The Nippon Chisso Hiryo K.K. company constructed the Pujon River Hydropower Plant in colonial Korea during the 1920s. The plant was very large for its time, even when compared to those built in the Japanese Empire. It later became an important trigger for Korean industrialization in the 1930s. The construction plan was proposed by electrical engineer Kazuo Morita (1872 – 1966). Although Morita conducted several large and similarly important hydropower projects in Japan, the scope of his work has not received a great deal of attention. This study therefore follows Morita’s work to clarify three characteristics that he acquired during that time of fierce electric power development boom in Japan (between World War I and the 1920s). This research determined the kind of experience Morita gained and what development concepts he maintained in the years before planning the giant Pujon River plant. First, he expanded his work assignments through the personal contacts he gained while developing giant hydropower plants for the Anglo-Japanese Hydro-Electric Co. during the late Meiji Period. Second, he was earnestly oriented toward and held a positive attitude about new technology. Third, he developed a technological system centered on electrical engineers and brought construction companies together to achieve the “formation of a construction cooperative” that specialized in hydropower plant construction. These events helped build the framework for Morita’s later construction of the Pujon River Hydropower Plant.

Key Words : hydropower plant, electrical engineer, development, technology

1. INTRODUCTION
I researched the history of hydroelectric power development on the Korean Peninsula during the Japanese colonial era. I particularly focused on the construction activities of the Nippon Chisso Hiryo K.K. company (below, “Nicchitsu”), which is considered identical to its subsidiary, the Chosen Chisso Hiryo K.K. company.

Regarding the development of hydroelectric power in Japan, it was common to generate small-scale thermal power using coal up until the end of the 19th century. However, long-distance electric transmission technology was developed during the early 20th century. Serious industrialization began with the country’s involvement in World War I. The construction of large-scale hydroelectric power plants advanced at a competitive pace during this time. For example, Kanidera Power Station (the largest hydroelectric plant in Japan at the time, with a generating capacity of 50,000 kW) was completed in 1925.

This facility supported the industrialization of distant Osaka. Competitive development practices also reached colonial Korea during the 1920s. At this time, many companies entered the Korean market with a focus on the cheap construction and land costs that existed under imperial control. Among these was the chemical fertilizer manufacturer, Nicchitsu, which constructed a number of huge hydroelectric plants that would have been unbuildable in Japan.

Nicchitsu began constructing the Pujon River Hydropower Plant during the 1920s. This facility boasted an electric power output of 200,000 kW, which was far greater than that of any other such plant in Japan. This was the company’s first step in colonial Korea. The Pujon River Hydropower Plant was so influential that it transformed the state of hydropower on the Korean Peninsula and determined Nicchitsu’s later business developments in the northern areas. The plant was proposed by electrical engineer Kazuo Morita (1872 – 1966).
The history of the Pujon River Hydropower Plant construction was previously studied by Jae-eun Kang et al., but their research contained almost no analysis on Morita. The only recent research on Morita was conducted by me. The documents regarding his whole life can only be found in a simple profile of Morita’s life. In addition to this lack of documentation, little research has been conducted on Morita because his roots were in electrical engineering. Civil engineering structures were cooperatively built by technologists working in diverse fields, but their histories are primarily topics in the fields of civil engineering and architectural history. This is probably why Morita, an electrical engineer, did not attract much attention. However, he was well-grounded in civil engineering. This is evident from the comment of a contemporary technologist who wrote a brief outline of Morita’s life. He asserted that Morita “was smart and a technologist with extremely broad talents, and through his direct involvement in the development of a number of hydropower plants, he obtained knowledge of civil engineering technologies that would put skilled civil engineers to shame.” Members of Hazama Gumi Ltd. (now the Hazama Ando Corporation), which played a leading role in the construction of many Japanese hydropower plants, held the opinion that “he was a benefactor from the corporate side who trusted and guided the company.”

In what types of development did Morita participate prior to planning this giant Korean facility? What types of experiences and personal contacts did he develop? In this paper, I trace Morita’s history as a technologist and discuss his links with other technologists to clarify his unique technological characteristics prior to his planning of the Pujon River Hydropower Plant.

To clarify Morita’s personal history, I first present prior research and discuss the documents I used as reference materials. Prior research referring to Morita is discussed in my work “Genealogy of Electric Power Development in Korea—from Oi to Pujon.” In that paper, I summarized Morita’s history as an engineer and discussed his links with other technologists to clarify his unique technological characteristics prior to his planning of the Pujon River Hydropower Plant.

Table 1 Timeline of Kazuo Morita.

| Year | Event |
|------|-------|
| 1872 | Born in Kumamoto |
| 1893 | Graduates from Daigo Middle School and enters an Imperial University to study electrical engineering |
| 1896 | Joins the Ministry of Communications as a telegraph architectural engineer after graduation |
| 1898 | Becomes an engineer at Kumamoto Dento |
| 1900 | Works for a series of railway companies: Keihin Dentetsu, Odawara Dentetsu, and Tokyo Dentetsu |
| 1908 | Takes charge of the Electrical Department at Nichiei Suiryou Denki |
| 1911 | Selected as a chief engineer for the construction of the Onagohata Hydropower Plant in Kyushu |
| 1915 | Appointed Chief of the Electrical Department and Chief of the Engineering Department at Fuji Paper thanks to a recommendation by Keijiro Kishi |
| 1916 | Constructs Nakahan Hydropower Plant and Honmoshiri Hydropower Plant |
| 1918 | Appointed as an executive managing director of Hayakawa Suiryou Denki. Participates in the Kuretsubo Hydropower Plant (today Hayakawa Daisan Power Station) project |
| 1923 | Moves to Nichi-er Suidein, but apparently resigns soon after |
| 1924 | Conducts a survey of the Pujon River in Korea |
| 1926 | Establishment of Chosen Hydroelectric (Chosen Suiden). Morita takes charge of the construction of the Pujon River Dam |
| 1927 | Groundbreaking ceremony for Hungnam Plant |
| 1931 | Resigns from his post as director of Chosen Hydroelectric and withdraws from engineering activities |
| 1966 | Passes away |
2. MORITA’S PERSONAL CONTACTS, TECHNOLOGIES, AND THOUGHTS

(1) Prior to his introduction to hydropower

Kazuo Morita was born in Kumamoto in 1872. He graduated from the Fifth Higher Middle School in 1893 and then entered the Imperial University to study electrical engineering. After graduating in 1896, he worked as a telegraph architectural engineer for the Ministry of Communications for two years. He later returned to his home city to work as a chief engineer for Kumamoto Dento (Kumamoto Electric Lights). Kumamoto Dento was the oldest operating urban electric light company in Kyushu, making it a pioneering company in spreading electric lighting throughout the region. While Morita was working for this company, it suffered from continually worsening chronic financial difficulties accompanied by equipment breakdowns that kept it on the verge of dissolution. Likely unable to work adequately in this environment, Morita left Kumamoto after approximately two years to join Keihin Dentetsu (Keihin Electric Railway) in 1900. He later worked for several railway companies (including Odawara Dentetsu [Odawara Electric Railway] and Tokyo Dentetsu [Tokyo Electric Railway]). It can be assumed that, while at these companies, Morita mainly studied technologies linked to the electric power distribution networks needed to operate railway systems. Kumamoto Electric Lights and each railway company where he worked primarily operated thermal power plants, thus I presume that Morita was not involved in the design or construction of hydropower plants at that time.

However, beginning in 1908, he suddenly began to devote himself to hydropower. In 1908, he was first put in charge of the electric-related work of Nichiei Suiryoku Denki (Anglo-Japanese Hydro-Electric Co.) (below, “Anglo-Japanese”), which was expected to become a joint Japanese and British company. Specifically, Morita closely inspected the quantities of power consumed in Tokyo and Yokohama—data that may have been based on market surveys. In addition to the power transmission technologies he learned while at the electric light and railway companies, his links with the Keihin, Odawara, and Tokyo railway companies were probably useful to him when performing market surveys to assess electric power usage or planning and contracting electric power distribution for Anglo-Japanese ventures. On the other hand, I suppose that the managers at Anglo-Japanese were counting on Morita’s abilities and wide connections.

Anglo-Japanese embraced a grand concept—that is, to construct the world’s largest dam, which would soar approximately 300 shaku (90 m) high on the upstream of the Oi River. There, they would build a hydropower plant with a capacity of about 30,000 kW just downstream from the dam (Fig.1). A power plant supplied by such a large dam was unprecedented. However, this proposal triggered an opposition movement among downstream residents. Even Kimitake Furuichi (1854 – 1934), who was the most powerful figure in the Japanese civil engineering technology world, doubted its safety. He commented, “I cannot possibly agree to it.” The plan was finally shelved.

Records show that Morita was strongly influenced by the American civil engineers who had proposed the plan for this Anglo-Japanese project. It is therefore probable that Morita was involved not only in market surveying but also in planning the construction of power plants and electric power distribution systems under these American civil engineers. However, my research has revealed that, rather than Morita, it was the American civil engineers Julius Merriam Howells and James Dix Schuyler who conceived of the plans for the dam and the conduits. Morita’s participation in the planning of the hydropower plant construction was probably limited at that time.

When the Anglo-Japanese company’s plans collapsed in this way, Morita became a chief engineer with Kyushu Suiryouki Denki Kabushiki Kaisha (Kyushu Hydro-electric Co., Ltd.) (below, “Kyushu Suiryouki”) in 1911.

(2) Hydropower practices

Kyushu Suiryouki was planning to construct the Onagohata Hydropower Plant, which would be equipped with the most advanced electric power generation capacity at that time. Morita was selected as a chief engineer for this project in 1911. In 1913,
the Onagohata Hydropower Plant, which produced 12,000 kW (15,000 kW, according to one document), became Kyushu’s first super large-scale hydropower plant to produce more than 10,000 kW. At Kyushu Suiryoku, which had planned its construction, electrical engineer Keijiro Kishi (1869 – 1927) served as a corporate counselor, while Kimitake Furuichi served as a technical counselor. Keijiro Kishi was an electrical engineer who graduated from the faculty of electrical engineering at the Imperial University in 1895; thus, he was Morita’s senior. He was an engineer at Shibaura Seisakusho and also one of the founders of Anglo-Japanese. He had also played a part in Kyushu Suiryoku since it was founded. It was highly likely that Morita went to Onagohata owing to his links with Kishi.

The Onagohata Hydropower Plant was located at the convergence of the Kusu River and Ohyama River at an upstream location on the Chikugo River, which is the largest river in Kyushu. The reservoir was located on a plateau behind the plant; water reached the plant through an upstream conduit on the Kusu River, while power was generated by using a drop from the reservoir to the plant, which measured about 90 m (an effective drop of about 70 m) (Fig.2). However, the initial plan for the Onagohata Hydropower Plant was different. Instead, it appears to have been an attempt to build a dam-type power plant in which power would have been generated by a drop from a dam constructed on the main course of the Kusu River, upstream from the Chikugo River. At that time, there were still no full-scale dam-type power plants that generated electric power using the elevation differential of a dam constructed on the main course of a river. Perhaps fearing the risk of attempting something unprecedented, it was reported that the dam-type power plant was rejected or refused for safety reasons. The lineup of engineers at the time included Kishi (electrical), Morita (electrical), Sanjiro Yoshikawa (railway civil engineering), Shigematsu Akimoto (bridge civil engineering), Tsumetaro Sasaki (hydropower civil engineering), and Tatsumi Mochida (mechanical engineering). Those who could draft a master plan included Kishi, Morita, and Sasaki, based on their respective engineering fields and status in the company. However, Sasaki did not possess a Bachelor of Engineering degree. For this reason, I assume that the plan was proposed by either Kishi or Morita.

Fig.2 Onagohata Hydropower Plant (Photo by author, 2017).

Fig.3 Conduit from the Kusu River (Photo by author, 2017).

However, one aspect cannot be overlooked. Not only was the Onagohata power plant revised to the conduit type from the initial dam type, as shown in Fig.3, but a reservoir was also added behind the power plant. If the water from the river had been directly used to generate electric power, such production would have been affected by the variations in the river flow rate. However, taking water from the river through a conduit and temporarily storing it in a reservoir before using it permitted a more stable operation that could adapt to such circumstances. This compensated for the shortcomings of the conduit type and was intended to improve operating efficiency. Although the project was changed from the dam type, which would have become the first of its kind in Japan, the method of storing water after
the revision was an extremely pioneering approach in the Japanese context. An interesting record is thought to explain this point. Morita gave the following information to a journalist who actually visited the Onagohata Hydropower Plant construction site:

A noteworthy fact about this work is that it includes a reservoir, [omission], and this plan by the well-known company, Anglo-Japanese, is the first of its kind in Japan. When a reservoir is included, if the scale of the conduit, which is the most expensive part of the work, can be minimized, it is possible to freely adjust the water quantity according to the increase or decrease of electric power produced.

While equipping the Onagohata Hydropower Plant with a reservoir was a pioneering approach, this report suggests that the achievement was associated with an Anglo-Japanese project. The reservoir was included because it could shorten the length of the costly conduit and control the quantity of water to adapt to circumstances from the human side. In other words, it could control the electric power output. At this time, it can be concluded that Morita grasped the necessary concepts and technologies for using a reservoir to generate hydroelectric power from a rational economic perspective.

(3) Electrical engineering theory of guidance for hydropower production

Morita was appointed Chief of the Electrical Department and Chief of the Engineering Department at Fuji Paper in 1915 upon recommendation by Keijiro Kishi. Japanese paper manufacturers responded to the demand for newsprint after the Russo-Japanese War by opening plants in Hokkaido, Karafuto (Sakhalin), and Korea. Fuji Paper also planned to build a hydropower plant to power its paper plant in Hokkaido. Construction started in July 1916 and was completed in December 1918. Called the Nokanan Hydropower Plant, it was one of Japan’s first power plants that contained a concrete gravity dam (a concrete dam built on the main course of a river that produces power through the dam drop). This power plant was proposed by Morita.

It was constructed as a dam type because Morita judged that the Sorachi River (on which the Nokanan Hydropower Plant was constructed) had an extremely gentle gradient. In order to adapt the conduit type to this situation, it would be essential to ensure that the drop was not easily lost as the water flowed through the conduit to the power plant. It would be therefore necessary for the conduit gradient to be gentler than that of the main river channel. However, the greater the degree achieved, the less easily the water flows. Ultimately, the flow rate in the conduit could be increased and forcefully carried, but the conduit would have to be enlarged in this case, making it inefficient in terms of construction costs and electric power production. However, if the river itself was blocked by a dam, and the gradient differential formed by the dam were to be created to generate power at that location, then “the river itself would become an intake opening, forming a conduit and a tank.” This improved efficiency. Morita was thus convinced that, because a dam type contained a reservoir and could generate electric power using the gradient differential of the dam itself, it was a suitable type for use on a river with a gentle gradient.

It is probably correct to call this a new technology capable of artificially creating a drop regardless of the surrounding topography.

However, because it was a new technology, this design was the target of widespread criticism. According to a record from a lecture he gave about the construction at Nokanan, “Objections fell like arrows, foolhardy and reckless;” furthermore, the slanderous statement that he was “just an electrician” “was really unbearable.” Many of the objections were rooted in fears regarding the safety of damming a river. However, the critical words “just an electrician” probably indicated that an electrical engineer should not meddle with structures like dams. Morita himself concluded the lecture by stating the following: “I must apologize for giving a talk unsuited as an address to an electric engineering conference, as it has little to do with electricity.” He thus revealed that he was a technologist far removed from the mainstream electrical engineering world. However, Morita had definitely not lost his self-respect. He clearly felt that technologists who took his position were necessary and felt confident that this was his role. Morita’s interesting theory of technology was revealed in the same lecture, as follows:

Aside from specialized design calculations, etc., dealing with every detail, I think that the planning of civil engineering work related to hydropower plants must be led by an electrical engineer with appropriate experience. I think that, at least until today’s civil engineers fully understand the most economical way to produce electric power or how to utilize it most economically, that must be so.

Morita was saying that hydropower plants should be proposed under the leadership of an electrical engineer. His reason for saying this was that civil engineers did not fully understand the economic pro-
cesses or methods for producing and consuming electric power. He continued his comments as follows:

In addition, I believe that it is extremely important and essential that the senior advisor be a top-rate civil engineer with the ability to examine a proposal made by electrical engineers to decide if their plan is ultimately feasible and does not include technologically unreasonable points in the civil engineering field.

Finally, a civil engineer judged whether it could be constructed. Morita likely believed that a civil engineer was nothing more than a technical advisor or final checker of whether the plans were feasible and that an electrical engineer who best understood the production and consumption of electrical power from the perspective of economic rationality should be the project leader. In this paper, I call his view the “guidance of hydropower production by electrical engineers” theory.

Morita applied this theory by entrusting the planning of Nokanan to Keijiro Kishi, while the civil engineering work and its design were given to Keisaku Shibata, who was a professor at Tokyo Imperial University. He carefully explained and shared every detailed aspect of the electrical and civil engineering phases by name. He stated that he personally only acted as an intermediary between the company and its technologists. However, at Fuji Paper, Morita was “entrusted with all the construction work.” He had been nursing this new idea for a dam type. This indicates that the innovative dam-type hydropower plant at Nokanan was a product of the technology system led by Morita. The criticism of him being “just an electrician” can likely be thought of as a criticism of the “guidance of hydropower production by electrical engineers” theory, which Morita advocated.

3. DISCUSSION

I have, thus far, discussed three of Morita’s characteristics. Namely, these are his personal connections, his attitude toward technology, and his theory about construction. I would like to investigate whether Morita’s work after this point involved these three characteristics.

I therefore focus on Morita’s personal connections as a starting point. After the completion of the Nokanan Hydropower Plant in Hokkaido, Morita immediately visited the Haya River in Yamanashi Prefecture. On the Haya River, President Shiro Kubota of Hayakawa Electric Power, who was the former president of Fuji Paper, was conducting the Kuretsubo Hydropower Plant construction project (with an originally planned maximum output of about 20,000kW; it was completed in 1923 and is now called the Hayakawa Daiichi Hydropower Plant) (Fig.4).

The second point is the attitude Morita held toward new technology. Morita introduced many innovations while entrusted with the Kuretsubo project, such as a new form of rolling gate as a sluice for rafters (Fig.5) and a regulating reservoir, water tank, and conduit built with reinforced concrete on a large scale. Here, we see his continually positive attitude toward new technologies and ideas. For instance, the rolling gate was a very new technology.
at that time, which had been developed in Germany. The version at Kuretsubo was considered one of the first adopted in Japan. Here, Morita’s proactive attitude toward new technologies and ideas can also be seen.

The third point is Morita’s “guidance of hydro-power production by electrical engineers” theory. Is this theory apparent in the works he completed after Nokanan? Under his guidance, Keisaku Shibata accepted Morita’s invitation to participate at Kuretsubo. Here, he was accompanied by his own followers. Morita also continued to maintain relationships with the construction company Hazama-Gumi Ltd. after the Onagohata project. This clearly shows that, once he had forged good relations with technologists and construction companies, he maintained these links for a long time.27)

![Fig.5 Near the intake of the old Kuretsubo Hydropower Plant. This image is presumed to show the rolling gate adopted by Morita. (Photo by author, 2016).](image)

Table 2 lists the topics of discussion up to this point. It can be said that Kazuo Morita was one of the leading engineers who introduced hydroelectric power during the 1910s and 1920s.

After working on the Kuretsubo Hydropower Plant, Morita moved to the Anglo-Japanese Hydropower company (Nichi-ei Suiden) in 1923 (Author’s note: Although it shared a name with the last Anglo-Japanese company that Morita had joined, it was a different entity). However, a working plan was not completed, thus keeping Morita away from construction sites. In 1924, while waiting for a new project, he got the idea for the Pujon River Dam in Korea.

In this chapter, we confirm that Morita’s characteristics were highly apparent even in the plans for the Kuretsubo Hydropower Plant in which Morita was directly involved before leaving for colonial Korea.

### 4. CONCLUSIONS

This paper traced the career of electrical engineer Kazuo Morita by analyzing each project in which he was involved before the Pujon River Hydropower Plant and clarified that, as an engineer, his works and ideas reflected three characteristics.

As shown by his connection with Keijiro Kishi, the first characteristic was that he maintained a broad network of personal connections dating back to his time with Anglo-Japanese. Although the plans fell through there, Anglo-Japanese was a giant pro-

| Year Completed | Planning began in 1908 | 1913 | 1918 | 1923 |
|----------------|------------------------|------|------|------|
| Enteprising Body | Nichiei Suiryoku Denki (Anglo-Japanese) | Kyushu Suiryoku | Fuji Paper | Hayakawa Electric Power |
| Hydropower Plant Name (River) | Sawarajima-Homura Project, Ikawa-Umeji Project (Oi River) | Onagohata Hydropower Plant (Chikugo River) | Nokanan Hydropower Plant (Sorachi River) | Kuretsubo Hydropower Plant (Haya River) |
| Power Output | About 105,000kW (Ikawa-Umeji): 30,000kW, Sawarajima-Homura: 75,000kW | About 12,000kW | About 5,100kW | About 20,000kW |
| People with Connections to Anglo-Japanese | Keijiro Kishi, Shiro Kubota, Michimasa Soejima | Keijiro Kishi | Keijiro Kishi, Shiro Kubota | Shiro Kubota |
| Advanced Technologies, Ideas, and Facilities | Transbasin Diversion, Reservoir | Reservoir (Originally dam-style) | Concrete gravity dam | Concrete regulating reservoir, rolling rate |
| Actual Planner | Julius Merriam Howells (civil engineer), James Dix Schuyler (civil engineer) | Kazuo Morita (electrical engineer) | Kazuo Morita (electrical engineer) | Kazuo Morita (electrical engineer) |
| Technical Advisor | Kimitake Furuichi (supervised construction safety) | Kimitake Furuichi (civil engineer), Keijiro Kishi (electrical engineer) | Keisaku Shibata (civil engineer and professor at the Tokyo Imperial University) | Keisaku Shibata (civil engineer), Eikichi Arai (civil engineer) |
| Construction Company | Not constructed | Hazama-gumi, Shimizu-gumi | Hazama-gumi | Hazama-gumi, Konoike-gumi |
ject undertaken with the participation of leading members of Japan’s financial world. For Morita, this was definitely a powerful force that enabled him to build a strong personal network. This is an important contact point linking political and economic history.

The second is his positive attitude toward new technologies. In the 1910s, Morita worked to introduce a nearly unprecedented reservoir-style hydroelectric plant in Onagohata. He similarly implemented the earliest dam-style power plant construction project at Nokanan. Thus, when Morita prioritized economic rationality, he boldly took up the challenge in the face of malicious statements. He was an electrical engineer but also an early user of new civil engineering techniques, reservoirs, and dam-type power plants.

The third is his “guidance of hydropower production by electrical engineers” theory, which he not only advocated but also personally practiced by forming an organization of dependable fellow engineers. This group did not only include engineers, however. Morita maintained lifelong links with the construction company Hazama-Gumi Ltd. He personally formed an engineering team to construct huge and advanced hydropower plants. Here, I call this a “construction cooperative” led by Morita.

I think that the abovementioned characteristics are closely related to the electric power supply construction boom in Japan. At that time, just like Morita, innumerable civil and electrical engineers constantly changed workplaces to participate in one new project after another. They accumulated experience by moving between projects while earning large salaries. Through this process, engineers probably depended on personal connections and their own technology. As the number of places where hydropower plants could be developed declined inversely in proportion to the intensification of competition in particular, the new technologies (i.e., the reservoir and dam types) were innovative methods that could rapidly expand businesses, at least from an economic perspective. This idea governed the overall operations of these companies. However, without any explanation of these ideas from technologists, non-experts could not understand them and certainly did not think of them. From a business perspective, it was also essential to form and sustain relationships with technologists to survive the surrounding competition. Business leaders wanted to understand the electric power market and rationally plan power production from both the economic and management perspectives. It is likely that Morita’s broad insight was effective in this capacity. I think that the rationality of the “guidance of hydropower production by electrical engineers” theory that Morita advocated was quite compatible with the logic of businessmen who survived in a competitive society.

However, no matter how advanced the technology possessed by only one engineer was, he could not complete every step (from project design to construction) alone. Like a hydropower dam, this required diverse technologies. The dam, conduits, power plant, and transformer stations each demanded their own advanced technologies. Thus, a high level of teamwork was needed to implement the overall project. As he switched work places, Morita not only satisfied businessmen but also organized and assigned skilled and reliable engineers around him. He built a network of engineers with high adaptability and organizational capability. This team would come from all across Japan whenever he called upon them. This group was sustained by civil engineer Yutaka Kubota, who was Morita’s right-hand man during Nicchitsu’s later developments in Korea.

As described above, this paper clarified three major characteristics of Morita’s engineering work by tracing his footsteps. His personal connections with Anglo-Japanese had an effect on him. He held a positive attitude toward new technologies and continued to maintain his developmental theory.

Many civil engineering structures are not only large in scale but also the products of a combination of technologies. For this reason, they are created through the participation of engineers in various fields. To say that the participating engineers are diverse probably opens up the history of civil engineering to diverse fields. I think that clarifying civil engineering structures and technologies from multiple aspects based on the perspectives of technologists in other fields will vest civil engineering with new social significance. I believe that historically clarifying Asian colonial developments through projects such as the Pujon River Dam will also provide important opportunities to reveal the meaning and historical significance of civil engineering structures to a wide range of people. I hope that I can contribute toward achieving this goal, if only in a small way.

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