



**Japan Society of Civil Engineers**

*International Activities Center*

## IAC News No.84

### 2019 Annual Meeting, International Program – Prompt Report –

The 2019 Annual Meeting of the Japan Society of Civil Engineers (JSCE) was held from September 3 to 5 at the Saiwai-cho Campus of Kagawa University and other venues. The International Activities Center holds International Program, namely the International Roundtable Meeting, International Summer Symposium (International Session), International Workshop for Young Civil Engineers (part of the Symposium), IAC Networking Reception, and Technical Tour, on the first two days of the Annual Meeting every year. This year, we held the International Summer Symposium and IAC Networking Reception at Kagawa University, and programs such as the International Roundtable Meeting and International Workshop for Young Civil Engineers at Kagawa Prefectural Comprehensive Social Welfare Center.



International Roundtable Meeting (RTM)

In this year's International Roundtable Meeting, under the theme of "Effectiveness of Developing Quality Infrastructure –Issues and Approaches-", we reaffirmed the necessity of improving infrastructure to resolve various issues confronting Asian countries. Our goal was to establish a shared awareness of the significance of high-quality infrastructure and the impact of infrastructure improvements on social development. First, speakers from the US, South Korea, Japan, Bangladesh, Myanmar, and Mongolia made presentations on their activities and issues. Then, participants outlined the infrastructure they need and discussed its quality and the importance of high-quality infrastructure. The second half of the Meeting was an open discussion. Participants including PICE (Philippines), which did not make a presentation as a speaker, actively exchanged opinions. Discussions on the quality of infrastructure are expected to continue.

This year marks the 21st since we started the International Summer Symposium (International Session), which is another core part of the International Program. There were presentations on 52 papers, including those prepared by the seven young overseas engineers who are participating in the Study Tour Grant, a program subsidized by the JSCE International Scientific Exchange Fund. Like last year, in the International Workshop for Young Engineers, we discussed the measures taken by municipal governments affected by earthquakes under the title of "When a Mega Disaster Strikes ...How would you respond if you were a mayor?" and under the directions of Yoshihiro Okumura, Associate Professor at Kansai



Participants Discuss Post-Disaster Policies as Mayors

University. Participants discussed the policies for measures against disaster, security measures for residents, and reconstruction activities from the perspective of the mayor of the municipal government. The policies were reported in a press-conference style. As there have been many natural disasters in recent years, the participants seemed to consider specifically what should be prioritized and what directions and cooperation are needed by analyzing countermeasures against disasters as if they were mayors.

On the first evening, IAC Networking Reception was held at bakery cafe “SORAMI” on the Saiwai-cho Campus of Kagawa University. Seventy-one people, including JSCE President Hayashi, International Activities Center, Members from the Research and Studies Committees, International Guests, and participants of the International Workshop for Young Civil Engineers attended. Regional cuisine of Kagawa was prepared, and the participants enjoyed the food of Kagawa and making new friends across generations and country borders.

The Technical Tour on the second day was unique, consisting of visits to both construction sites and entertaining sites, such as the Kabagawa Dam construction site, National Sanukimanno Park, Shin-Inohana tunnel construction site, Honen-ike Dam, and Zenigata Sunae. The Tour was made possible with the cooperation of the Annual Meeting Steering Committee; Shikoku Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism; Civil Engineering Department, Kagawa Prefecture; Honen-ike Dam Fan Club; and Kannonji City Tourism Association. We received positive feedback from many of the participants, saying the Tour was very interesting. We would like to express our gratitude to everyone who assisted us throughout the Tour, from planning to implementation.



In Front of Honen-ike Dam

**【Overview】**

Date : September 3&4, 2019

Venue : Kagawa University Saiwai-cho Campus, Kagawa Prefectural Comprehensive Social Welfare Center

Oversea Participants : JSCE Korean Section, JSCE Taiwan Section, JSCE Mongolian Section, JSCE Vietnam Section, ASCE, Fed. MES, IEB, KSCE, MACE, PICE (25 participants from 8 countries and regions, excluding summer symposium participants)

**【Program】**

(1) International Roundtable Meeting

Title : “Effectiveness of Developing Quality Infrastructure—Issues and Approaches—”

Date & Time : September 3, 13:30~17:00

Participants : 64

(2) The 21st International Summer Symposium

Date & Time : September 3&4, 8:40~11:55

Papers : 52

(3) International Workshop for Young Civil Engineers

Theme : “ When a Mega Disaster Strikes...-How would you respond if you were a mayor? -”

Date & Time : September 3, 13:00~17:00

Participants : 27

(4) IAC Networking Reception

Date & Time : September 3, 17:30~19:30

Participants : 71

Venue : Café Sorami, University Hall 2F., Kagawa University Saiwai-cho Campus

(5) Technical Tour

Date & Time : September 4, 8:30~17:00

Participants : 22

Visited Places : Kabagawa Dam Construction Site, Sanuki Mannou Park, Shin-Inohana Tunnel Construction Site, Honen-ike Dam, Zenigata Sunae

# Eglinton–Scarborough Crosstown Tunnel Construction Keele to Yonge Project

## ◆ Background

In this project, a joint venture group led by Obayashi Canada; a local company of Obayashi Corporation and Kenaidan Contracting Ltd., one of the Obayashi Group companies, constructed single track twin tunnels (inside diameter: 5.8 m) with a total length of 6.5 km each (first section: 3.6 km; second section: 2.9 km), as part of the LRT line connecting the east and west sides of Toronto in Ontario, Canada. The earth pressure balance (EPB) type shield machine was applied. Though the project is located in Toronto; the fourth biggest city in North America, it was difficult to hire miners due to a short history of shield tunnel construction in the city. We needed to train and supervise non-skilled workers and ensure planned means and method to achieve sufficient workmanship.

## ◆ Challenges

Generally speaking, construction projects in North America are characterized by higher labor costs and more difficult labor management compared with Japan. In this project, we also spent much time managing workers from labor union. There was no experienced subcontractors due to the short history of shield construction in this area, and thus the primary contractor had to directly hire each foreperson and worker as miners and manage them throughout all stages during construction such as safety issues and construction means and methods, in order to proceed with the construction project.

In such a working environment, construction risks unique to overseas projects are to be judged and managed. In an overseas project like this one, it is quite normal to excavate a long distance while carrying out intervention and replacing cutter bits underground. By hiring local workers, the majority of whom had not many experience in tunnel work, we had to safely proceed with the long-distance shield tunnel construction project while providing the workers with education and guidance on construction.

Also, the risk allocation between a contractor and an owner is strictly determined in accordance with the contract. Therefore, when bidding for a project, even like this one involving high-risk work such as NATM excavation of cross passages (eight in total), it is imperative to identify construction risks and offer competitive price at the same time. This is what decides the bid results. It is important to evaluate risks while confirming the aspects specific to the site and project from various perspectives from the bidding stage, before actually bidding for the project, concluding the contract, formulating the



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Location Map



Crossing an Existing Subway Line

plan, and proceeding with the construction.

These kinds of challenges unique to overseas projects are too numerous to mention. At the same time, they are a precious experience that can be gained only overseas. If you regard the experience as an opportunity for personal growth as a civil engineer, you will motivate by yourself to work, and when the construction is finished without any accident, you will feel a profound sense of relief and accomplishment.

#### ◆ For Young Engineers

Canada, a country with multicultural policies, is sometimes regarded as a “cultural mosaic”, which describes the characteristics of the project team. Completion of the construction project required cooperation among multinational staff and workers who place a top priority on their own values. I believe that working with colleagues who have a different culture and sense of value is a good opportunity not only to know the world outside but also to search your soul. We encourage young engineers to challenge themselves by working overseas projects.



At Arrival Shaft

【Report by Fumitaka Katafuchi, Kenji Yamauchi, Hiroyoshi Kawasaki, (Obayashi Corp.)】

## Japanese Civil Engineers the Global Leaders Symposium Series No. 14 “The Project on Rehabilitation and Recovery from Typhoon Yolanda” in the Philippines by JICA’s Project”

International Activities Center hosted “Japanese Civil Engineers the Global Leaders Symposium Series No.14” at 2nd floor of the JSCE auditorium on August 28, 2019. Until the 13th symposium, this series focused on overseas construction projects. But this time, it took another term; the theme was JICA’s rehabilitation and recovery efforts after a natural disaster. The date of the symposium was right before the Disaster Preparedness Day, Sept. 1 and over 60 people attended the event. The program was as follows:

## Program

- Opening Speech  
Makio Shichijo, Acting Senior Director, International Activities Center, JSCE
- (The 1st Part) Latest Situation of International Cooperation
  - JICA's Efforts in the Field of Disaster Prevention and Rehabilitation from Disasters  
Miki Inaoka, Senior Deputy Director, Disaster Risk Reduction Group, Global Environment Department, JICA
- (The 2nd Part) International Emergency Assistance and Measures to Strengthen Disaster Prevention by JICA  
~ Lessons from Assistance for Rehabilitation and Recovery from Typhoon Yolanda in 2013 ~
  - Framework and Examples of JICA's International Emergency Assistance  
Tsukasa Katsube, Senior Adviser (Humanitarian Assistance), Secretariat of Japan Disaster Relief Team, UN Disaster Assistance and Coordination Team (UNDAC), JICA
  - Case Study of Rehabilitation and Recovery from Typhoon Yolanda in Philippines, Lessons and Challenges  
Atsutoshi Hirabayashi, Senior Advisor, Infrastructure and Peacebuilding Department, JICA
  - Support through Technical Cooperation Project ~The Project on Rehabilitation and Recovery from Typhoon Yolanda~  
Masaki Todo, Director, Contents Development Division, Foundation of River & Basin Integrated Communications (FRICS)
  - Career Path for Civil Engineers Involved in International Cooperation  
Soichiro Ide, Project Officer, Grant Aid Project Management Division, Financial Cooperation Implementation Department, JICA
- Q & A Session
- Summary  
Yoshiaki Higuchi, International Activities Center, JSCE
- Closing Speech  
Yukihiro Tsukada, Executive Director, JSCE

Typhoon Yolanda was a very powerful typhoon unprecedented in the weather observation history that hit Leyte Island in the Philippines in November 2013. There were 6,300 casualties, and economic loss was estimated at 200 billion yen, due to strong winds and storm surges. Many countries offered assistance from soon after the disaster.

In the symposium, after an opening speech by Mr. Makio Shichijo, Ms. Miki Inaoka talked about the importance of disaster prevention to support sustainable development, the Sendai Framework for Disaster Risk Reduction 2015-2030 and international trends, and the characteristics of JICA as a donor.

After a break, four lecturers from JICA and FRICS who were engaged in the Yolanda project made presentations about various aspects.

Active discussions were made in the question and answer session, which covered emergency assistance policy and how to approach disaster prevention for infrastructure. In the closing, Mr. Yoshiaki Higuchi summarized the symposium, and Mr. Yukihiro Tsukada made a closing speech.



Mr. Hirabayashi Introduces Case Study of Rehabilitation and Recovery from Typhoon Yolanda

The next symposium will be held on Feb. 5, 2020, focusing on the Vietnamese Railway Bridge Rehabilitation Project.

【Reported by Yoshiaki Higuchi (Oriental Consultants Co., Ltd.),  
JSCE Fellow, Director of International Center, JSCE】

## Updates

### ◆Up-coming Events

1. Workshop Japan and the Netherlands “Climate Adaptation and Resilience” (October 31, 2019)
2. 2019 Site Excursion & Joint Company Information Session in Osaka (November 25, 2019)
3. 2019 Joint Company Information Session in Tokyo (December 7, 2019)
4. 3rd Seminar on the Dissemination of Japanese Technical Standards Overseas (December 17, 2019)
5. Japanese Civil Engineers the Global Leaders Symposium Series No.15 (February 5, 2020)

- ◆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/>
- ◆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.10, October 2019  
<http://www.jsce-int.org/pub/magazine>
- ◆Journal of JSCE  
<https://www.jstage.jst.go.jp/browse/journalofjsce>

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### **Comments and Questions**

Please send us your feedback and comments to help us improve the IAC news. We look forward to hearing from you.

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