

WATER MANAGEMENT PROJECTS AND FLOODS/ DROUGHTS IN COLONIAL KOREA: THE CASE OF THE MAN'GYŎNG RIVER IN THE HONAM PLAIN

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The Man'gyŏng River is a medium-sized river passing through the southwestern Chŏlla region, one of the most productive rice cultivation areas of Korea. This article analyzes projects related to water management, such as the construction of irrigation facilities, river improvement, and farmland rearrangement, conducted in the river basin during the period of Japanese colonial rule (1910–1945), with an emphasis on the reactions of local Korean peasants. Immediately after the Russo-Japanese War (1904–1905), Japanese immigrants began to acquire land around the middle and lower reaches of the river, and by the time of the colonization of Korea in 1910, large Japanese landowners had established modern-style irrigation associations for supplying water to their farms, which were tilled by Korean tenants. However, construction of developmental infrastructure, such as railways, roads, and irrigation facilities induced the exacerbation of flood damage once the river overflowed because of the obstruction of water drainage. The interests of local Korean peasants and those of large Japanese farm owners clashed over the issue of preventing flood damage. Eventually, the colonial government decided to proceed with the river improvement project proposed by the Japanese-led irrigation associations.

Keywords: Japanese settlers, Korean tenants, river improvement, irrigation associations, droughts, floods

This article analyzes one aspect of the improvement project of the Man'gyŏng River, one of the most important rivers put under the control of the colonial

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government in Korea (i.e., the Chōsen sōtokufu). Its focus is on the issue of the flood damage precipitated by the water management projects that was part of the ‘developmental’ policy of the colonial government. The colonial government aimed to benefit the public by controlling the water flow through building dams and dikes on the one hand, yet paradoxically its water management projects had adverse consequences, such as the exacerbation of flood damage. Despite the water management projects, the Man’gyōng River sometimes overflowed. Once the overflow occurred, water drainage was obstructed by the dikes constructed in the course of the projects, worsening the flood damage.

Many recent environmental historical studies have made a strong case that large-scale water management projects initiated by developmental colonial authorities entailed a range of problems, such as civil disputes over water usage, man-made natural disasters, and changes in the ecosystem (McNeill 2000; Marks 2006). In the case of colonial India, the showcasing of modern scientific technologies introduced by the British colonial authorities in the course of local water projects was tarnished by a host of subsequent problems, such as the massive financial burden, and the weakening of local control over water resources (Radkau 2008: 172). Despite some individual cases of success in the developing and managing of local water resources (Ostrom 1990), the problematic relationship between local development and its environmental impact has emerged as a growing concern in colonial studies.

Water management projects in the Man’gyōng River basin under colonial rule consisted of land improvement projects like irrigation, drainage and land rearrangement projects which were mainly conducted by the irrigation associations and river improvement projects conducted by the colonial government. Some scholars have paid attention to the irrigation associations that mushroomed along the Man’gyōng River since the end of the 1990s.¹ Recently, several case studies have contributed to our understanding of various aspects of the Man’gyōng River improvement project; Hirose Teizo’s study (2010) addresses the issues of land purchase and compensation; Hō Suyōl’s study (2012) analyzes the Iri construction office and its subcontract system for the supply of labor to the project. However, there is also a need to consider what the actual impact (positive or negative) of the project to prevent flooding on the local communities of Korean peasants was, and what the environmental problems caused by the project were.

It should be noted that water management projects in the Man’gyōng River basin were conducted in the context of the Japanese colonialist policy to develop

¹ See Matsumoto Takenori (2003); Hong Sōngch’an, et al. (2006); Chung Seung-Jin (Chōng Sūngjin) (2009a, 2009b, 2009c, 2015).

the Honam plain—dubbed a “treasure of Korea.”² Right after the Russo-Japanese War (1904–1905), many Japanese started to accumulate substantial portions of the huge area of farmland in this plain. These large-scale landowners collected rice from Korean tenant peasants as farm rent and exported it to Japan. Rice export from the Kunsan port as an outlet of the Honam plain to Japan increased rapidly in volume. By the early 1920s, along with Pusan, Kunsan grew into a major port for the export of rice to Japan.³ To stabilize and promote the rice product and ultimately to export it to Japan was one of the main purposes of water management projects.

The effects of the projects recognized respectively by the large-scale landowners and Korean peasants are different from each other. For the large-scale landowners in this plain, including a few Koreans, flood damage was a matter of risk management; they could survive as long as the damage was local, and welcomed the water management projects because those projects could decrease the probability of the floods. For Korean peasants, contrastingly, even isolated instances of local flood damage were very destructive and severely damaged their livelihood. Such Korean peasants sometimes became skeptical of the effects of the projects, because they believed the projects could not completely prevent the floods.

1. THE GEOGRAPHICAL SETTING OF THE MAN'GYŎNG RIVER BASIN

The Man'gyŏng River runs along the northern area of the Honam plain and is a medium-sized river, originating from the mountains to the northeast of North Chŏlla Province and flowing into the Yellow Sea. Together with the Tongjin River to the south of North Chŏlla, it served as a major source of water for the Honam plain, which had been a rice basket for Korea from times immemorial. The Honam plain in North Chŏlla was marked by extremely productive rice agriculture and thriving commercial farming, and also by the highest tenancy rate throughout Korea. One study suggests that with the growth of cities like Kunsan and Iri following the establishment of colonial rule, there was considerable migration from the upper reaches to the middle and lower reaches of the river (Namgung Pong 1990).

² Iksan County and Kimje County, the key areas of rice cultivation in North Chŏlla, were called the “treasure of Chŏlla Province.” (Matsumoto and Chung 2015)

³ Itō Kōzaburō, *Gunsan Annai* [Guide to Kunsan] (Gunsan Tikkō Kikō Shukuga Kirokugakari 1926), 36.

With growing immigration of Japanese into the interior of Korea ever since the Russo-Japanese War, they acquired more and more land in the middle and lower Man'gyöng River basin. When after the colonization of Korea (1910) a transportation network of roads and railways was constructed, Iri, located at a key spot where the Honam and Chölla railways were linked, grew rapidly as a colonial city dominated by Japanese immigrants, in the same way as Kunsan (Chung Seungjin 2012). The enthusiasm of the Japanese immigrants for agricultural development in this region was evident early on. Around the time of the annexation of Korea in 1910, four irrigation associations were organized along the middle and lower reaches of the Man'gyöng River.⁴ All four irrigation associations relied on the Man'gyöng River as the source of their water supply.

The upper Man'gyöng River (Kosan-ch'ön) and its tributary (Chönju-ch'ön) met near Samnye in Chönju County and from that point downstream, the water current became slower. Vast tracts of fields stretched to the right side of the river, called the Chönju plain, which was located to the north of the Honam plain. Since the Chosön era (1392–1910), the Samnye area had been known for its transportation routes, over the river, along the coast and overland, hence its nickname as the gateway to Chölla Province. Yet the tidal difference at the mouth of the river was great, and at high tide seawater invaded the river upstream to its middle reaches (i.e., the Samnye area), affording sufficient depth for smooth navigation. Due to this, the middle and lower sections of the river were favorable to riverine transportation, while its heavily meandering course (especially at the Samnye area) slowed the flow of water, time and again precipitating large-scale flooding.

In terms of the traditional irrigation system, the upstream section, middle section and downstream section of the Man'gyöng River basin had different characteristics (Namsung Pong 1997). The upstream section had the oldest history of irrigation, going back to the mid-Chosön era (about the early seventeenth century), and utilized river water by collecting it in small-scale dammed pools (*pö*), which were constructed and managed by local village communities. For the middle section, government documents reported the construction of river bank and irrigation facilities from the latter half of the seventeenth century. It was recorded that a large-scale dammed pool, named Tokjuhang-bo, which reportedly irrigated about 300 hectares of paddy fields, was rebuilt there in the latter half of

⁴ Besides those four irrigation associations, Imik (founded in 1909), Imik-nambu (1909), Chönik (1910), and Imok (1911), there also existed an association, Okku-söbu, a small traditional irrigation association founded by Korean peasants in 1908. See Chönbuk nongji kaeryang chohap, ed., *Chönbuk nongjo 70 nyön sa* [Seventy-year history of the Chönbuk Agricultural Association] (1978), 100–102.

the nineteenth century (c.f. Picture 1). This pool (*po*) was owned and managed by a high-ranking government officer who was a relative of Queen Min in the late Chosŏn era. Among the large-scale traditional dammed pools it was the one that was located furthest downstream. However, it soon became partly unusable after its owner had lost his political position in the central government. This event implies that a large-scale traditional dammed pool like Tokjuhange-bo couldn't be reconstructed and managed without the support of the political authorities in power. In the downstream area, there were no traditional dammed pools, because it was difficult to control water there by using traditional engineering techniques. Instead of dammed pools, people constructed reservoirs to preserve rain water for the irrigation of their paddy fields.

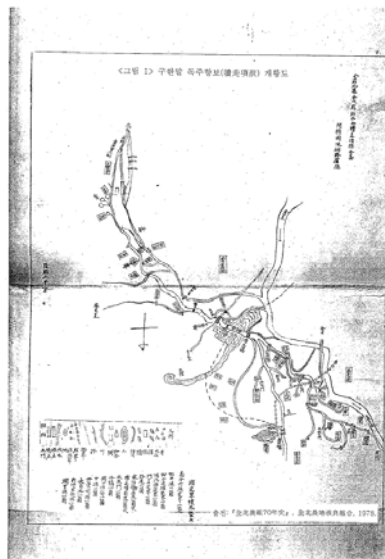


Figure 1: Outline Map of Tokchuhang-bo prior to colonial rule

Immediately after the Russo-Japanese War, many Japanese investors started to purchase land parcels around this area and rent them out to Korean tenants. Some large Japanese landowners, encouraged by the agricultural immigration policy of their homeland, acquired their own land in the Korean interior and established Japanese agricultural immigrant villages there. The number of Japanese farm households in north Chŏlla increased rapidly from 899 in 1910 to 1,478 in 1916. Yet, compared with the number of Korean farm households of 194,907 in 1916, the Japanese proportion remained miniscule. Moreover, the proportion of the Japanese farm households out of the total 5,739 Japanese households in north

Chōlla in 1916 was just 26 percent. A great majority of Japanese immigrants in north Chōlla engaged in non-agricultural occupations such as government posts and commercial or industrial jobs, residing in the urban streets of Kunsan and Iri rather than in rural villages.⁵

Some Japanese large-scale landlords played a leading role in establishing the irrigation associations, repairing the conventional irrigation facilities around 1910. In the case of the Chōnik Irrigation Association, it utilized Tokchuhang-bo by repairing existing facilities, as was propagated by the colonial government (Chung Seungjin 2009a). It was from 1920 when the colonial government started to promote the “Rice Production Increase Plan” that the modern large-scaled irrigation facilities were constructed by the irrigation associations with the financial and technical support of the colonial government, as will be shown below in the case of the Igok Irrigation Association in 1920, which covered an irrigation area of 10,000 hectares (approximately 24,500 acres) and had its office in Iri City.

Basically, the irrigation associations in this area focused on irrigation and drainage projects. Their projects were still vulnerable to the overflow of the Man’gyōng River. To make things worse, as will be explained below, the irrigation association facilities became obstacles for the drainage of the flood water of the Man’gyōng River. Development of irrigation association projects eventually triggered the Man’gyōng River improvement project.

2. POLICY BACKGROUND OF THE MAN’GYŎNG RIVER IMPROVEMENT PROJECT

In 1914, the colonial government of Korea announced the “Regulations to Control Major Rivers,” and designated fourteen major rivers in Korea, including the Man’gyōng River, as rivers under direct control of the colonial government. A survey of the Man’gyōng River started in 1912 and resulted in plans to improve the river, centered on redirecting the meandering course of the river and the building of dams for water conservancy.⁶ As an accompanying project, an additional plan to build a large-scale reservoir at the upper reaches of the river was drawn up in order to supply irrigation water and to lessen the hazard of

⁵ These statistics are cited from Chōsen sōtokufu Zenrahokudō, ed., *Taishō 5 nen Chosen sōtokufu Zenra hokudō tokei nenpō* [Annual report of North Chōlla Province, Government General of Korea] (1918), 12 and 134.

⁶ Chōsen sōtokufu naimubu dobokuka, ed., *Chōsen kasei chōsasbo* [Investigation report on Korea’s rivers] (1929), 35–36.

flooding.⁷

The latter project of building a reservoir was initiated by the local irrigation associations rather than by the colonial government, and the cost was to be borne by the local beneficiaries of the project, while the river improvement project was to be financed by the colonial government (Matsumoto 1991). Under the initiative of the leading Japanese landowner Fujii Kantarō, the Igok Irrigation Association came into being in 1920 through a merger of the Imik-nambu Irrigation Association and the Imok Irrigation Association. The newly-built Taea Reservoir on the upper section of the river served its irrigation water supply (Matsumoto Takenori 2003). Prior to this in 1909, Fujii Kantarō, by overhauling the dilapidated traditional Hwangdŭng Reservoir, had succeeded in creating a large-scale irrigation association based on the reservoir, named the Imik Irrigation Association—the first of its kind in Korea. The new Igok Irrigation Association (1920) was basically an enlarged version of his earlier Imik Irrigation Association (1909). Its large-scale reservoirs and extended irrigation waterways stretching across Iksan and Okku Counties (including Kunsan) supplied water for the Japanese large-scale landlords' farms in the region.

The survey of fourteen major rivers was finished in 1923, and was soon followed by the river improvement projects in 1925. The Man'gyōng River together with the Chaeryōng River were given priority, the rationale of which was expressed by the colonial authorities as follows;

Even up to the 1900s, in the lower Man'gyōng River basin there were still mostly reed fields, but owing to relatively mild weather and proximity to the Kunsan [rice export] port, the inland large-scale landowners continued to open their farms, thereby transforming the region into a renowned rice-producing area of the colony. . . . Yet, the building of railways, roads, and dikes by the irrigation associations since the 1910s has resulted in drainage problems in times of flood. Consequently, a demand for river improvement was voiced earlier, and in the aftermath of the recent floods in 1920 and 1921, there has been a popular uproar over the issue of water control.⁸

The quoted report shows how the river improvement project was presented as a new developmental project to prevent flood damage caused by the land improvement efforts of the Japanese farm owners through the construction of irrigation facilities. Interestingly, the above quote suggests the viewpoints of the

⁷ Chōsen sōtokufu kanbo dobokubu, ed., *Chisui oyobi shuiri tosasbo* [Field survey of water control and irrigation] (1929), 35–36.

⁸ Chōsen sōtokufu naimubu dobokuka, *ibid.*, 368–9.

colonialist developers. First, the report highlighted the transformative efforts of the Japanese immigrants, who had reclaimed the old reed fields—symbolizing the stagnant state of Korea’s agriculture—into a major rice-producing plain.⁹ Moreover, the location of their farms in the hinterland of the rice-exporting port of Kunsan pointed to the role of colonial Korea as an agricultural supply base for the metropole.

Second, the admission that developmental infrastructure such as railways, roads, and irrigation embankments obstructed the drainage of water and therefore caused the exacerbation of flood damage once the river overflowed indicated a dilemma on the part of the colonial power in its efforts to justify colonial rule on the basis of the development it brought to the colony. Moreover, the irrigation associations, in particular the Igok Irrigation Association (1920) led by Fujii Kantarō, were designed to provide more effective irrigation and drainage of water, yet they turned into a disastrous cause of flooding in time of heavy rain, confronting not only the affected local peasants but also the ruling colonial authorities with a grave problem.

While this infrastructure-induced flooding may well have put the colonial authorities into a kind of ‘developmental dilemma,’ it posed a serious threat to the lives and property of local Korean peasants, who protested riotously as hinted in the above quote. For the colonial authorities, promotion of the Man’gyōng River improvement projects was the only way to dissolve the ‘developmental dilemma’ situation. Actually, the projects were conducted from the middle of the 1920s. Attitudes of large-scale Japanese and Korean landowners and Korean peasants toward the projects were different from each other as will be mentioned in the next section.

3. CONFLICTING ATTITUDES TOWARD THE IRRIGATION FACILITIES BETWEEN THE LARGE-SCALE LANDOWNERS AND KOREAN PEASANTS

Contemporary Korean newspapers were keen to report the magnitude of flood disasters and the protests of Korean peasants living in the affected areas. A large flood in 1920 was reported as having inundated about 10,000 hectares

⁹ According to Kunsan noji kumiai, even as of 1910, its members’ registered lands comprised 184,737 *turak* (斗落) of rice paddy, 26,167 *turak* of dry land, and only 12,293 *turak* of uncultivated waste land (Yi Kyusu 1996, 369). Yet, it seems that the authors of *Chōsen kasen chosasho* tried to highlight the widespread existence of reed (waste) land, reflecting their perception of Korea’s stagnation in agricultural development.

(approximately 24,500 acres) of farmland in Kimje, one of the key agricultural regions in the Honam plain (*Tonga ilbo*, July 21, 1920). Another flood in Iksan County (centered around Iri City) was reported to have inundated almost all of Taejangch'on, a Japanese immigrant village, and having endangered the Honam railway line. In neighboring Ch'ŏnju too, a flood was reported to have inflicted severe damage, with 500 houses inundated, 50 houses lost, and a number of human casualties (*Tonga ilbo*, July 21, 1920). The newspaper further detailed the disastrous aftermath of the floods that had hit the center of the Honam plain, including news on relief and donation activities (*Tonga ilbo*, July 22, 23, 26, and 30, 1920).

Regarding the peasants' reaction to the flood damage in September 1921, the *Tonga ilbo* reported that hundreds of peasants in Iksan rushed to the provincial office, "protesting against the building of dikes by the irrigation associations" (*Tonga ilbo*, September 22, 1921). On September 20, the protesting crowd swelled to five thousand, joining from the affected seven sub-counties of the three counties of Ch'ŏnju, Iksan, and Kimje, and again rushed to the provincial office, demanding measures to mend damage caused by the flood. The newspaper noted that the protest seemed well-organized, as each household was asked to provide at least one participant carrying two to three days' food with him (*Tonga ilbo* September 24, 1921). Yet, the protestors were stopped in mid-course by roughly thirty policemen, and several leaders were arrested and interrogated. In the end, the peasants succumbed to the persuasion of the police chief who had hurried to the scene from Ch'ŏnju City, and they sent fourteen representatives to file a petition with the provincial authorities of North Ch'ŏlla (*Maeil sinbo*, September 25, 1921).

In the collective petition by the peasants from the three counties of Ch'ŏnju, Iksan, and Kimje, three principal reasons for endemic flooding were pointed out. First, of the irrigation dikes under the control of the Igok Irrigation Association, in particular the one passing through the Mokch'ŏnp'o-ri middle-reaches region was heavily twisted and too narrow, thereby thwarting the draining of excess water when the level of the Man'gyŏng River was swelled by rain. Second, many roads in the province were somewhat elevated, posing obstacles to the draining of water. Third, the course of the Man'gyŏng River itself was crooked at many points, thus slowing water flow, especially in the event of a flood (*Maeil sinbo*, September 25, 1921). It should be noted that the peasants blamed the endemic flooding on what may be referred to as 'hydraulic infrastructure,' such as riverside roads and irrigation dikes, which was concentrated in the mid Man'gyŏng River basin (under the administration of Samnye-myŏn of Ch'ŏnju-kun and Ch'unp'o-myŏn of Iksan-gun).

The newspaper accounts, however, are not clear as to what action the local peasants desired to take with regard to the existing water control facilities. A clue can be found in one 1922 request letter titled “Damage done to the Man’gyōng river basin villages, including an insufficient supply of fresh water,” which was sent to the head of the Igok Irrigation Association by the sub-county head of Paekku (Kimje-gun), who was supposed to represent the interests of local residents.¹⁰ This letter brought charges against the counterproductive effects of the association’s water control facilities, which not only caused difficulties in the securing of fresh water to drink and to use, but also caused severe floods. In an impassioned tone the letter charged that “because of the dike built by your association, the unprecedentedly large consecutive floods of 1920 and 1921 have dealt a devastating blow to local farm households, resulting in their loss of houses and farmlands, and that the grieved peasants are so angry and desperate that there is a rumor that they will attack what they call ‘your harmful association.’” Speaking on behalf of the local peasants, the head of the sub-county in the letter demanded the digging of wells for fresh water, the building of at least two sluice gates at the vulnerable Mokch’ōnp’o area along the dike, and even the breaching of the dike in the event of heavy rain.

Similarly, another incident of radical activism by peasants was reported in the course of a severe drought in the summer of 1924, when the peasants of Iksan resorted to destroying the irrigation dike controlled by the irrigation association. The newspaper reported that the “peasants became desperate and violent due to the lack of water even in their rice seed beds. Armed policemen were dispatched against them, but they are expected to receive lenient treatment (*Tonga ilbo*, July 8, 1924). Yet another incident of peasant radicalism was reported at the time of devastating flooding of the Man’gyōng River in August 1931, when hundreds of angry peasants demolished the irrigation dikes of the river under the control of the Igok Irrigation Association, and fifty of them were arrested by the police (*Tonga ilbo*, August 8 and 9, 1931).

In contrast to Korean peasants’ protests against the dike-induced flooding at the middle reaches of the Man’gyōng River, the Japanese farm owners gathered to form an association to appeal to the colonial government for a river improvement project in December 1921. The association succeeded in enlisting as members 1,500 land-owning farmers, from whom 34 large landowners in possession of more than ten hectares (approximately 24.5 acres) were selected as committee members. The standing committee consisted of 7 Japanese farm owners (Nakaya, Nagahara, Yano, Yamazaki, Inoue, Tasaka, and Imamura), and 3 Korean farm

¹⁰ Igok suri chohap, ed., *Jūyō shornū tsuzuri: sho keiyaku* [Files of important papers: various contracts] (1922), Igok document No. 990, 2–7.

owners (Paek Ingi, Kim Chunhŭi and Pak Kisun) (*Maeil sinbo*, December 28, 1921).

The standing committee members paid a series of visits first to the provincial governor of North Chŏlla, and then to the government general in Seoul, including the bureaus of industry, construction, and finance, appealing for a Man'gyŏng River improvement project. Among them, Fujii Kantarō and Paek Ingi met the director general of administration (i.e., the second highest official of the Chōsen sōtokufu) and presented a petition (*Maeil sinbo*, December 28, 1921). The petition collectively signed by some 132 persons stated that “of late human progress and the building of transportation facilities frequently have entailed the obstruction of water flows and the sea tide,” affirming the realization that human efforts could cause flooding. Nevertheless, the petition made it clear that “the Man'gyŏng River improvement project was not only a matter of critical importance for the life and livelihood of the 100,000 residents in the area (covering four counties and sixteen sub-counties), but also a [governmental] project indispensable for developing new arable land.” Thus, the river project was advocated as a regional task (producing one million *sŏk*¹¹ of rice) that was part of a broader colonial mission to develop industry and economy in the colony. While local Korean peasants in their protests seriously questioned the advisability of the irrigation dikes in controlling water, the committee led by Japanese and Korean owners of large-scale farms argued for the river project not only for flood prevention but also for the promotion of the agricultural industry in the region.

The paradoxical situation that the construction of irrigation facilities meant for agricultural development increased the hazard of floods posed a serious dilemma for the colonial authorities, who saw developmental initiative in the colony as an important element in its justification of colonial rule. For the local Korean peasants, dismantling the irrigation structure, which they condemned as a regrettable source of flooding, was a legitimate choice of action in their protests or petitions to the local colonial authorities. By contrast, the petitions led by the Japanese and Korean owners of large-scale farms held on to the developmental project to overhaul the river, assuming that “a problem caused by one development could be cured by another development.” By 1924, large scale construction work for effective water management was launched under the name of relief measures to rescue the impoverished peasants from drought.¹² (*Tonga*

¹¹ 1 *sŏk* of rice is roughly equivalent to 180 liters or 150 kilograms of rice.

¹² In September 1924, when the director general of administration of the Shimooka (下岡) under the Sōtokufu took a tour of the Honam region, accompanying high officials from the construction department, Hara (原) and Fujii Kantaō briefed him about the river improvement project. On arriving at Iri, they were greeted by two or three representatives of the local elite who petitioned them to expedite the Man'gyŏng River improvement project (*Maeil sinbo*, September 8, 1924). The

ilbo, September 21, 1924; *Maeil sinbo*, October 7, 1924)

Eventually, the protests of the Korean peasants were overshadowed by the developmental initiatives proposed by the Japanese and Korean owners of large-scale farms and supported by the colonial government. As has been mentioned above, the Korean peasants recognized that the crooked course of the Man'gyōng River made its water flow slow running and was ultimately the cause of frequent flooding. In this sense, even Korean peasants welcomed the river improvement project conducted by the colonial government, too.

However, the significance of the river improvement project for Korean peasants was different from its significance for the Japanese and Korean owners of large-scale farms in two main respects. Firstly, river improvement projects could not completely prevent floods. They could just decrease the probability of floods. For large-scale farm owners, the decrease of this probability was worth welcoming from the viewpoint of their farms' risk management. On the other hand, for Korean peasants, even just a single flood inflicted destructive damage on their livelihood. That is why Korean peasants tried repeatedly to dismantle the irrigation structure, which was regarded as an obstacle for drainage once the river water overflowed, in order to lessen the flood damage. Secondly, Korean peasants were excluded from the process of the project planning unlike the case of the large-scale farm owners who could reflect their own opinions in the colonial government's projects. The colonial government never gave Korean peasants any opportunities to present their opinions on the projects, even rejecting their collective petitions by force.

4. IMPLEMENTATION OF THE MAN'GYŎNG RIVER IMPROVEMENT PROJECT

The Man'gyōng River improvement scheme was a government general-led project that lasted for six years from 1925 to 1930. Spurred by a great drought in 1924, and starting with the Chōnju Stream (a tributary river) in 1925, the project focused on the middle section of the river, which stretched over sixteen kilometers from Pibijōng to T'aejang-ch'ōn to Moch'ōn-p'ō to Tongja-p'ō, as shown in Figure 2. The project involved the straightening of the existing meanders of the river. (Cf. the old course of the river as shown in Figure 1)

director general in the following year decided to launch the Man'gyōng River improvement project with government funding.

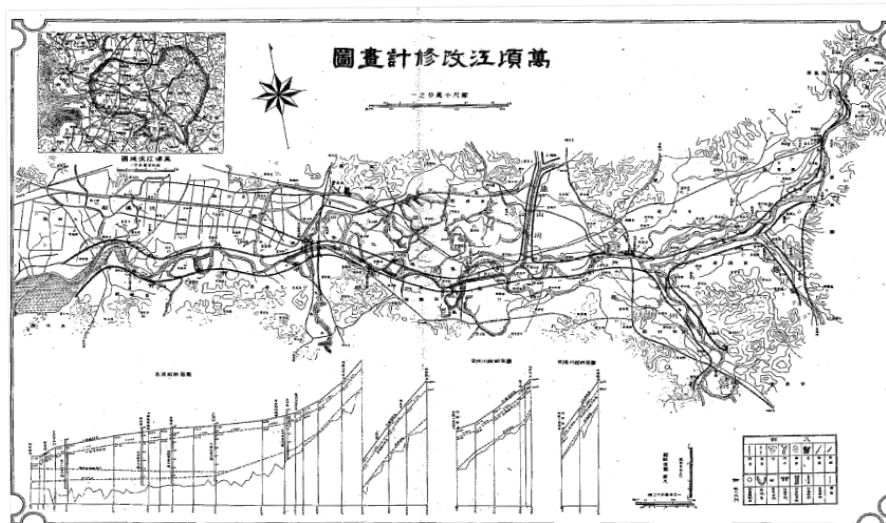


Figure 2: Plan for the Man'gyōng River Improvement Project
 Source: Chōsen sōtokufu, Naimubu, Dobokuka, *op.cit.*

If the focus of the survey was directed to the right side of the Man'gyōng River covered by the irrigation associations, the landholdings run mostly by Japanese (including Japanese corporations) can be verified besides those of Koreans. Remarkably, the proportions of Korean holdings shrink progressively in the direction of the middle and lower reaches of the river; 54.2 percent of the 2,150 *chō* area of Pongdong and Samnye in the upper reach of the river, while 23.8 percent of the 1,334 *chō* area of the Chōnik Irrigation Association, 19.5 percent of the 3,590 *chō* area of the Imik Irrigation Association, and only 13.1 percent of the 10,118 *chō* area of the Igok Irrigation Association in the middle and lower reaches of the river.¹³ While the proportion of Korean holdings in the upper river area exceeds half of the total holdings, the Japanese proportion in the middle and lower river areas far exceeds that of the Korean holdings. Since the Man'gyōng River improvement project was concentrated on the middle and lower reaches of the river, it can be argued that the project was carried out mostly for the benefit of the area largely possessed by the Japanese landowners.

¹³ Chōsen sōtokufu, ed., *Shōwa 6 nendo tochikairyō jigyo yoran* [Summary of the land improvement project in 1931] (1932), 108–109; Imik suri chohap, ed., “Shōwa 15 nendo kuiki henku (shinhennyū no bu) tochi shoyūsha betsu shūkeihyō” [Statistical table of landholding by individual by area (newly added)] (1940), 3. The figure of Pongdong and Samnye is that in 1940. The figures of the four irrigation associations are those in 1931.

In 1929, the range of the project was further expanded, including the eight-kilometer range of the lower course of the river from Tongja-p'o to Tongji-san, and the Iksan Stream, a tributary river. This entailed an extension of the project period and an increase in its total cost from 5.7 million to 9.6 million yen. As for the necessity for the expanded project, the government general argued that “as a result of the improved conditions of the middle section of the river, the volume and velocity of the lower river are increasing, posing a new threat.”¹⁴ In 1933, another addition was the improvement of the Kosan Stream (the upper section of the Man'gyōng River), extending the project period up to 1938.

By 1935, the whole project was almost completed (94 percent), finishing the 178 sub-projects out of the planned 190. The number of finished cases increased rapidly especially from 1930, when the project was expanded to include the lower river and the Iksan Stream in 1929, as mentioned before. The main thrust of the river improvement was focused on streamlining the river, by widening its course, dredging the river bottom, building dikes and reinforcing the river banks, so that flooding of the river could be prevented (Chung Seungjin 2004, 149).

The individual parts of the project were chiefly concentrated on the area vulnerable to endemic flooding—the middle reach of the river and the Iksan Stream—where the irrigation facilities of the irrigation associations were mainly concentrated.¹⁵ Remarkably, the Iksan Stream improvement completed in the early 1930s brought safety from flooding and drought to the farmlands of the middle river basin, including Taejang-ch'on, a prominent Japanese immigrant village.¹⁶

Contrary to the official reports on the successful progress and results of the river improvement project, contemporary newspapers drew attention to the downside of the project, especially at the time of the severe drought that hit the Chōlla region hard in 1929. The *Tonga ilbo* reported that “the influx of victims of the drought into Iri City greatly swelled its population, and poverty-stricken people flowed into the cities to seek for manual labor, driving out the Japanese immigrants.” (*Tonga ilbo*, April 16, 1929) The unsatisfactory condition of the improvement project spawned anxiety “among the Korean peasants in Kimje County, who in anticipation of the rainy season rushed to the construction office

¹⁴ Quoted from Chōsen sōtokufu, ed., *Chōsen sōtokufu chokkatsu kasen kōji nenpō* [Annual report on the river projects under direct control of Chōsen sōtokufu] (1929), 8.

¹⁵ The middle river basin included the area ranging from Pibijōng of Samnye-myōn to Taejang-ch'on of Ch'unp'o-myōn to Mokch'ōn-p'o (near Iri). See Chōsen sōtokufu, ed., “Mankeikō kaishū kōji” [Man'gyōng River improvement project], in *Chōsen chokkatsu kasen kōji nenpō* [Annual report on the river projects under direct control of Chōsen sōtokufu] (1931).

¹⁶ Chōnik suri chohap, ed., “Kasen ryūsui inyō ni kansuru ken” [Issues related to the river water utilization] (1931).

in Iri to voice their concern over imminent flooding.” (*Tonga ilbo*, June 1, 1929) The chronic problem of an insufficient supply of fresh water was again reported, especially in the middle river area, where “due to the river project and dry weather local residents of Taejang-ch’on suffered from a shortage of fresh water, yet their complaints fell on deaf ears.” The prolonged 1929 drought “devastated the livelihoods of thousands of local residents,” all the more so in those regions where the river improvement project was suspended and remained unfinished because of tight financial policies and hence a lack of budget.” (*Tonga ilbo*, August 17, 1929)

In sum, since the shortage of water including drinking water in Iksan and Kimje was a perennial topic of report, even while the Man’gyōng River improvement project was underway, it is doubtful that the water management project followed by the river improvement project was a complete success in bringing natural disasters to an end. Yet, given the fact that the intermittent drought had been an endemic ecological problem in the Honam region, it seems to be hard to point to the problems of the river improvement project as being a major source of the drought damage.

After the Man’gyōng River improvement project was completed in 1940, it was followed by a farmland rearrangement project that was intended to maximize the effects of the river improvement project (Namgung Pong 1990). From 1937 the colonial government in Korea began to provide subsidies for the agricultural land rearrangement in order to promote it. The project aimed to facilitate both the supply and drainage of water.¹⁷ The “plan to increase rice production in Korea” launched in 1940 aimed at complete rearrangement of agricultural land amounting to 18,000 *chō* over the next six years. In 1942 the plan was extended to include 66,000 *chō* of agricultural land to be rearranged over the next twelve years.¹⁸ Under the wartime regime the agricultural land rearrangement project was reinforced. One author advocating the need for “reorganizing the agricultural villages” under the wartime regime emphasized the positive effects of the agricultural land rearrangement, such as efficient irrigation and drainage, effective crop rotation, saving of labor, and prevention of agricultural land loss and ruin.¹⁹

¹⁷ Chōsen sōtokufu nōrinkyoku nōseika, ed., *Chōsen no nōgyō* [Agriculture of Korea] (1942), 36–37.

¹⁸ T’oji kaeryang chohap yōnhaphoe, ed., *T’oji kaeryang saōp isip nyōn sa* [Twenty-year history of the land improvement project] (1967), 48. The reinforced plan to increase rice production launched in 1942 aimed to improve a total of 577,700 *chō* of agricultural land. As the agricultural land rearrangement project covered only 11 percent of the land improvement project, the arrangement of colonial Korea’s agricultural land was very limited in scale.

¹⁹ Onodera Jirō, *Chōsen no nōgyokeikaku to nōsan kakujū mondai* [Agricultural plan of Korea and the problems of increasing agricultural production] (Tokyo: Tōto shoseki, 1943), 136.

It can be said that the agricultural land rearrangement projected performed from the late 1930s pursued the consistent aim of increasing crop yield per unit area of agricultural field.

Here, the case of farmland rearrangement projects in the Ch'unp'o-myŏn area, conducted by the Chŏnik Irrigation Association (and later by the Chŏnbuk Irrigation Association), will be examined. The farmland rearrangement project for the Ch'unp'o-myŏn area started in 1940, but was suspended in 1945 at the end of the colonial rule in Korea (Cho Sŏnguk 2007). The comparison of two land registers of Taejangch'on in this area, of 1940 and 1945 respectively, as shown in Table 1, will shed some light on the changes wrought by the farmland rearrangement project.

Table 1: Comparison of the Taejang-ch'on Land Registers of 1940 and 1945

Plot unit (<i>p'yŏng</i> =3.3m ²)	Land registers of 1940		Land registers of 1945	
	No. of plots	Area (%)	No. of plots	Area (%)
3000~	45	273,759 (41.5)	17	71,921 (7.4)
2000~3000	40	95,796 (14.5)	21	50,072 (5.2)
1500~2000	36	62,350 (9.4)	24	40,644 (4.2)
1200~1500	23	30,962 (4.7)	384	472,391 (48.9)
900~1200	38	39,052 (5.9)	120	125,952 (13.0)
600~900	70	53,023 (8.0)	126	94,959 (9.8)
300~600	134	58,809 (8.9)	149	65,318 (6.8)
~300	508	46,075 (7.0)	506	44,300 (4.6)
Total	894	659,823(100.0)	1,347	965,557(100.0)

Source: Iksan-gun Ch'unp'o-myŏn toji taejang [Land registers of Ch'unp'o-myŏn, Iksan County]

Table 1 shows that the predominant plot units tended to be 1,200 to 1,500 *p'yŏng* in 1945 (i.e., after the project), making up 48.9 percent of the total farmland area, whereas in 1940 (i.e., before the project) the prevailing plot unit was 3,000 *p'yŏng* or more, making up 41.5 percent of the total farmland area. At the same time, there was a tendency for the small plot units of 600 *p'yŏng* or less to become larger (600 *p'yŏng* or more). Remarkably, the particular plot unit of 1,210 *p'yŏng* can be amply found in the land register of 1945. It is hard to imagine that paddy field parcels of 3,000 *p'yŏng* or more were dominant in this area. Probably the actual area of the parcel was much smaller and, the registration was conducted as if it was a large parcel, because the neighboring parcels were all owned by the same landlord.

On the whole, it can be argued that both large and small plot units in 1940 tended to be consolidated into medium plot units of 1,200 *p'yŏng*. Thus, the farmland layout in the southern Iksan area approached the more regular pattern of medium-sized plots, like that of a checkerboard that we can observe today. This new rearrangement of farmland plots made it possible for the cultivators to use resources like water and labor more effectively.

The main purposes of the land adjustment project were firstly to enlarge the area of every land parcel, secondly to achieve a rectangular shape for each parcel, and thirdly to construct irrigation and drainage channels in such a way that each parcel of land had access to the channel. As a result, firstly local peasants could save labor because they could plow the field more smoothly, using draft cattle to pull the plow, and they could save time in moving from one parcel to another. Secondly they could save labor irrigating every parcel. Conventionally, not every parcel had direct access to an irrigation channel and peasants might have had to use water from another, upstream parcel. Peasants might have to wait a long time for water, and often missed the right moment for optimal cultivation. After the project, peasants could supply water from the irrigation channel to every parcel independently. These effects were expected to contribute to the increase of the rice yield by area unit. In reality, however, because of the supply shortage of production materials like fertilizer, rice production decreased in war time.

CONCLUSION

It should be noted that a commonality of interests did not exist between local Korean peasants and the large Japanese landowners with respect to the large-scale river improvement (water control) project conducted by the colonial government. The effects of the irrigation associations initiated by the Japanese farm owners along the middle and lower basin of the Man'gyŏng River were double-edged in nature. On the one hand, thanks to the irrigation associations that supplied water to farmland the potentially devastating effects of droughts were more or less curtailed. On the other hand, however, the irrigation facilities like dams and dikes substantially reduced the river's ability to carry off surplus water, especially in times of heavy rain, thus precipitating endemic flooding in the region. Thus, further development of the irrigation water facilities in the middle and lower reaches of the river further increased the hazard of flood damage—a typical 'developmental dilemma.' The colonial developers were caught in the paradoxical situation whereby the adverse results of one development project (irrigation) had to be cured by another development project (river improvement).

The local Korean peasants, believing that the developmental infrastructure built from 1910, such as irrigation dikes, roads, and railways, was the regrettable cause of endemic flooding, protested against the river improvement project, reflecting a deep-rooted skepticism against the developmental initiatives of the colonial authorities. However, the colonial government pushed on with the river project, starting in 1925 with the Chŏngju Stream in the middle reach of the Man'gyŏng River, and extending the project in both directions to the lower and upper sections of the river up until 1940.

The Man'gyŏng River improvement project was mainly focused on the middle river area that was vulnerable to frequent flooding, and where Japanese farms and irrigation facilities were concentrated. The local Korean peasants revolted against the river improvement project on the grounds that it caused both flooding and droughts, involved land requisition, and also because they had to bear the burden of construction costs. Thus the Man'gyŏng River project was an imposition on the local Koreans, demanding a measure of sacrifice from them.

Meanwhile, the completion of the river improvement project made it possible to launch another type of agricultural development, that is, the farmland rearrangement project to regularize the pattern of the parcels of farmland. The farmland rearrangement project can be seen as a positive product of the irrigation and the river improvement projects, because it enabled peasants to save water and labor input. On the other hand, it should be understood that the Government General primarily promoted the land adjustment projects in the war time to mobilize as many resources in rural Korea as possible for the sake of industrial output in both Korea and Japan.

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