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New Year's Greetings

Kiyoshi Kobayashi
106th JSCE President

When the Pacific War ended, the people of Japan, whether they liked it or not, accepted the fact that they had lost the war. However, they did not become servile just because they were the citizens of a defeated country. They decided and were motivated to rebuild the cities that had been reduced to ashes and to establish an affluent society for the future.

On a personal note, I was born in 1953, which means our generation did not experience the war. It may surprise you, but I still remember the remarks made by the principal at the entrance ceremony of my elementary school, which made me quiver. He said something like, "Did you know that Japan was once occupied by foreign countries? People of my generation lived through hard times during the war, which Japan lost and therefore was occupied by foreign countries. You are the first children to be born after the liberation of Japan. I would like you to be strong and study hard in order to build a brand-new Japan."

In 1952, the Treaty of Peace with Japan became law and the country thus gained its independence. Compared with our parents' generation, I wonder how affluent Japan has actually become. However, it seems that the era of pursuing material affluence has ended. The important points today are: "What is a vibrant life?" and "What is a good society?" These concepts need not be based on a single scenario; it does not matter how many scenarios you have. The important thing is to create a vision, and this is what the Japan Society of Civil Engineers (JSCE) does. If people start to support you, they will eventually understand the infrastructure required for realizing your vision. Be an innovator who designs the new society. This is my message to you.

I wish you a happy new year, and hope that is a happy and rewarding one.

The 2nd JSCE-CCES Joint Symposium

The 2nd JSCE-CCES Joint Symposium was held at Shanghai Tongji University, from 25th to 28th October 2018. To strength the cooperation of CCES (China Civil Engineering Society) and JSCE, this symposium was decided to continually hosted in Japan and China by the JSCE President Masahiko Isobe and Vice Chairman Yongsheng Li of CCES in the ceremonial event of the Japan Society of Civil Engineers in 2014. After preparations, the 1st symposium was held in Tokyo in October 2016. At that time, it was agreed to organize a symposium between Japan and China each time with the same theme, this was the second time.

Photo 1 The 2nd JSCE-CCES Joint Symposium in Tongji University

At the beginning, Professor Gu Xianglin, also the Vice President of Tongji University, Vice Chairman of CCES, Dr. Xu a Chief Bridge Designer, Professor Iwaki from Nihon University, Dr. Konishi from JR East gave the Keynote Lectures about the state of art on maintenance management of civil engineering structures and construction design. After that, both parallel sessions were held in tunnel and bridge structures respectively.

In the sessions on tunnel construction technology and maintenance management technology, there were 21 presentations on both sides in two days. Companying with fast development of infrastructures in China, numerous large-scale tunnel drilling were introduced. And advances in various excavation techniques suitable for complicated geological conditions were impressive.

On the other hand, although the number of announcements on the Japanese side is few, it was obvious that the point of view focused on maintenance. There is no doubt that it was a presentation of interest to each other and it can be said that it was a useful exchange.

In addition, a visiting tour on the construction site of the city underground expressway network in Shanghai was conducted. This network is in the shape of kanji 'well' (double cross) under Shanghai city. What we visited is the upper and side tracks in the form of 'Well', which is called 'North Cross Path'.

To construct this tunnel in diameter of 15.8 meters, AI based mud shield drilling technology was used. The top of the section and the inside have 3 lanes each, while the lower part is a PC joint groove. Although the shield drilling technology itself was great, the quality of the PC precast pipe was not so good, it is difficult to feel it as manufactured in good quality. The picture after the tour is shown in the Photo 2.

Photo 2 After the Tunnel Construction Tour

In the bridge sessions, together with 37 papers, 15 from Japan and 22 from China, have been presented. From the Chinese side, introduction of Hong Kong-Zhuhai-Macau Bridge which was opened on October 24 during this symposium, rapid construction, monitoring of traffic load and analysis of change in diameter was presented. From the Japanese side, reports were focused on topics such as structural seismic damage investigation in Kumamoto earthquake.

In the afternoon of the second day, the construction site of the Shanghai-Nantong Yangtze River Bridge connecting between Shanghai and Nantong City, the Hu-Tong Bridge, was visited by the members interesting in bridges. The main part of this project is a cable-stayed bridge with main span of 1092 meters, which is very rare for railway bridges. After arrived at the dock by bus, participants changed to a ferry and arrived the construction part and climbed up to the main girder under construction of 332 meters high, where the scene of making the two-layer main girder of the road and the railroad can be seen.

Photo 3 On a 332-meter-high Construction Site of Hu-Tong Bridge

Participants from Japan, both the tunnel bridge groups, also visited the legendary fellow Huangshan distant from Shanghai on 27th and 28th. Tongji University's graduate students also participated. Based on the comment from the participants this visiting is really a precious experience and unforgettable after climbing this high mountain together. (Photo taken at the top of Huangshan is shown in Photo 4)

Photo 4 On the Top of Huangshan

Finally, the 3rd Joint Symposium will be held in 2020 in Tokyo, and the topic would be expanded from tunnels and bridges to river and port engineering.

【Reported by Ho Cho, Nagoya Institute of Technology, Ji Dang, Yoshiaki Okui, Saitama University 】

The Committee on Pavement Engineering
"The 8th JAPAN/CHINA Workshop on Pavement Technologies"

The Committee on Pavement Engineering, JSCE held the 8th JAPAN / CHINA Workshop on Pavement Technologies on Thursday, November 29 and Friday, November 30, 2018.

Japan and China are actively engaged in various research activities on pavement technologies. However, since our mother tongues are not English, we are not making a sufficient number of reports on our findings available to other countries. That is why we thought that discussing our findings in our respective mother tongues would help solve the technical problems of the pavement technologies of both countries. The first JAPAN / CHINA Workshop on Pavement Technologies was held in 2001 in Shanghai, China. This year marks the 8th workshop since its establishment.

Workshop	Year and Month	Country and City
1st	November 2001	Shanghai, China
2nd	November 2003	Tokyo, Japan
3rd	November 2005	Nanjing, China
4th	July 2007	Sapporo, Japan
5th	September 2009	Xian, China
6th	September 2011	Naha, Japan
7th	August 2013	Harbin, China
8th	November 2018	Osaka, Japan

Thirty participants from Japan and 24 from China participated in the workshop, and 13 papers from Japan and 29 from China were submitted. Among them, because of the tight schedule, presentations on nine papers from Japan and seven from China were made. On the first day, Professor Tatsuo Nishizawa of the National Institute of Technology, Ishikawa College (Chair of the Committee on Pavement Engineering, JSCE) from Japan and Professor Xiaoming Huang of Southeast University from China gave keynote lectures. Each presentation was made in the mother tongue (Japanese or Chinese) of the presenter with consecutive interpretation, leading to deeper discussions.

The next workshop is to be held in Changsha, China in 2020.

【Reported by Yukitomo Tubokawa, The Committee on Pavement Engineering】

-Internationalization of Japanese Universities-

Teaching International Students at Yokohama National University Graduate School, Center of Innovation, Department of Civil Engineering

Hitoshi Yamada
Yokohama National University

When you think of Yokohama, there is a strong, faithful association of its being a “port city” or an “international city.” The university has also placed great importance on the education of international students and international education programs. For example, since the inception of the Economics and Management schools, as the name “Department of International Social Sciences” suggests, there is a long history of teaching and research championing the international theme at the departmental level. Though almost 40 years have passed since the Department of Civil Engineering celebrated its first graduating class in 1982, its history is not very long relative to other civil engineering departments around Tokyo. However, if we look at the history of the special program that gives preferential admission and government scholarships to international students, the university has the second longest hisotry next to the University of Tokyo, whch has produced 237 graduates since the introduction of the program in 1988. The details can be viewed in the university’s public data.

The main features of teaching international students through the Department of Civil Engineering at the university can be summarized as follows:

1) All teaching and research guidance activities are carried out in English. Only recently has English teaching been touted as a requirement for internationalization, but from the beginning, that was a measure put in place to aid international students in understand and communicating during learning and doing research activities to lower barriers associated with studying in Japan. Given the precedents, considerations were also given to ensure that the quality of teaching in Japanese for regular students did not decline.

2) At the beginning of the program, enrollment was limited to students from Official Development Assistance (ODA) recipient countries. This excluded the students from East Asian and developed countries who would normally make up the majority. As a result, many returned home after graduation-including those in 3)-to take a teahing career, creating a ripple effect of inviting excellent second- and third-generation students whom they taught to apply for the program.

3) Admissions of international students were focused on those studying in doctoral courses. It was possible to admit many international students to master’s programs, but this was not necessarily a good policy from a teaching quality perspective, as many Japanese students also progressed into master’s programs. By targeting the best students from top tier universities globally who wished to study in doctoral courses, we employed the strategy of quality over quantity. Establishing good relationships with candidates from top overseas universities was paramount; therefore, our teaching staff~~s~~ visited universities in person many times.

4) Since the inception of the program, supplementary Japanese classes and mental care for adapting to the Japanese way of life have been made available to international students using the teaching budget. We understand

that teaching staffs and faculties cannot always provide sufficient support to the international students to adjust to life in Japan. Therefore, we continue to provide classes to help them feel more at home.

The above features of the university's Department of Civil Engineering relate to the preferential admissions program and government scholarships for international students by the Ministry of Education, Culture, Sports, Science and Technology. However, because of changes in governmental policies, governmental support for the program is changing from simply upgrading technologies in target countries to encompassing a wider range of enrollment and learning support programs. For example, a double-degree program is a given and programs supporting teaching staffs from universities in developing countries in their pursuit of doctoral degrees and various channels through the Japan International Cooperation Agency (JICA) and the World Bank's Infrastructure Management Program (IMP) are components of this multifaceted program expansion. The number of international students in the Civil Engineering doctoral program alone is now reaching a capacity of the entire department, which includes Architecture and Humanities students. Therefore, securing resources for teaching laboratories needed to maintain the teaching and research standards is currently a major issue.

【Reported by Hitoshi Yamada, Yokohama National University】

- Overseas Project -
Hoaac Science and Technology City Infrastructure Construction Work

1. Introduction

Tokuyuki Matsuya
TAISEI Corp.

Vietnam, located in the eastern part of the Indochina Peninsula in Southeast Asia, is a socialist republic with an area of 330,000 km2 and a population of 93.7 million (as of 2017). Since 2000, when the Doi Moi policies started to take hold, the country has posted an average annual GDP growth of 6 to 7%, one of the highest among ASEAN countries in recent years.

2. Background

Vietnam's economic growth is supported by industrial products manufactured in each industrial complex, as well as abundant agricultural products, fisheries, and mineral products. It is estimated that 60% of the export value of industry in Vietnam is produced by more than 300 industrial complexes and export processing zones throughout the country.

The government of Vietnam aims to grow the country into a world-class industrial powerhouse with the following national goals: to develop information technology (IT) infrastructure, to develop IT engineers, to promote the use of IT in society and the economy overall, and to strengthen the IT industry. The Hoa Lac Science and Technology City Development Project was proposed to rapidly achieve the goal of increasing the share of high-tech products to more than 45% of GDP.

3. Hoa Lac Hi-tech Park (HHTP)

Hoa Lac Hi-tech Park (HHTP) waMasMMs planned to be constructed in the Hoa Lac area located approximately 30 km west of Hanoi, the capital city. It is accessible, taking just 30 minutes from Hanoi and 45 minutes from Noi Bai International Airport by car. Hoa Lac Science and Technology City Development Project has been supported by the Japanese government since 2006. Under this project, the HHTP has been developed into a hub for collaboration between business and academia taking a previous case in Japan as an example.

Fig.1 Overall Plan, Bird's-eye view*

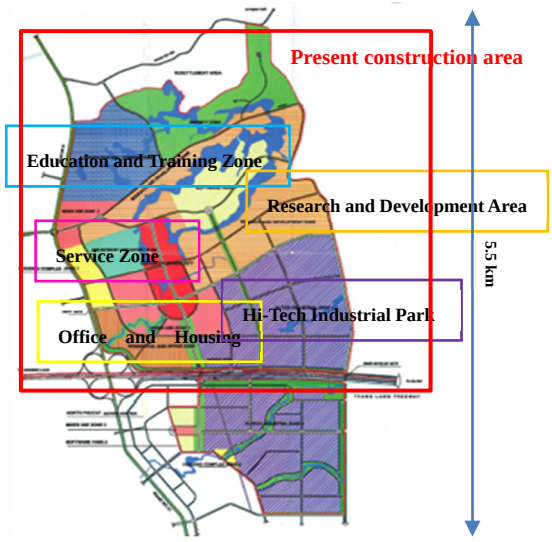


Fig.2 Master Plan of Land use*

*Cited from official brochure of HHTP. The author added the names of zones and others.

Partially opened in 2008. Seventy-two companies, four of which are Japanese ones, have decided to move in as of 2018. In addition to the IT universities that have been opened, the HHTP is planning to invite science-technology universities. HHTP aims to be a city with 100,000 students by 2050.

4. Details of Construction and Current State

As part of the new construction plan, construction orders for some projects were issued in October 2015. Among them, this is an infrastructure project that includes the construction of roads, bridges, water and sewage facilities, and telecommunication facilities.

Hoa Lac Science and Technology City Development Project Package "CP1A: Major Infrastructure Development" was ordered by Hoa Lac Hi-Tech Park Management Board as a Japanese ODA project. The joint venture among Taisei Corporation and Vinaconex Construction & Import-Export J.S.C. and Truong Son Construction Corporation is responsible for construction, which will run for 37 months from October 2015 to October 2018. In the premises of 1,036 ha, those three companies will share the construction of roads (construction of new roads and improvement of existing roads, with a total length of 36 km), five bridges, piping systems (rainwater, drainage, and water and sewage system, with a total length of 144 km), telecommunication system (total length of 115 km), electricity distribution room, sewage pumping room, etc.

Preparations for commissioning the infrastructure construction are underway. Meanwhile, connections with external infrastructure are taking time; accordingly, the project including this construction work is to be completed by the end of next year.

Photo 1 Construction of new road

Photo 2 New bridge that goes across the reservoir

5. Conclusion

We are grateful for and value the support from the client and all who are involved in the construction, and would like to complete the construction while putting safety before everything else. We hope that this project will contribute to the sophistication of industry in Vietnam and support the country to develop to a world-class industrial country, and that the relationship between Vietnam and Japan will develop and strengthen further.

【Reported by Shigeaki Tanaka, Tokuyuki Matsuya, Kosuke Nagashima, TAISEI CORPORATION】

【Alumni of DOBOKU Series】
"River Restoration Project: Malaysia and Japan Perspectives"
Mohd Shalahuddin Adnan
Senior Lecturer, Faculty of Civil and Environmental Engineering, University Tun Hussein Onn Malaysia

Mohd Shalahuddin Adnan (University Tun Hussein Onn Malaysia)

I've experienced amazing time doing my Doctoral Degree in Japan, and honestly it was one of the most memorable moments in my life. I came to Japan in October 2008 after finishing my Masters Degree from Gadjah Mada University, Indonesia. I was sponsored by Japan International Cooperation Agency (JICA) to pursue my study at Kyushu University in the field of River Engineering. I would like to thank JICA for the sponsorship as it helps to make my dream comes true. During my stay, I'm not only learned about the advanced technology and knowledge in my field but also, I've learned about Japanese culture, society and language. One of the values in Japanese cultures that I remember the most is on punctuality and I tried my best to practice this culture in my daily life activities.

River Restoration Practise in Malaysia and Japan

Photo 1 Field Trip at Kanmon Bridge

There are big differences between river restoration practices conducted in Malaysia and Japan on how to carry out the river restoration projects. Based on my observation, the gaps can be concluded in term of functionally, participation from various stakeholders, determination, cost and monitoring works after the project completed. River restoration project can be carried out based from a range of different approaches. Many restoration projects attempt to replicate natural river processes and features such as river flow, flow depth, river morphology, meanders, pool and riffles. Another common restoration approach is to remove human hydraulic structure such as sluice gate, weirs and dams to improve continuity and connectivity between different habitats along a river's course.

When I started my study, my PhD supervisor had involved me with the real river restoration project which has been conducted in the Kamisaigou River and Azame-nose wetland which are located at the Fukutsu City and Karatasu City respectively. Since it has been only a month in Japan, I couldn't really understand the discussion which was carried out in Japanese. However, after joining Japanese class, I've improved my Japanese and be able to understand the discussion topic in the next following meeting and symposium. In the past, Kamisaigou River has been canalized with concrete revetments and the morphology has changed from meander river to straight river which resulted in reduction of its biological function. Thus, in 2007, Fukutsu City Government has initiated a restoration program to improve the environmental quality of the river. While for Azame-nose wetland, this wetland is totally a new wetland that specially designs to reduce the magnitude of flood by providing a space for river to expand their floodplain during high flow. Before these restoration projects carried out, the extensive surveys and community engagement have been performed to make sure the project can successfully achieve the objective of the project. The final decision will be made after several series of workshops and symposiums which involved many stakeholders that not only dominated by the government agencies but also NGO's and local community.

Meanwhile back in Malaysia, the restoration project that was carried out by the government normally with low participation from the local community. Based on this practice, sometimes the local community aren't aware about the project thus there is no self-belonging to the environment that resulted to low awareness on river care. However, in these day many agencies and NGOs have play their role to educate the community by engaging them with the current and future project in their surrounding and adjacent perimeters to make sure the river restoration project can be sustained for last.

Bridging Malaysia and Japan through Research Activities

During my study, I was involved and awarded with special grant under Global Center of Excellence (GCOE) program of Kyushu University, and I also worked as an International Researcher on the ecological conservation project especially in Malaysia. I participated in the development of research network with the universities, NGO (Global Environment Centre), governmental organizations (Freshwater Research Centre) inside Malaysia and

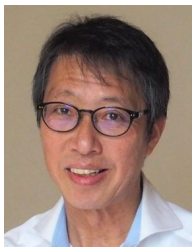
other Countries. Series of workshop and symposium were conducted in order to share the findings. The chances to work with special group known as Asian Pacific Biodiversity Observation Network (APBON) has given me a special opportunity to work with my lab mate after graduated from my PhD. After coming back from Japan, we started to collect and develop freshwater fish database that could be made as a reference for future works. My lab mates have travelled several times to Malaysia to perform sampling activities and we've visited several rivers and streams from natural to polluted rivers to record, create and update biodiversity database. Moreover, the collaboration between alumni from different countries such as Indonesia, Cambodia, Laos and Vietnam through conferences and research visit have expanded research network and strengthen the relationship among these countries.

Photo 2 With Teacher and Laboratory Colleagues

Current River Ecosystem in Malaysia and Way Forward

Restoring the river ecosystem is a big challenge to the governments and consultants to design the best restoration project. By referring to several successful stories on river restoration and rehabilitation projects from Japan, Korea, Taiwan, United Kingdom and United State; the Malaysia government is inspired to initiate urban river rehabilitation program in Malaysia. Since the last decade, many river restoration projects were carried out in order to improve the river ecosystem in Malaysia. Many initiatives have been carried out such as love our river campaign, river adoption, public awareness and education, river watch programme, river expedition, and many more. Hopefully, by performing these activities, the river environment in Malaysia will be further enhanced and we can see many rivers in Malaysia are back to serve their original function as a habitat for flora and fauna and wealth creation.

《**Column**》 Yukihiro Shimatani, School of Engineering, Graduate School of Engineering Kyushu University, Professor



Mr. Shalahuddin's doctoral dissertation was a study on the evaluation and indexing of ecosystem soundness for the Pahang River. It was a difficult research theme, he had to cooperate with a Malaysian institute to investigate fish once every two months, and to do the analysis afterwards. Many kinds of insect-eating fish live in that river, so the investigation results were quite interesting. I also participated in the survey of the Pahang River once, it was really memorable experience to fish in a tropical natural river and meet with his family. I read the article he wrote this time, it is such a pleasure to know his experience and progress in research.

※Alumni of DOBOKU Series is in collaboration with Editorial Committee of JSCE Magazine.

Updates

◆CECAR8 Online Registration (Early Bird: June 1, 2018 – Jan 31, 2019)
http://www.cecar8.jp/

◆The International Infrastructure Archives
– A Compilation of Japan's Greatest Projects in Transfer of Civil Engineering Technology in Service –
http://www.jsce.or.jp/e/archive/

◆Asian Civil Engineering Coordinating Council (ACECC) International Newsletter
http://www.acecc-world.org/newsletter.html

◆IAC "News Pick Up!!" on the JSCE Japanese website
http://committees.jsce.or.jp/kokusai/node/118

◆Summary of featured articles in JSCE Magazine Vol. 104, No.1 January 2019
http://www.jsce-int.org/pub/magazine

◆Journal of JSCE
https://www.jstage.jst.go.jp/browse/journalofjsce

◆IAC Students and Alumni Network
http://www.jsce-int.org/IAC_network

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