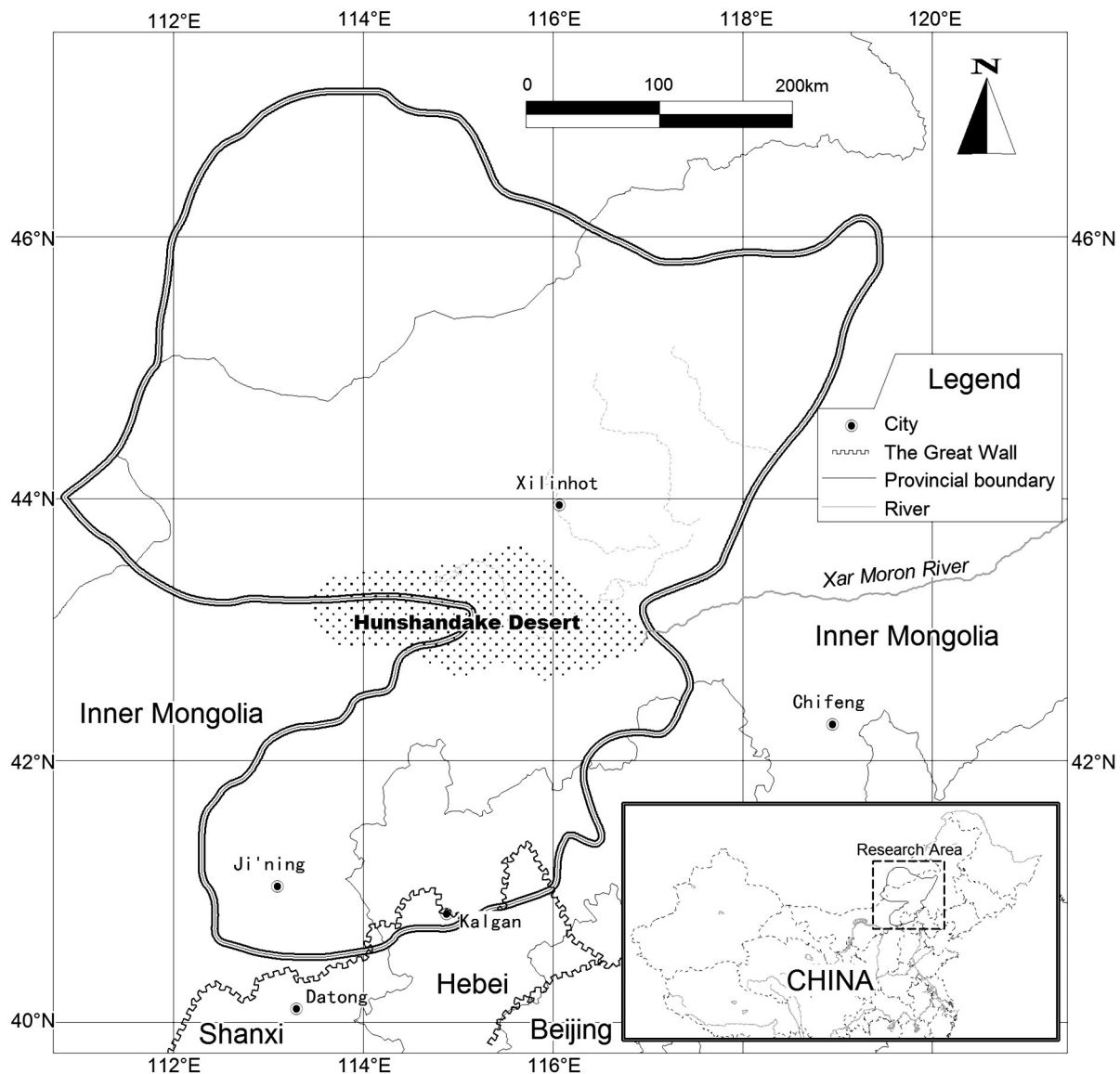


Fig. 1. Location of the study area.
Modified from the Inner Mongolia Autonomous Region Atlas, 2001.

temperatures as high as 39.9 °C recorded. The mean annual precipitation ranges from 260 mm in the north to 390 mm in the south (Institute of Education Science and Research in Kalgan City, 2003). There is enough warmth in summer for crops, but the shortage of precipitation has historically limited the development of rain-fed agriculture (Wu, 1935; Yang et al., 2012, 2013).

3. The spread of the Catholic Church in Chahar and the establishment of the Central Mongolia Vicariate

“Chahar” means barrier or border in Mongolian, a name given to this region because of its proximity to the Great Wall and because of its role as the southeastern barrier safeguarding the Mongolia territory since the time of Dayan Khan (1479–1517) (Yano, 1935). After it was conquered by the Manchus in 1635, the Chahar tribe, as the most powerful Mongol tribe, was divided into 8 Banners, military units under the leadership of Chahar Commander. The territory of this Chahar Commander was a grazing district where nomadic Mongols lived (Muzhang’a, 2007).

Around 1700, some Han Chinese Catholics made their way across the Great Wall and entered the Chahar region from the south. They

lived in Xiwanzi, a small village close to the Great Wall, and established their first church there, named Dadonggou chapel (Huc, 1931; Gazette editorial Board of Chongli County, Hebei Province, 1995; Rondelez, 2002). This marked the earliest stage of Catholicism in the Chahar region.

The 18th century was generally a rough time for Christianity in China. The preaching of Christianity was strictly forbidden and foreign missionaries could hardly make their way into the inland of China. Therefore native pastors were in charge of the local churches (Huc, 1931; Gazette editorial Board of Chongli County, Hebei Province, 1995; Rondelez, 2002). During the reign of the Qianlong emperor (1736–1795), especially in the year 1768, the persecution of Catholics became more severe and Church property was confiscated all around the country. Thanks to the distant location of Xiwanzi, some foreign missionaries who were in charge of missions in Mongolia and Korea, managed to remain under the radar, but they had to leave Beijing and the regions within the Great Wall to seek sanctuary in Xiwanzi’s chapel (Gazette editorial Board of Chongli County, Hebei Province, 1995; Rondelez, 2002). Thus while the Church was suffering in the major Chinese urban centers, Xiwanzi’s Catholic community started to thrive. When the Congregation of the Mission (Lazarists) took over the mission

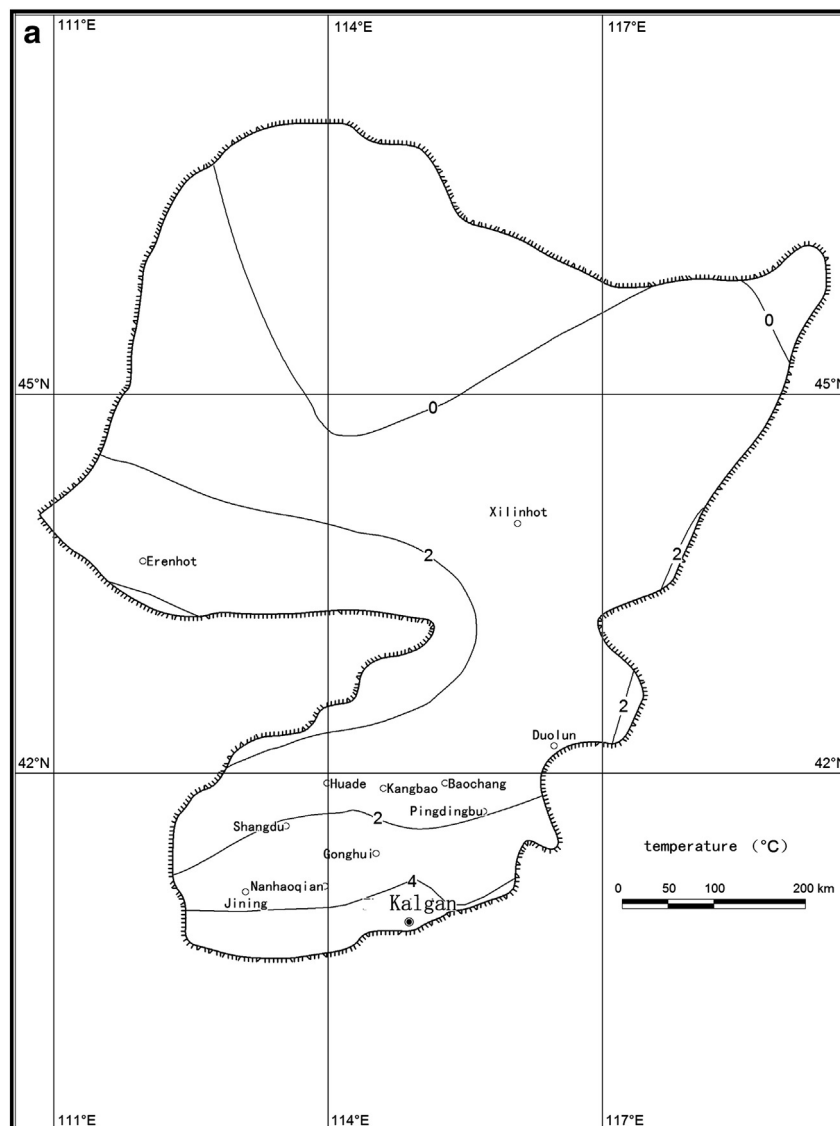


Fig. 2. Mean isotherm and isohyet maps of the Chahar Region.

Sources: Department of Geography in Inner Mongolia Normal University (1965); Gazette editorial Board of Hebei Province, 1993 (Fig. 2).

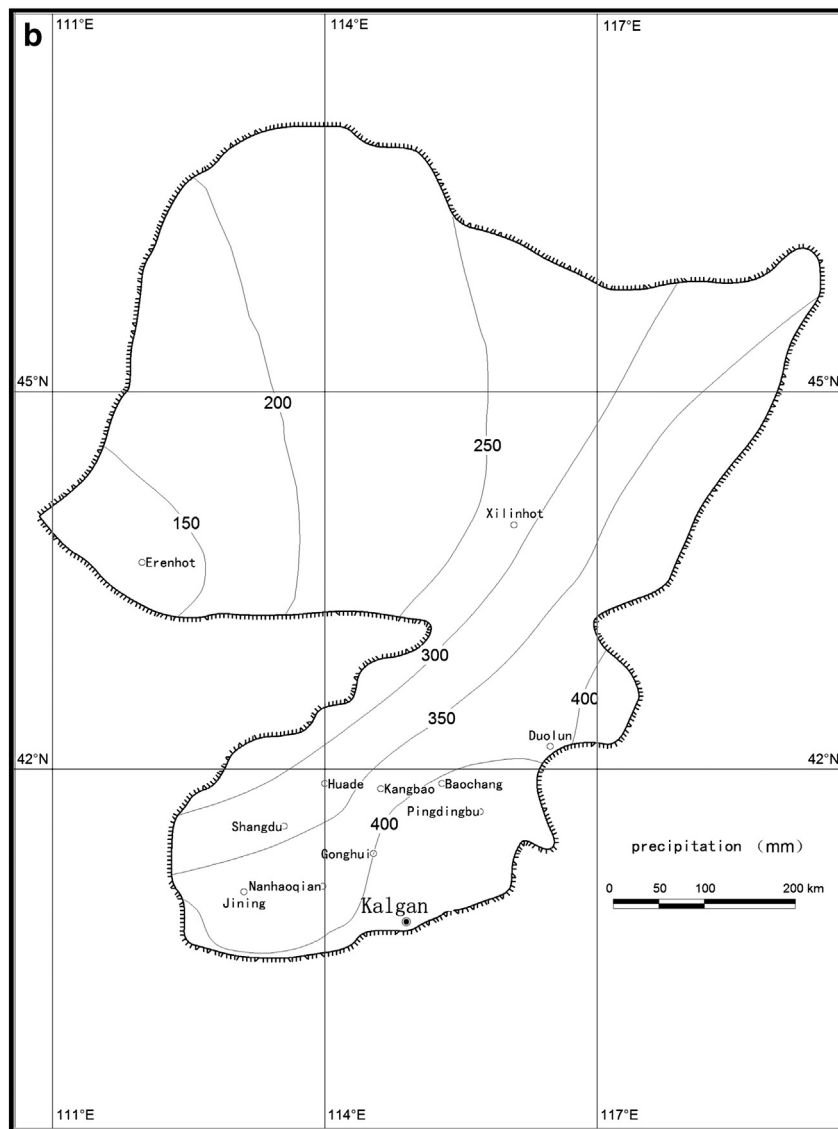


Fig. 2 (continued).

in Mongolia and Manchu in 1788, there were four chapels there: Xiwanzi, Gaojiaying, Wuhao and Baihuagou (*Gazette editorial Board of Chongli County, Hebei Province, 1995*).

Under the management of the Congregation of the Mission, the Catholic community grew slowly but steadily. In 1835, all 676 villagers in Xiwanzi village were reported to be Christian (*Rondelez, 2002*). Because of this development, the Vatican decided to establish Xiwanzi Vicariate to provide better religious services to Manchuria and Mongolia, based in a cathedral situated on Xiwanzi village. A Mongolia Vicariate was set up separately from Manchuria in 1840, bordered by the Great Wall in the south and the Great Khingan in the east (*Congregation of the Mission, 1846; Chao, 1980*). The cathedral was seat on Xiwanzi (*Table 1*). In those days, Xiwanzi Cathedral became one of the most important cathedrals in northern China.

After its defeat in the Opium War, the Qing government was forced to open its doors to Christian evangelism, and foreign missionaries were allowed to preach in inland China under the political umbrella of France. Under these new circumstances, the Catholic Church developed at an unprecedented rate. The population of the Mongolia Vicariate in 1851 was 1934 Catholics of whom almost half, or 989 lived Xiwanzi village alone (*Rondelez, 2002*).

In 1863, the Vatican decided to relegate the Mongolia Vicariate to the Congregation of the Immaculate Heart of Mary (CICM), a young congregation founded recently in Belgium. The CICM formally took over the vicariate at Xiwanzi Cathedral from the Lazarist in January, 1865, where there were 2700 Catholics in the vicariate. Among them, more than one thousand lived in Xiwanzi village, with the others scattered in 26 adjacent villages (*Rondelez, 2002*).

With the rapid development of the Church, and in light of its vast territory, the Mongolia Vicariate was to be divided into three parts by Vatican in 1883, namely the Central Mongolia Vicariate, Eastern Mongolia Vicariate and Southwestern Mongolia Vicariate (*Chao, 1980*). In the Central Mongolia Vicariate, corresponding roughly to the later of Chahar Province, there were 8700 Catholics at that time (*Rondelez, 2002*). In 1899, the member increased to some 16,000, and Xiwanzi diocese alone had 5 churches: Gaojiaying, Wuhao, Baihuagou, Heimahu and Pingdingbu; 42 chapels and 6909 Catholics (*Gazette editorial Board of Chongli County, Hebei Province, 1995; Rondelez, 2002*).

In 1900, the Boxer uprising broke out. The Central Mongolia Vicariate armed itself against attack, so only the two churches in Gaojiaying and Wuhao were destroyed (*Gazette editorial Board of Chongli*

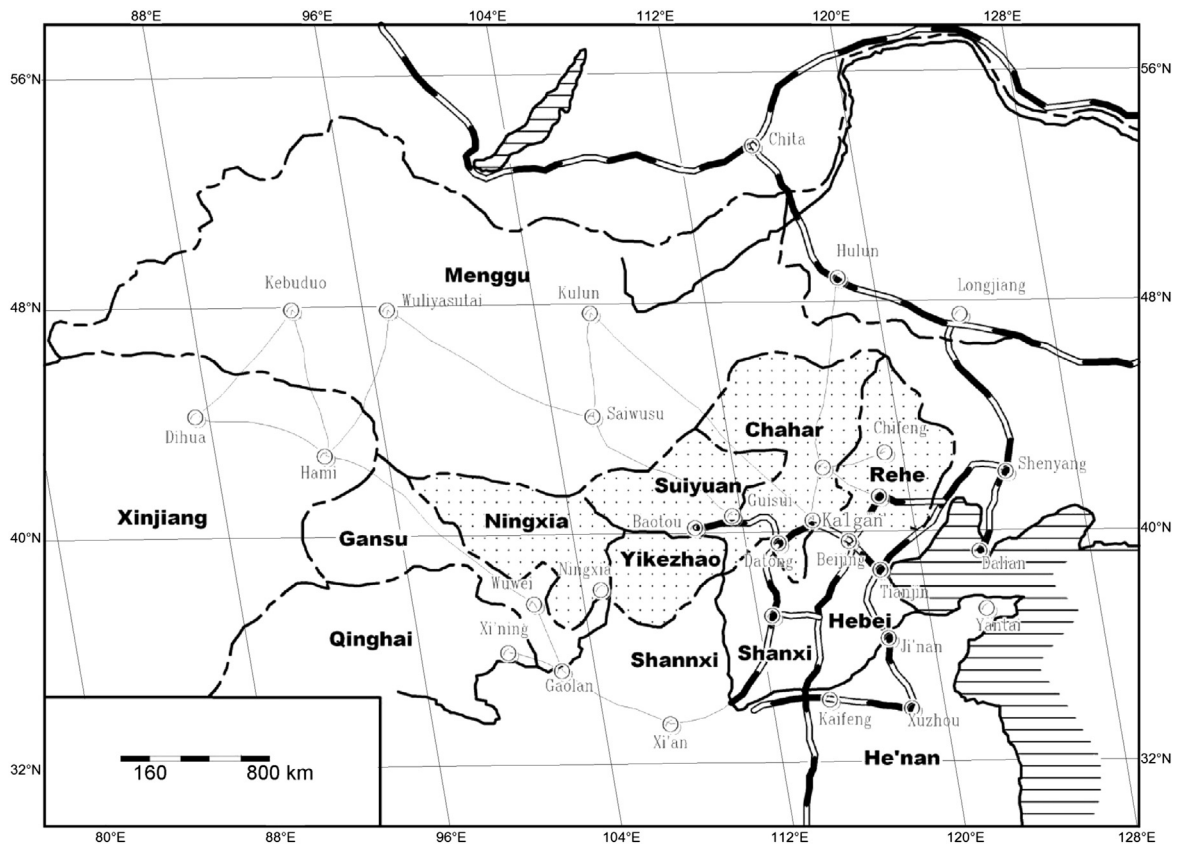


Fig. 3. Central Mongolia Vicariate in 1924.

County, Hebei Province, 1995). Many foreign missionaries, nuns and some lay Catholics fled to Xiwanzi Cathedral to take sanctuary.

After the chaos had subsided, the Qing had to pay a war indemnity to the Catholic Church, which gained the opportunity to expand rapidly, the Catholic population increased from 8774 in 1903 to 45,656 in 1924 (China|Status Missionum CICM in Sina et in Mongolia, 1903–1924; Compiling Committee of Catholic Cases in Late Qing Dynasty, 1988). In 1924, the Central Mongolia Vicariate was renamed the Xiwanzi Vicariate, but its territory stayed the same, included the Kalgan region in Hebei Province, the Jining region and Xilinguole Meng in Inner Mongolia, and the Datong region in Shanxi Province (Chao, 1980; Fig. 3). In 1929 the Jining Vicariate, managed by Chinese Missionaries, was separated from Xiwanzi Vicariate because of the large population of Catholics there (Chao, 1980).

When Japanese scholars carried out investigations in the town of Pingdingbu in 1935, they found that, “The Catholic Church started to enter Pingdingbao 40 years ago. From its beginning, in only decades, chapels have been built in Huliuyu, Qihaotang and eventually Touhaotang. The Catholics themselves state that their population is 6500, but we believe the real number is more than that” (Shimonaga, 1935). Table 2 shows the years in which chapels were established.

After years of sustainable and stable development, there were about 400 churches in Chahar Region belonging to 4 parishes: Zhangbei, Nanhaoqian, Xiwanzi and Pingdingbu. The Catholic population increased

from 7297 in 1903 to 39,356 in 1947, an average annual growth of over 3.90% (Bureau Sinologique de Zi-ka-wei, 1930–1947; China|Status Missionum CICM in Sina et in Mongolia, Archief Scheutisten-Generaalat, 17.1.4-6200–6201; China|Status Missionum CICM in Sina et in Mongolia, 1902–1947) (Chart 1).

4. The migration of Catholics and reclamation of grassland

4.1. Migration and proliferation of Catholic villages on the Mongolian grassland

As recorded by Evariste-Regis Huc, the earliest Catholics to come to the Mongolian grassland were members of a Han family, named Zhao. To escape persecution, they fled to Wengniute Banner, Inner Mongolia, which at that time was called the Wulanhada Region (Huc, 1931). However, according to *The Catholic Village of Xiwanzi*, the first Catholics to cross the Great Wall and settle in the north were from a family named Zhang (Rondelez, 2002). Whatever their name may have been, these early migrants started to cultivate the grassland where they had settled.

After this obscure beginning, Catholics continued to migrate into the Mongolia Plateau from the North China Plain, buying land from the Mongolia kings (Second Chinese historical Archival, 1937; Rondelez, 2002). Up until the time of Mgr. Huc, there were two churches beyond the Great Wall apart from Xiwanzi, one at Kulitu and the other at Maoshantung village, with populations of 879 and 493 Catholics respectively (Huc, 1931). Mgr. Planchet gave another record in his notes to Huc’s book by citing *Congregation of the Mission* of 1846 and said, “[In] the year (1844–1845), there were 7000–8000 Catholics in Mongolia, three cathedrals erected at three places far apart: (1) Xiwanzi, the cathedral of Central Mongolia Vicariate; (2) Heishui (Black-Water), now named Kulitu, located in Eastern Mongolia Cathedral;

Table 2 The development of Catholic Church in Pingdingbu area.

Church's name	Location	The year of establish
Pingdingbu Shuang'aitang	Guyuan County	1890
Qihaotang Shuang'aitang	Bochang County	1916
Touhao Shuang'aitang	Bochang County	1928
Huliuyu Shuang'aitang	Bochang County	1931

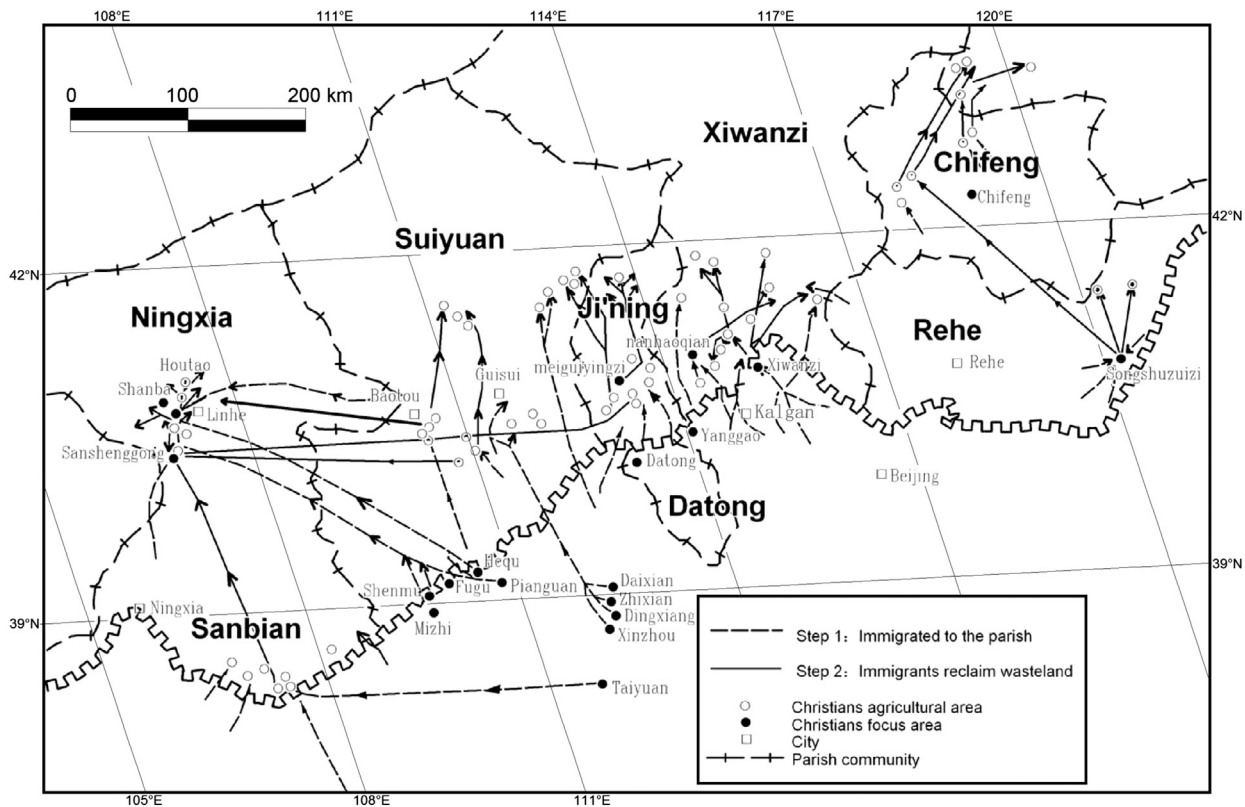


Fig. 4. Catholic immigration and land reclamation beyond the Great Wall.
Source: Van Melckebeke (1950).

and (3) Xiaotunguo, located in Central Mongolia, though abandoned later on" (Huc, 1931).

In the wake of various disasters in the late 19th century, impoverished Han people immigrated into the Chahar Region in search of better fortunes. Missionaries seized the opportunity to convert them by offering land, houses, seeds, and farming tools. As the population of Catholics grew rapidly, the Church moved groups of them to new areas to cultivate the grassland (Shimonaga, 1935).

Fig. 4 shows the process of the migration of Catholics. The first step was migration from the northern part of Shanxi Province and Zhili Province across the Great Wall into the Chahar region. The second step was for the Catholics to migrate further northwards (Van Melckebeke, 1950). Most of immigrants came from Shanxi province and Suiyuan province (Shimonaga, 1936). From Chart 1, we find that the Catholic Church had developed into maturity in middle of 1930s as the churches' hold on the population increased slowly and with stability.

4.2. Grassland reclamation in Mongolia and transformation of landscape

As Catholic Han migrants entered Inner Mongolia, they cultivated the land and planted crops that had been the typical means of subsistence in their native regions. Huc records how they began to reclaim the grassland and change the landscape: "Towards the middle of the 17th century, the Chinese began to penetrate into this district. At that period, the whole landscape was still one of rude grandeur; the mountains were covered with fine forests, and the Mongol tents whitened the valleys, amid rich pasturages. For a very moderate sum the Chinese obtained permission to cultivate the desert, and as cultivation advanced, the Mongols were obliged to retreat, conducting their flocks and herds elsewhere" (Huc, 1931).

According to Chinese official documents, land reclamation began there in the early 18th century during the reign of Yongzheng (The Reclamation Bureau in Chahaer Region, 1976). Large-scale land

reclamation commenced in 1750. A Catholic family, having fled to Wulanhata Banner and lived there for 20 years, bought the whole valley of the Black-water in central Chahar from the Mongols in 1777 and transformed the region into a center of Catholicism (Huc, 1931).

Because of land reclamation in the northern grasslands, in the mid-19th century, the boundary between agriculture and pastoralism had shifted northwards but not far from the Great Wall. Mgr. Huc noted in his *Souvenirs of a Journey through Tartary, Tibet and China: during the Years 1844, 1845 and 1846*: "A great Lamastery, containing nearly 2000 Lamas, called Altan-some by Mongols, was a first trading town, which Chinese (Han people) had settled there in order to traffic with the Mongols, on their journey" (Huc, 1931). This means the place was located at the boundary between agriculture and nomadism at that time. The landscape had been transformed markedly: "From that time forth, the aspect of the country became entirely changed. All the trees were grubbed up, the forests disappeared from the hills, the prairies were cleared by means of fire, and the new cultivators set busily to work in exhausting the fecundity of the soil. Almost the entire region is now in the hands of the Chinese, and it is probably to their system of devastation that we must attribute the extreme irregularity of the seasons which now desolate this unhappy land" (Huc, 1931). Only the Mongolian grassland, which was not yet claimed by Han people, could be described as steppe, and Mongols living there went in for animal husbandry (Huc, 1931).

With Catholic migration, the area taken by farmland was pushed further northwards reaching the middle of the Chahar Region "In Father Huc's day, the Grass Lands were about 20 miles North of the Black-Water district" (Huc, 1931). About 90 years later, Mgr. Planchet emphasized in 1931, "After the travel of Mgr. Régis-Evariste Huc and Mgr. Joseph Gabet (1845), Han people had made great expansion in the Mongolian region, Han immigrants pushed the Mongolian thousands miles northward. With the advantage of these cultivated lands, a large number of Christianity chapels were founded and thrived.

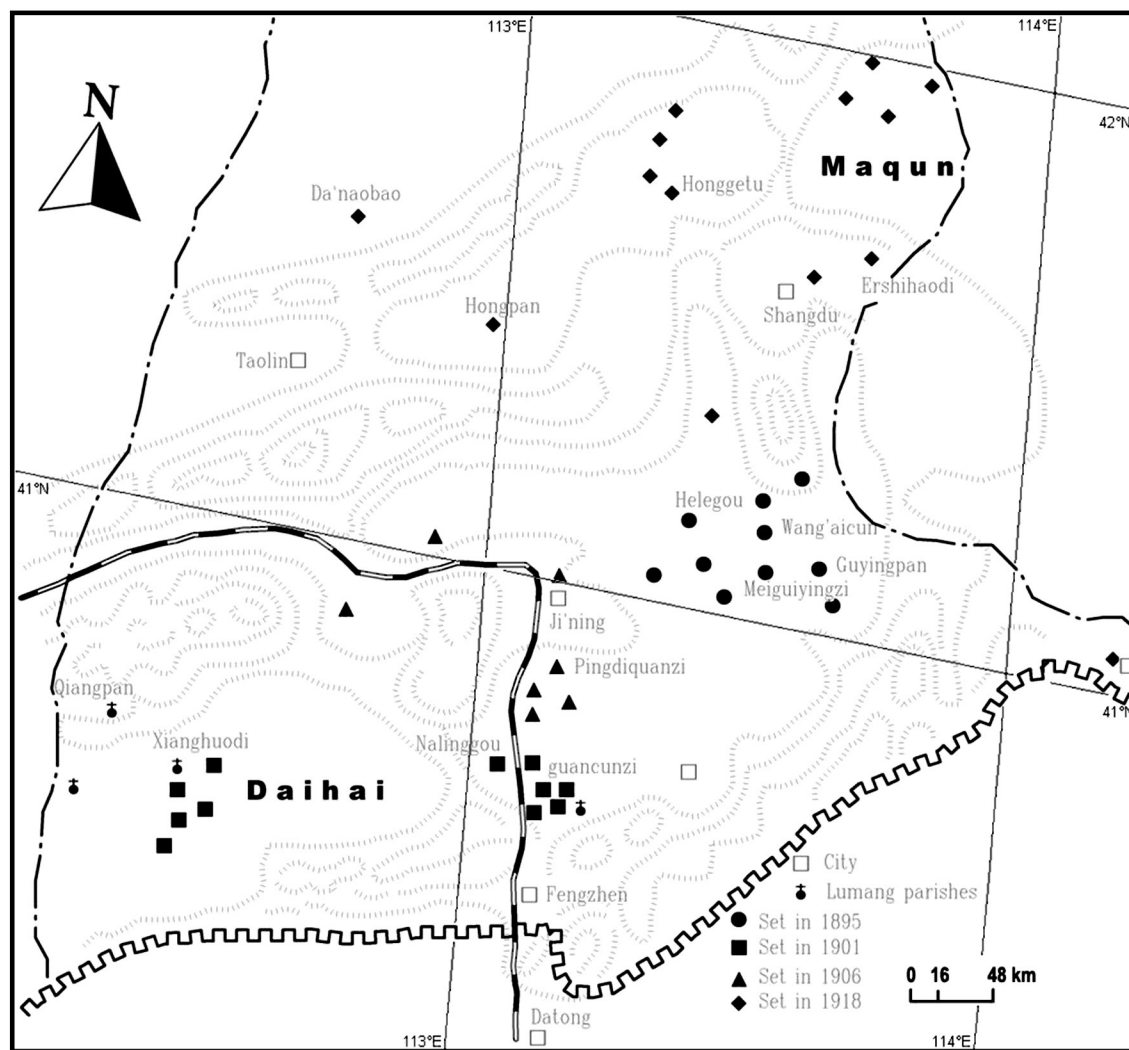


Fig. 5. The expanding of Catholic villages in Jining Parish.
Source: Van Melckebeke (1950).

The impoverished Christians from Zhili province moved there, and many of them had lived a happy and even prosperous life then” (Huc, 1931).

5. Discussion

5.1. Establishment of Catholic villages and shifting of the agro-pastoral line

Along with the growth of the Catholic population, the farmland that they reclaimed gradually became insufficient and degraded. “It would seem as though, in this country, nature resented the encroachments of man upon her rights. Wherever the plough has passed, the soil has become poor, arid, and sandy, producing nothing but oats, which constitute the food of the people” (Huc, 1931). So the church planned to move Catholic communities further northwards to reclaim new land establishing a new Catholic village for the enhancement of living condition (Shimonaga, 1935).

With increasing numbers of Han Catholics entering the Mongolia Plateau, the Church needed access to more land. Missionaries bought or rented additional land from Mongols and organized newcomers to migrate there. Mgr. Planchet mentioned this in his notes to Huc’s book: “Since the days of Father Huc the colonization of Mongolia by Chinese immigrants has made immense progress; the Mongols have receded miles to the North in the face of this incoming flood. Mongolia in

making use of these spaces so suitable for cultivation has opened the door to many flourishing Catholic communities in which the poor Catholics of Chihli have found a veritable gold mine” (Huc, 1931).

We may get some idea of the proliferation of Catholic villages in the area by examining the migration under Jining Parish during the period from 1895 to 1918 (shown in Fig. 5). The earliest villages were built in 1895, indicated here by dots. They were mostly near the Great Wall, far from Lama temples. All of them were located in valleys. The second group of villages was built after the Boxer Uprising in 1901, indicated here by small square dots. They were located to the west of the first group, closer to the Lama temples, but still in valleys area and close to the Great Wall. The third group of villages was established in 1906, indicated by small triangles. Those were located on hillside terrain close to the second group of villages. The fourth group of villages was built in 1918, indicated by small diamonds. These villages penetrated deeply northward, away from the Great Wall, but remained on low terrain. Because Han farmers relied on rain-fed agriculture, they had to dwell on low terrain. The villages’ distribution over time shows some detail of the northbound process of agricultural development.

When a region’s reclamation prospects had been exhausted, Catholic settlers had to explore more opportunities by probing deeper into the grassland. This map of Catholic villages, built over time in Jining Parish, can provide an intuitive sense of the spatial relationship between the spread of Catholic settlers and land reclamation beyond the Great Wall.

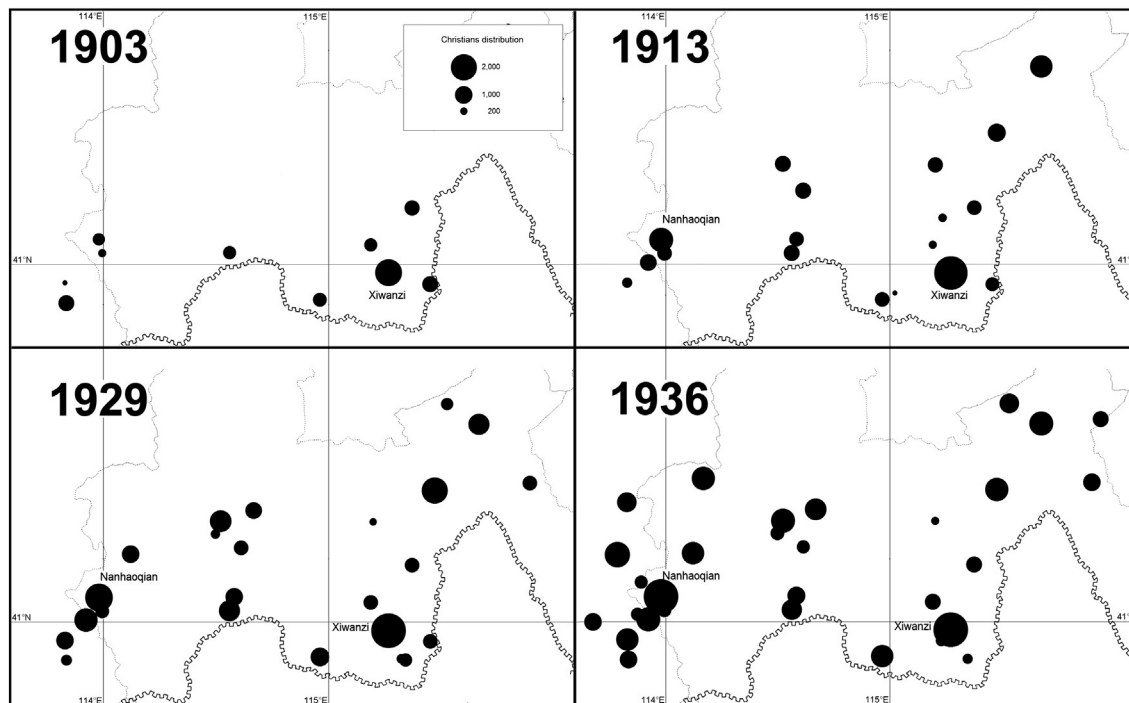


Fig. 6. The distribution of Catholic population from 1903 to 1936.

Sources: Bureau Sinologique de Zi-ka-wei, 1931–1948; China|Status Missionum CICM in Sina et in Mongolia, Archief Scheutisten-Generaal, 17.1.4-6200–6201; (China|Status Missionum CICM in Sina et in Mongolia, 1902–1947).

This situation was not only happening in the Central Mongolia Vicariate, but also took place in the Eastern Mongolia Vicariate. Mgr. Planchet noted that in 1918, the church in the Black-Water valley sent a band of more than a thousand Catholics northwards, to the Steppes, which were thrown open to cultivation by the Barin king, where the Catholic district of Ta-Yntze had been established with population of 1849 souls in 1918 (Huc, 1931). The distributive maps of Catholic population in Chahar Province in different years show how the Catholicism expanded northwards from the place close to the Great Wall in Fig. 6.

As Catholic villages, consisting mostly of Han settlers, were constructed, the frontier of cultivation continued pushing further into the grassland, so that the agro-pastoral line moved as far northward as the middle of the Chahar Region. Only in the northern part of Chahar were the Mongols still roving the Mongolia Plateau (Fujino, 1932). As farmland kept pushing forth into the grassland in the process described above, the distribution of Catholic villages roughly reflected the distribution of Han people in the Chahar region.

5.2. The distribution of Banners and Counties corresponding to the agro-pastoral line

In recognition of the large-scale movement of Han settlers into Inner Mongolia during the late Qing, the central government set county-level administrations (*xian*) under which Han people were governed, whereas the Mongols remained under the administration of Banners (*qi*). A county was established when the number of Han residents reached a certain level (Yan et al., 2002; Fu, 2007). “In later times, the king of Barin has thrown open his possessions, and colonists from China have multiplied to a large extent so much, so that it has been found necessary to create there a new sub-prefecture (Linsi county)” (Huc, 1931). This phenomenon suggests that the distribution of *xian* (county, and sub-prefecture) and *qi* (Banner) may have something to do with the location of the agro-pastoral line in the area.

Generally, prior to establishing a county in the border areas, another preparatory administrative division called a *shezhiju* would be set up. A committee traveled to the area to delimit the extent of the future county, organize migrants' land reclamation and maintain public security. As soon as the local social order was established, a new county would be set up. In 1931, the government of the Republic of China issued a regulation announcing that *shezhiju* would set up in areas where there were no county administrations. These could be upgraded to counties as soon as the Han population arrived at a certain level (Fu and Zheng, 2007).

Before the late 19th century, the Qing government had set up three prefectures (*ting*) along the Great Wall: Kalgan, Dushikou and Duolunnaoer, belonging to Zhili Province, were established during the Yongzheng reign. Later their administrative charges extended into the region beyond the Great Wall. In 1906, the Qing government opened the southern part of Xilinguole Meng and Wulanchabu Meng for reclamation to be managed by the Kalgan *ting*, Duolunnaoer *ting*, Dushikou *ting* as well as the counties of Fengzhen, Xinhe, Taolin, and Liangcheng (Zhou, 1994).

The Qing administrative system was carried on by the Republic after 1912, but all *tings* were renamed *xian*: Kalgan *ting* became Zhangbei *xian*, Duolunnaoer *ting* became Duolun *xian*, and Dushi *ting* became Dushi *xian*, all of them belonging to Chahar Special District (Zhou, 1994; Fu and Zheng, 2007). These change indicated that these were region where Han people had settled down and come to predominate, leading the bureaucracy to adjust its administrative divisions to deal with new management problems.

As part of these administrative changes, the Chahar Special District was set up in 1913. There were 11 counties in the south and 6 Banners in the north, covering an area of about 300,000 square kilometers (Fu and Zheng, 2007). The northern three quarters belonged to the Banners, while the southern portion, amounting to about one quarter of the total area, fell under county administration. The counties occupied about 80,000 square kilometers based around farmland

(Fu and Zheng, 2007). The line between Banners and counties at that time was close to the Great Wall (Fig. 7a).

Due to later developments in Chahar province, three *shezhiju* were set up there in 1934: Chongli, Shangyi and Huade, all of which were upgraded to counties in January, 1936 (Fu and Zheng, 2007). The distributive maps of Banners and counties in Chahar Province in 1913 and 1935 respectively show how the boundary between Banners and counties was pushed northwards to the area of the middle of Chahar Province (Fig. 7).

The administrative divergence between Mongols Banners and Hans Counties during the late Qing and Republican period provides collateral evidence of the location of the agro-pastoral line, although there would have been a little lag, as the establishment of a new county meant that there the local land had almost completely changed from pastoral land into farmland. In fact, if we map the distribution of Catholic churches based on a database combining several sources (Fig. 8), we find that the dividing line between counties and Banners is roughly situated at the northern limit of the distribution of Catholic churches with some overlap with the boundary between Banners and counties in 1936. So the relationship between spreading

of Catholic Church and line of agro-pastoral northwards is very clearly demonstrated.

6. Conclusion

Geographically, the belt along the Great Wall is a transition zone between sub-humid and semi-arid climates. This line is the northern boundary of the monsoon region, so it roughly equates to the dividing line between agriculture and nomadic regions, or the agro-pastoral line as we have referred to it. Although this line shifted at some points depending on the balance of power between sedentary states and nomadic tribes, it was perceived as being roughly stable for some 2000 years.

However, the line started to shift substantially northward and westward into the Mongolian Plateau in the middle of the 19th century. It went far beyond the Great Wall and almost approached the 400 mm isohyets line which is the ultimate limit of rain-fed agriculture. At some places, even the 400 mm isohyets line was crossed. What happened in the period? We find that there was a massive wave of Han migration across the Great Wall beginning in the late 18th century. What's more

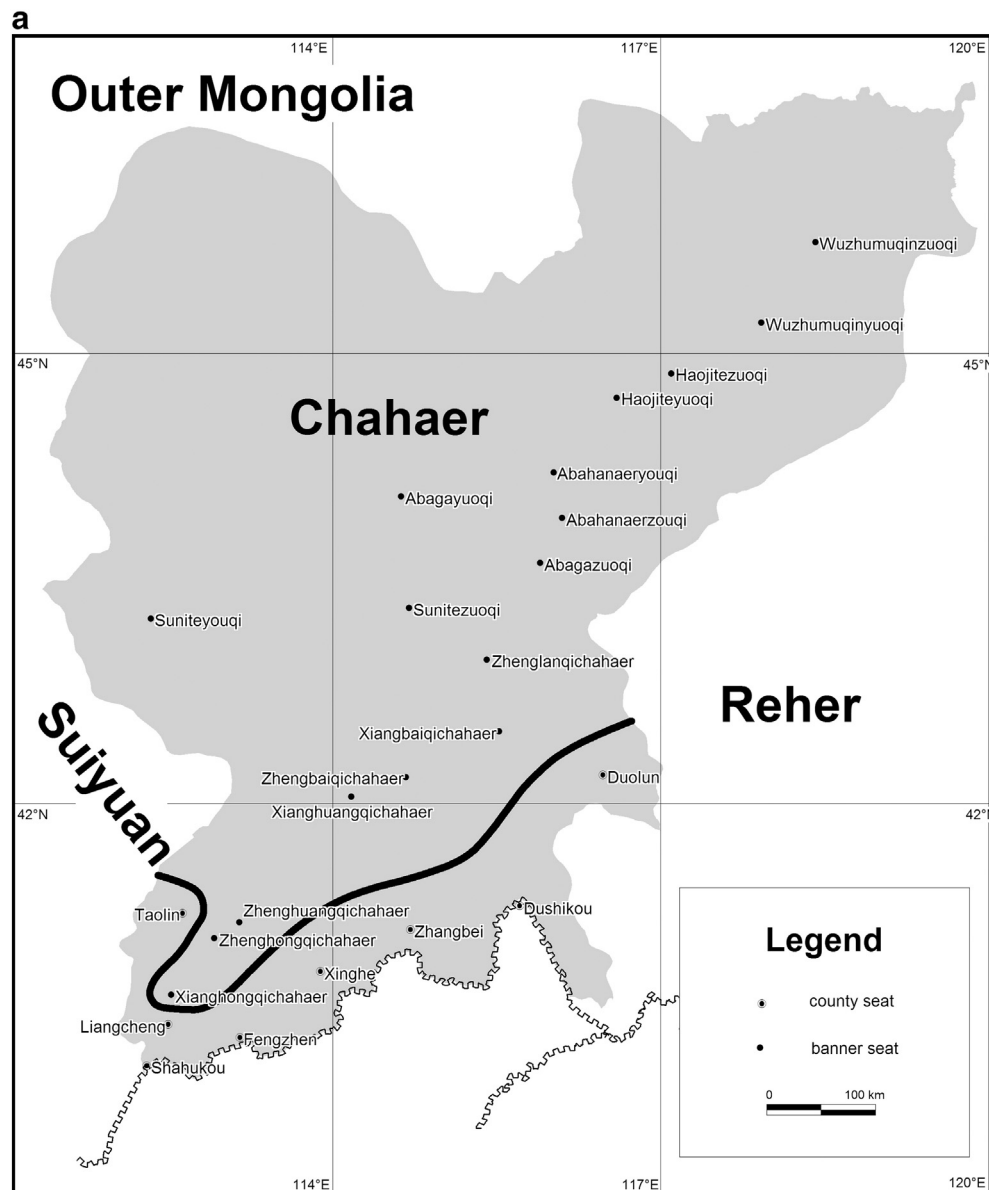


Fig. 7. The map of shifting of boundary between Banners and Counties in Chahar Province.

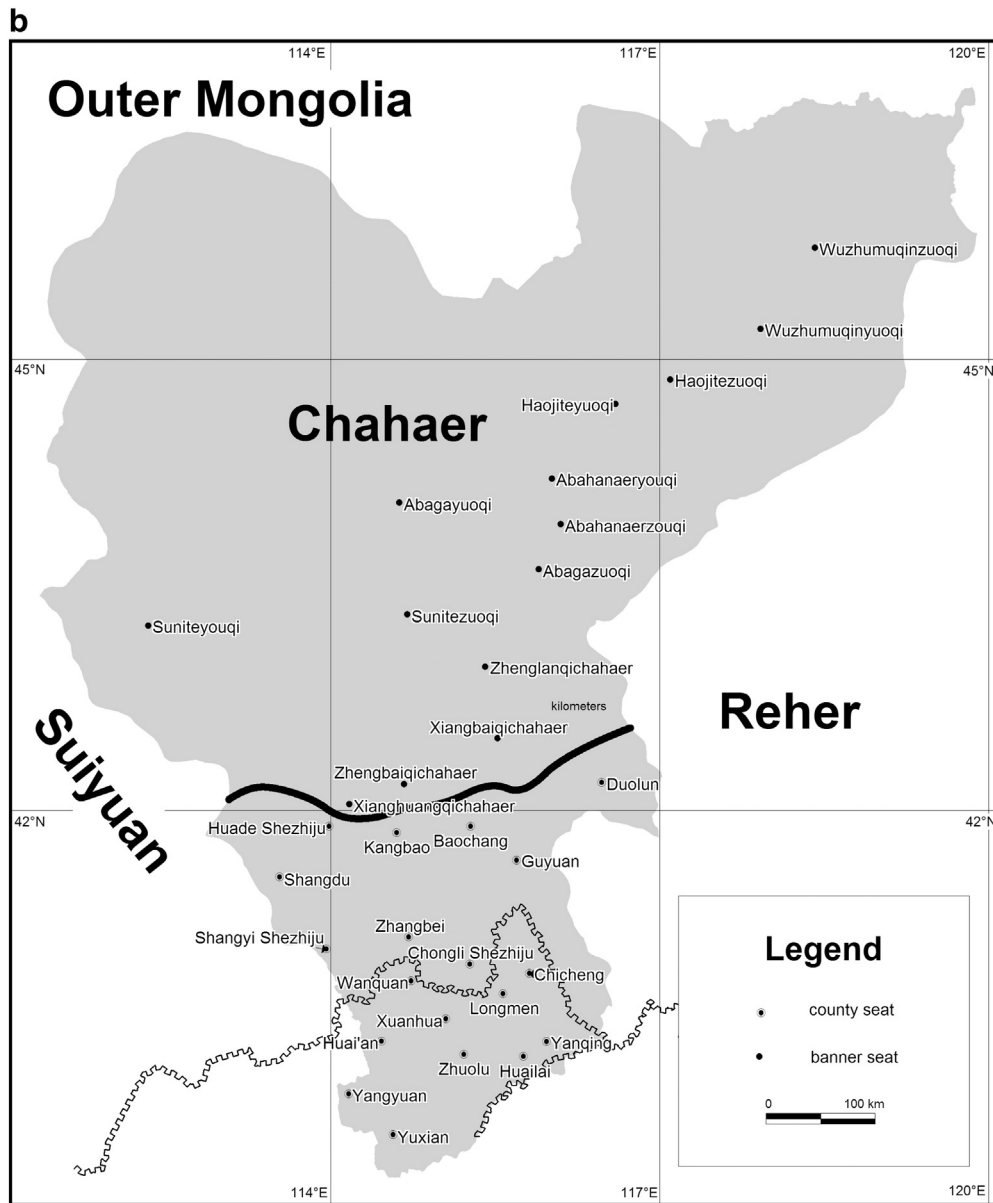


Fig. 7 (continued).

surprising is that most of them were in fact Catholics. Thus there was a relationship between the shifting of the agro-pastoral line and the spread of Catholicism.

Our earlier studies have found that there was indeed a close relationship between agricultural development and the spread of the Catholic Church in western Inner Mongolia. When preaching to Han farmers in Inner Mongolia, missionaries of the Catholic Church had to get involved in the special man-land relationship there by taking part in the reclamation of grassland. Meanwhile, missionaries made efforts to promote the transformation of former grazing land to productive farmland. However, we are not sure whether this strategy was carried out by the CICM in the whole Mongolia Vicariate or not. We are especially interested in the eastern part of the Vicariate, where rain-fed agricultural was highly developed.

Although Han people first started moving onto Mongolian grassland, renting portions of it to cultivate, in the middle of the Qing Dynasty, their land reclamation was only small-scale and had little influence on the location of agro-pastoral line. Furthermore, the policy of the Qing government hardly enabled individual Han settlers to survive on the

grassland, so that the agro-pastoral line remained fixed on the belt of the Great Wall.

Europe's age of geographical discovery led to the spread of Catholicism from Europe to other parts of the world, a process that impacted China. However, the development of Catholicism had been limited in inland China as the Qing government forced the missionaries to preach in marginal areas where central government control was weak. As the Chahaer region was the junction of the North China Plain and the Mongolian Plateau, the executive power belonged to military commanders because it was close to Beijing, the political center of China. Thus this region became an asylum to Catholic Church under the pressure of Chinese government and local society.

At the same time, corn and sweet potatoes came to be planted widely in China, which in times of peace resulted in a rapid population increase and consequently tense human-land relationship. Even so, agricultural productivity remained too low to feed the population due to the lag in tillage methods. Agricultural impoverishment was worst in the North China Plain, and the starved famers had to depart from their native regions to seek survival in the vast Mongolian Plateau. Meanwhile, the Catholic Church was looking for opportunities to preach

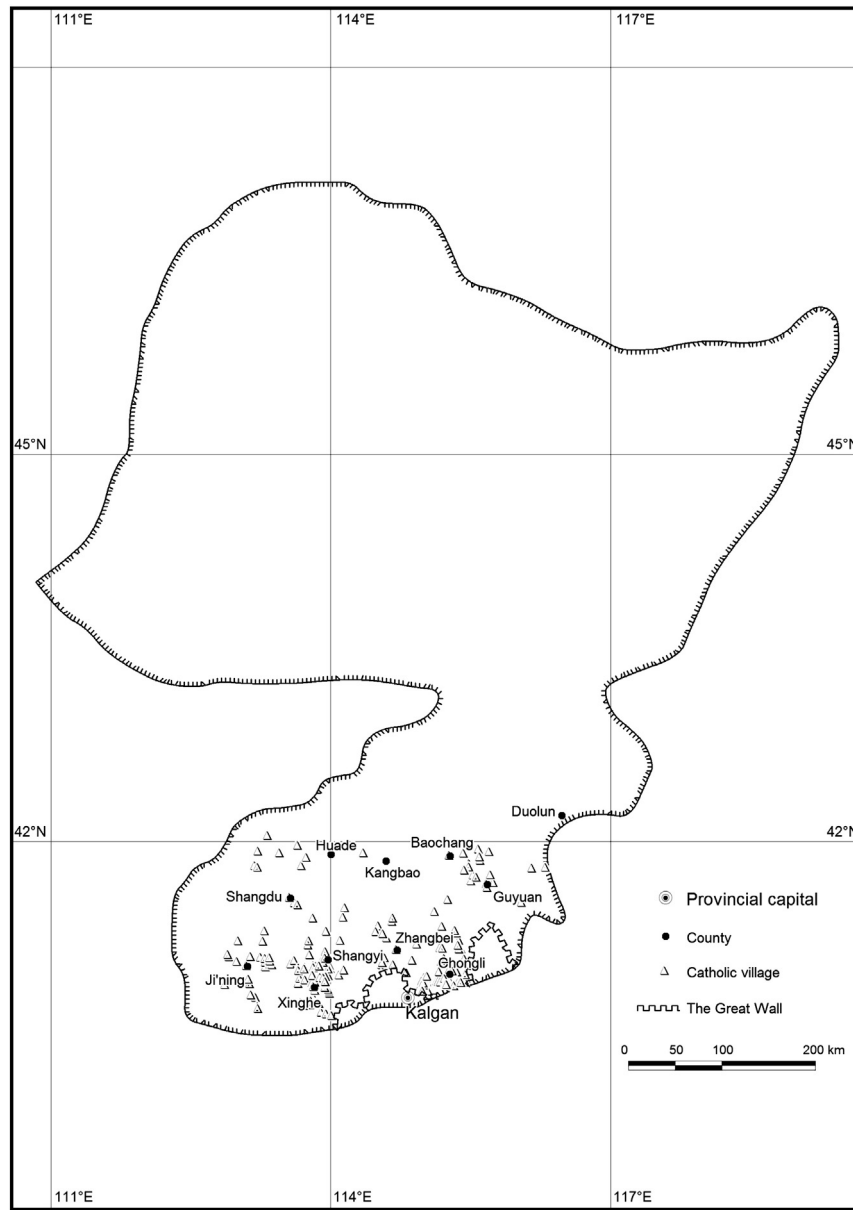


Fig. 8. The comparison of the distribution of Catholic villages and the dividing line between counties and Banners in Chahar Province in 1935.

in Mongolia, and found that it was difficult to preach to the Mongols as they were scattered over a vast territory and were devout Buddhists. Hence, the missionaries focused on preaching to the Han. To convert

Han farmers to Catholicism, the church rented or bought land from Mongols, and sublet the land to Han people, as well as providing them with seeds and tools. Due to the development of the Catholic Church, more and more Catholic villages were built up on former grazing land beyond the Great Wall. The agro-pastoral line was pushed northwards in Chahar region while masses of Han were converted to Catholicism. This expansion reached the point where it caused the methods of administrative management to change in the region. Hence, the preaching strategy of the Church indirectly changed the grassland into farmland, and pushed the agro-pastoral line northwards far from the Great Wall.

The influence of Catholic missionary activity on the agro-pastoral line was most significant in the period from 1800 to 1906. When the central government took over land reclamation in Inner Mongolia in 1906, the Catholic Church was no longer the most powerful organization in this field and its leading role was weakened. However, there is no doubt that the Catholic Church had already played an important role in the early agricultural development of the region and the northward movement of the agro-pastoral line in Chahar.

The Catholic Population

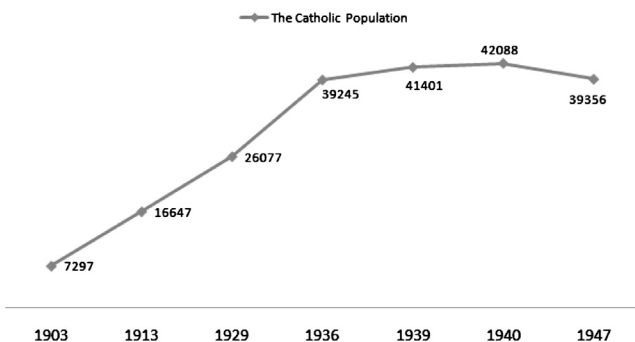


Chart 1. The Catholic population under the Chahar Region (1903–1947).

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Appendix A. Supplementary data

Supplementary data associated with this article can be found in the online version, at <http://dx.doi.org/10.1016/j.catena.2015.01.023>. These data include Google maps of the most important areas described in this article.

References

- Berg, L., 2002. Scheut in China, mission beyond the Great Wall. Jointly published by Ferdinand Verbiest Foundation, K. U. Leuven, Belgium and Kuagnchi Cultural Group, 281–310; Taipei, (in Chinese).
- Bureau Sinologique de Zi-ka-wei, 1930. *Missions séminaires œuvres Catholiques en Chine 1928–1929*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 12 (in French).
- Bureau Sinologique de Zi-ka-wei, 1931. *Missions séminaires œuvres Catholiques en Chine 1929–1930*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 18 (in French).
- Bureau Sinologique de Zi-ka-wei, 1932. *Missions séminaires œuvres Catholiques en Chine 1930–1931*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 18 (in French).
- Bureau Sinologique de Zi-ka-wei, 1933. *Annuaire des missions Catholiques de Chine 1933*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 18 (in French).
- Bureau Sinologique de Zi-ka-wei, 1934. *Annuaire des missions Catholiques de Chine 1934*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 18 (in French).
- Bureau Sinologique de Zi-ka-wei, 1935. *Annuaire des missions Catholiques de Chine 1935*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 24 (in French).
- Bureau Sinologique de Zi-ka-wei, 1936. *Annuaire des missions Catholiques de Chine 1936*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 24 (in French).
- Bureau Sinologique de Zi-ka-wei, 1937. *Annuaire des missions Catholiques de Chine 1937*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 24 (in French).
- Bureau Sinologique de Zi-ka-wei, 1938. *Annuaire des missions Catholiques de Chine 1938*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 16 (in French).
- Bureau Sinologique de Zi-ka-wei, 1939. *Annuaire des missions Catholiques de Chine 1939*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 16 (in French).
- Bureau Sinologique de Zi-ka-wei, 1940. *Annuaire des missions Catholiques de Chine 1940*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 16 (in French).
- Bureau Sinologique de Zi-ka-wei, 1941. *Annuaire des missions Catholiques de Chine 1941*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 16 (in French).
- Bureau Sinologique de Zi-ka-wei, 1948. *Annuaire de L'ennuairCatholiques de Chine 1948*. Imprimerie de T'ou-sè-wè, Zi-ka-wei, Shanghai, p. 12 (in French).
- Chao, J., 1980. *A Brief History of the Hierarchy in the Church of China*. Wendao Press, Taipei (in Chinese).
- China\1924. Status Missionum CICM in Sina et in Mongolia, Archief Scheutisten-Generaalat, 17.1.4-6200, KADOC, KU Leuven (in Latin).
- China\1928. Central Mongolia/Sywantze/Tsining\Status Missionis, Archief Scheutisten-Generaalat, 17.1.4-6201, KADOC, KU Leuven (in Latin).
- Compiling Committee of Catholic Cases in Late Qing Dynasty, 1988. *The Catholic Cases in Late Qing Dynasty*. Zhonghua Press, Beijing (in Chinese).
- Congregation of the Mission, 1846. *Annales de la Congregation de la Mission*. Impeimerie D'adrien le Clere et C, Paris (in French).
- Department of Geography in Inner Mongolia Normal University (Ed.), 1965. *The Physical Geography in Inner Mongolia*. Inner Mongolia People's Press (in Chinese).
- Fu, L., 2007. The study on formation of Fumin Ting System in the Qing Dynasty. *Journal of Chinese Historical Geography* 22 (1), 32–38 (in Chinese).
- Fu, L., Zheng, B., 2007. *The history of Chinese Administrative Division—The Republic of China*. Fudan University Press, Shanghai (in Chinese).
- Fujino, S., 1932. *The Situation of Inner Mongolia*. New Mongolia 1, pp. 29–33 (in Chinese).
- Gazette editorial Board of Chongli County, Hebei Province, 1995. *Chongli County Gazette*. China Social Press, Beijing (in Chinese).
- Gazette editorial Board of Hebei Province, 1993. *Chronicle Records of Hebei Province*. Hebei Science and Technology Press, Shijiazhuang (in Chinese).
- Huc, E., 1931. *Souvenirs of a Journey Through Tartary, Tibet and China: During the Years 1844, 1845 and 1846*. In: Planchet, J. (Ed.), Lazarist Press, Peking (in French).
- Institute of Education Science and Research in Kalgan City, 2003. *Geography in Kalgan*. Hainan Press, Haikou (in Chinese).
- Muzhang'a, 2007. In: Pan, X. (Ed.), *The Geography of China in Qing Dynasty (Da Qing Yi Tong Zhi)* vol. 404. Shanghai Guji Public House, Shanghai, p. 411 (in Chinese).
- Rondelez, V., 2002. *The Catholic Village of Xiwanzi, Mission Beyond the Great Wall*, Jointly published by Ferdinand Verbiest Foundation. K. U. Leuven, Belgium and Kuagnchi Cultural Group, Taipei, pp. 9–94 (in Chinese).
- Second Chinese historical Archival (Ed.), 1937. *The Situation of Land Rent and Foreign Religion Preaching in Shuiyuan Province and Mongolia* (in Chinese).
- Sheng, W., 1999. *The Catholic Church in Inner Mongolia in Late Qing Dynasty (before1900)*. Master's thesis, Inner Mongolian University (in Chinese).
- Shimonaga, K., 1935. *The situation and influence of Catholics in Eastern Chahar*. New Mongolia 4(5), pp. 41–46 (in Chinese).
- Shimonaga, K., 1936. *The situation and influence of Catholics in Eastern Chahar*. New Mongolia (continued) 5(2), pp. 6–12 (in Chinese).
- Tang, K., Ma, Z., 2003. Review of CICM of missionizing in Gansu in the Late Qing Dynasty and the early days of Republic of China. *Journal of Northwest Normal University (Human and Social Science)* 3, 92–98.
- Taveirne, P., 2004. *Han–Mongol Encounters and Missionary Endeavors: A History of Schout in Ordos (1874–1911)*. Doctoral Dissertation. Leuven University.
- The Reclamation Bureau in Chahaer Region, 1976. *The Brief of Land Reclamation in Chahar Region*. Wenhai Press, Taipei (in Chinese).
- Tiedemann, G., 1994. *Christianity in a violent environment: the North China Plain on the eve of the Boxer Uprising*. In: Heyndrickx, Jeroom (Ed.), *Historiography of the Chinese Catholic Church: Nineteenth and Twentieth Centuries*. Ferdinand Verbiest Foundation K.U., Leuven.
- Van Melckbeke, C., 1950. *The cause of Roman Catholicism in Frontier*, Fu, M. (trans.). Saphientia Press House, Beijing, (in Chinese).
- Verhelst, D., Th. 2002. *Verbiest and CICM pioneers, Mission Beyond the Great Wall*, Jointly published by Ferdinand Verbiest Foundation, K. U. Leuven, Belgium and Kuagnchi Cultural Group, 125–214; Taipei, (in Chinese).
- Wu, Y., 1935. *Background of Chahar and Suiyuan*. New Mongolia 4(1), pp. 14–21 (in Chinese).
- Yan, T., Chen, X., Han, G., 2002. The interlocking pattern about Meng, Qi, Fu, Ting, Zhou and Xian in Rehe in Qing Dynasty. *Journal of Peking University (Humanities and Social Science)* 39 (6), 108–115 (in Chinese).
- Yang, X., Li, H., Conacher, A., 2012. Large-scale controls on the development of sand seas in northern China. *Quaternary International* 250, 74–83.
- Yang, X., Wang, X., Liu, Z., Li, H., Ren, X., Zhang, D., Ma, Z., Rioual, P., Jin, X., Scuderi, L., 2013. Initiation and variation of the dune fields in semi-arid northern China — with a special reference to the Hunshandake Sandy Land, Inner Mongolia. *Quaternary Science Reviews* 78, 369–380.
- Yano, J., 1935. *The relationship between Inner Mongolia and Qing Dynasty in past period*. New Mongolia 4(1), pp. 21–23 (in Chinese).
- Zhang, Y., 2006. *The research of Catholicism in the Inner Mongolia Preach activity during the Late Qing Dynasty (1865–1911)*. Doctoral Dissertation, Jinan University (in Chinese).
- Zhao, K., 1985. *The situation and influence of the foreign Catholic Church occupied the land in Inner Mongolia Modern China*. *Journal of Social Science of Inner Mongolia (Chinese)* 3, 61–66 (in Chinese).
- Zhou, Q. (Ed.), 1994. *The Historical Geography of Inner Mongolia*. Inner Mongolia University Press, Hohhot (in Chinese).