

IMPORTANCE TO RESPECT RELIGIOUS MOTIVATION IN WATER RESOURCES PLANNING AND DEVELOPMENT

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Abstract:

This paper posits that, in ancient Japan, development of the water resources were often contemplated and carried out with the benevolent aim of helping local indigenous people out of water-troubles, such as floodings and droughts.

In contrast, most of the activities related to water resources, nowadays, have been planned and carried out with economy-oriented aims without paying much attention to social, spiritual elements, accordingly. As a result, various kinds of negative social and environmental effects have occurred, causing unnecessary problems.

Most of such problems could have been avoided if those in charge included and followed intuitively spiritual, even religious, values.

1 INTRODUCTION AND BACKGROUND

Since ancient times, in Japan, water has been considered a sacred resources because of its original purity and colorless transparency: people believed that it had mysterious power to purify their minds and bodies. So, they bathed themselves in clean rivers whenever they wished to feel close to holy lands and places. Such a custom has long remained in peoples' minds: even in our modern society. Whenever people visit Shinto shrines or Buddhist temples, they remember to wash their hands before they begin worship.

Until medieval times, people believed that those who could manage to control the floods or the droughts were saints just as was the case in ancient China. In most cases, they were seen as so-called sorcerers who were accepted high social positions. People thought that they stood somewhere between gods and human beings.

However, after Japan reached the medieval, turbulent period in the 15-16th century, people became technologically developed to construct waterways, levees and other projects. Many cities and castles were successively developed. Gradually, fears of natural disasters diminished

People became somewhat more realistic. Genuine, religious modesty prevailed in Japan until the medieval period faded away. Moreover, political leaders diminished Buddhist monks' authority so as to deprive them of their power and authority. They were suppressed. Seeing such developments, people saw that religion's power was diminished.

The emergence of a regime holding absolute power, the Tokugawa shogunate, which started in the early 17th century and continued for 360 years, further weakened the power of Buddhist temples. But it supported the authority of Shinto shrines which were, nevertheless, also under its strong control.

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The advent of the modern age, the Meiji period, which began in 1868, made the Japanese society change completely: the influence of their inherent religions was weakened further, and people attached greater importance to science.

Especially after the end of the Second World War, people started to aim for economic prosperity, and promoted development.

Excessive development caused various types of environmental problems. The need to protect the environment became deeply recognized, and people have eagerly searched for ways to mitigate the negative influences of development. Voices advocating life's spiritual aspects grew louder.

2 BUDDHISM ARRIVES IN JAPAN

The Buddhism began when Gautama Siddhartha awakened to the truth of the universe and became a Buddha in India in the six century B.C. He preached the way of truth and salvation to the people of ancient India for forty-five years, passing away at the age of eighty. About a hundred years after he died, the Buddhist community split over its disciplinary rules for monks, and was divided into two groups: the conservative and the progressive.

Around the second century A.D., two major schools appeared respectively and were called the Hinayana (which followed traditional teachings, stressing individual salvation) and the Mahayana (which emphasized the spirit and the meaning of the Buddha's enlightenment, aiming at universal salvation).

The Mahayana school was brought to Japan through China in around 550 A.D. An emperor's son who became known as Shoutoko Taishi (574-622) advocated Buddhism as the national religion, in the belief that it would be a useful and effective tool to unify his people. A number of Buddhist temples were thus built. Under the regime's support, Buddhism prevailed in Japan. Several outstanding monks soon appeared. They were active mostly in the Kyoto and Nara areas.

3 THE INFLUENCE OF BUDDHIST MONKS ON WATER RESOURCES PLANNING AND DEVELOPMENT

(A) THE ASUKA AND NARA PERIOD (7th – 8th CENTURY)

With the support of emperors, a number of Buddhist monks devoted themselves in serving for the people by promoting various kind of the public water works during the the Asuka, Nara period. Among them, Gyou-ki (668-749) and Kuu-kai (774-835) are the most well-known.

(a – 1) Gyou-ki (668-749)

Gyou Ki was a disciple of Monk Dou-shou who was known to have traveled around Japan, serving for the local indigenous people by improving their daily livelihood: he excavated wells and created ponds, while making great efforts to promote the Buddhism.

He was born in a local rich family and served people in deprived circumstances and did his best to improve their condition: he seems to have mastered civil engineering, and built a number of ponds such as the Kon You pond situated in Itami city in the Kansai area. He also constructed ditches, moats, canals, bridges, etc., in the narrow, steep lands among the many hills in the Nara

basin. At that time, doing such work was prohibited by emperor's government (which was exercised on public works), but fortunately, his good deeds were acknowledged and appreciated by Emperor Shoumu and, enabling him to continue.

(a – 2) Kuu-kai (774-835)

Monk Kuu-kai was born in a distinguished family on the island of Shikoku. He was influenced by his uncle who was a famous scholar, served as a teacher of a loyal son of Emperor Kanmu. After studying in a prestigious university for a year, he left and went deep into the mountains in Shikoku, where he trained himself for more than a year. Thenafter, he was sent by the government to China. Acknowledged as a prominent monk, he was allowed to return to Japan after an extraordinary short stay. He brought back a number of Buddhist scrolls.

At the age of 31, he started activities. First, he approached Emperor Saga, who immediately noticed his excellent talent and capability. Under the Emperor's patronage, he did his best to serve people in various deeds, including the rehabilitation of the Man Nou reservoir.

(a – 3) Rehabilitation of the Man Nou Irrigation Reservoir, one of the great contribution of Kuu-kai

Kuu-kai's most famous contribution is the rehabilitation of the Man Nou reservoir. Before he touched the irrigation reservoir, it had been constructed in 701-704 but was destroyed in 818. Since then, the reservoir was abandoned because it was so badly ruined that it could not be rehabilitated.

Requested by a responsible local governor, Kuu-kai went to the project site. As soon as he arrived, he reposed on a rock near the site and began religious meditation. Hearing the rumor that Kuu-kai had started reconstruction, a vast number of religious adherents gathered at the site and began working to complete the project as his faithful laborers.

Before starting, Kuu-kai made a creative rehabilitation plan to build a dam with a spillway. Then, he started construction with his religious followers. (Although the project was an earth-arch dam, its crest length, depth and storage volume of the reservoir were said to have been 82 m, 20 m and 5,000,000 cubic m, respectively. It was completed in 821 A.D. within an astonishingly short period.) After its completion, it irrigated a broad farmland of the Sanuki plain on Shikoku island.

Although the dam has been damaged several times since then, the spillway which was designed and constructed by Kuu-kai has remained, and the reservoir is still being used even now. The existing Man Nou Reservoir has been well known as the oldest one, and now holds more than three times the water held by the one created by Kuu-kai.

(B) THE EIAN PERIOD (9th – 12th CENTURY)

After Kuu-kai passed away, several outstanding Buddhist monks appeared in the history of Japan as similarly fervent contributors in the later Heian period, which followed the above-mentioned Nara period and continued until the 12th century. They were Shin-en, Kuu-ya, Dou-shou and others.

Shin-en constructed the Masuda reservoir in the Yamato plain in the mainland Japan in 822. Chu-in is known to have intalled a number of ferry terminals and floating bridges for the people in the eastern areas of the mainland around 835. Another monk named Dou-shou is known to have rehabilitated levees along the Oh-i river in the Yamashiro province in 845. Later, a monk

named Kuu-ya (903-972) contributed by digging many wells and building bridges in Kyoto and its vicinity.

However, the details of all these civil engineering activities related to the water works are not well known.

(C) THE KAMAKURA AND THE MUROMACHI PERIOD (13th - THE MID-16th CENTURY)

In these periods, people suffered from heavy taxation which was coupled with a series of famines and diseases epidemic. Moreover, the enlargement of the social confusion caused by these disasters and the repeated civil wars destabilized society.

Under these confused circumstances, a number of monks acted to help people through various water-related works in the beginning of the period. Among them, monks named Juu-gen (1121-1206) and Nin-sei (1217-1303) are well known. They made remarkable contributions such as the construction of important bridges and the digging of drinking wells. Later, between 1219 and around 1560, several bridges were built, while, a large Buddha statue, namely "the Great Buddha" in Kamakura (1252) was erected. In Kyoto, the superb Kinkakuji temple (1397) was built.

In later stage of this period, no more large-scale public works related to water resources development were carried out. Moreover, monks' activities were limited under orders of political leaders only within the range of helping the poor.

(D) THE TURBULENT PERIOD (THE LATTER HALF OF 16th CENTURY)

After the period around 1560 until 1604, which is known as the Turbulent Period, several quite well-known powerful warriors such as Shingen Takeda, Nobuna-ga Oda, Hideyoshi Toyotomi and Ieyasu Tokugawa successively appeared in the history of Japan. These famous leaders were not only skillful in fighting battles, but were also very skilled in building fortresses, castles and many other military and civil engineering structures. They commanded admirable skill in executing large and middle-sized water related works, too.

Thus, there was no room for the Buddhist monks to exhibit their talent in any remarkable water resources development. People (mostly farmers) worked and supported those warrior-leaders, while the oppressed Buddhist monks were only able to survive by confining their activities to help people find spiritual tranquility. They obeyed the orders of their leaders, performed funeral services, and/or taught how to read and write.

(E) THE EDO PERIOD (17th – MID-19th CENTURY) UNTIL THE PRESENT

Since the advent of the Tokugawa shogunate period which started in 1603 and ended in 1867, the responsibility and the power to carry out all the major public welfare works which included the water resources development/rehabilitation were solely in the hands of the Tokugawa shogun and his subordinates, who became "lords" and commanded their own territories. The Tokugawa shogunate divided the whole land of Japan into some 400 pieces governed by subordinates.

The entire situation under which people existed, oppressed and controlled by feudalistic social system. Thus, throughout the Edo period, people relied only on the Buddhist monks in the occasion of performing funeral services and other religious ceremonies.

In 1867, Japan opened her country to the outside world. Since then, both the government and the people have wished to absorb western civilization as fast as possible to achieve independence in its real meaning, and to make progress. In general, people's major concern was focused on economic progress. People were so eager to absorb the western modern sciences and technologies that within a very short period, the tranquility seen in the previous Edo period was considerably lost, particularly in modernized cities. The belief on the Shintoism and the Buddhism was challenged by the newly introduced Christianity, although its influence was only slight.

During the Second World War, Shintoism gained power. Supported by the spirit of Shintoism, the Japanese people in general were urged by the army to positively participate in the War. Fanaticism gradually gained strength over them. Finally, at the end of the War, a number of hopeful young university students and fresh graduates who were forced to obey the army's order or were badly affected by the extreme belief of Shintoism agreed to sacrifice their own lives, committing the so-called suicide attack against the enemy, either sacrificed themselves voluntarily or were forced to do. Meanwhile, the Buddhist monks did nothing but perform funeral services for such young combatants.

4 DECLINE OF MAJOR CONCERN ON RELIGIONS PREVAILED AMONG PEOPLE AND ITS RESULT

Since the end of the War, a feeling of regret over what Japan did, particularly to the people in Asia during the first half of 20th century has become prevailing all over Japan. In the period from 1945 to 1960, the Japanese people totally lost their self-confidence and their regard for traditional religion rapidly declined. With few exceptions, people have become quite indifferent to any religion.

The above mentioned decline of regard for religion has caused two different types of general tendencies among the Japanese: the bright tendency is that they have become quite free to introduce and to promote any thoughts, while the negative tendency is that people have become so indifferent to religions that entire societies have become very much materialistic and economy-oriented. As a result of the latter tendency, they promoted development without paying much attention to the consequent environmental impact of the spiritual harm. In the field of the water resources development, people (mostly the government officials and their supporters) eagerly carried out the construction of dams and other related projects until the early 1970's in order to amply supply hydropower, irrigation water, drinking water, etc. and to control floods, dis-regarding damage done to the people and to the environment.

Since around the 1970, however, the government and the people have become sensitized to such negative consequences.

At the beginning of the 21st century, world scientists are seriously discussing about the needs to anticipate the ongoing deplorable aftermaths of dam construction. They are now seeking better planning policies for a brighter future.

5 CONCLUSION: RECOMMENDATION TO RESPECT RELIGIOUS MOTIVATION

The adoption of other structures such as levees, waterways, etc. to avert floods, etc., coupled with some non-structural effects such as better flood forecasting and warning, provision and training of protection-brigades, etc. to mitigate flood disaster, may be useful to successfully control flooding disaster. But that may still not be adequate.

On the other hand, people may not be able to completely stop building dams to create sizable reservoirs to generate energy, provide transport, or to irrigate.

Therefore, new ideas are needed to successfully continue future water development and flood control, minimizing or decreasing negative results of construction as much as possible. However, such new ideas are scarce.

In this context, the author believes that those concerned should remember the very original, religious attitudes which the ancient Japanese monks brought to bear on the water resources development issues as described above.

Most of troubling consequences of water resources development could be drastically relieved if the planners embraced the genuine pure minds such as mercy, forgiveness and pray for the betterment of common people's lives which must be already inherent in such projects, even if not consciously acknowledged.

Material success alone must fail if it does not also fulfil the psychic needs of spirituality, cultural preservation, harmony with nature and the responsibility which engineers owe the generations to come.

Enlightened planning may avoid the kind of unintended consequences that embitter the soul even when the material goals have been met quite admirably.

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