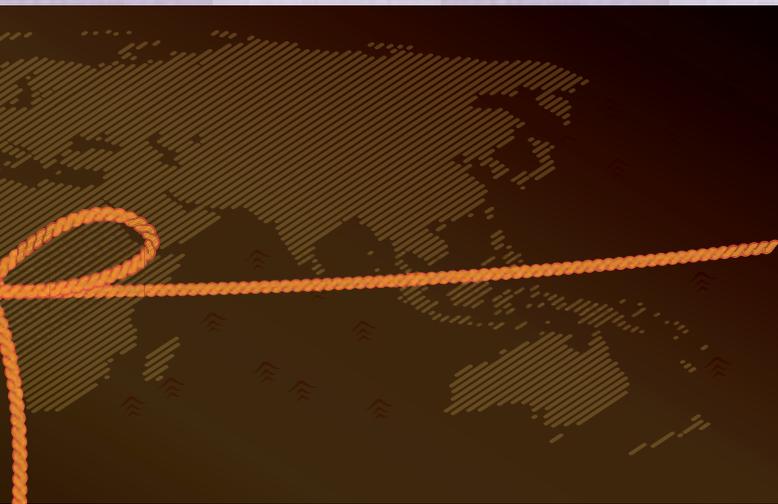


Vol.37

# AJCE

NEWS LETTER

March 2016



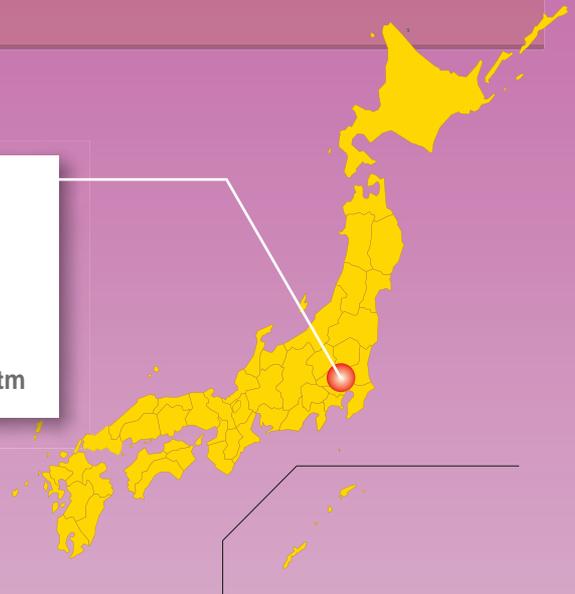
ASSOCIATION OF JAPANESE CONSULTING ENGINEERS  
(FIDIC Member Association)

## About AJCE

The Association of Japanese Consulting Engineers (AJCE) was established in 1974, and was approved by the Science and Technology Agency of Japan (currently, Ministry of Education, Culture, Sports, Science and Technology) as a legal entity in 1977. Further, AJCE was approved as a public legal entity by cabinet office in 2012. Representing Japanese consulting engineers, AJCE is a member of the International Federation of Consulting Engineers (FIDIC). AJCE strives to enhance the status and competence of private consulting engineers (CEs) who are independent and impartial of manufacturers, contractors and others. By doing so, AJCE contributes towards the advancement of science and technology, development of industry, sustainable considerations in built-environment, as well as the enhancement of human safety and welfare.



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## New Challenges to AJCE



**Konomu UCHIMURA**  
President, AJCE  
CTI Engineering Co., Ltd

### Activities of AJCE in 2015

Looking back on the activities of AJCE in 2015, we conducted several seminars such as Contract Administrator Training Seminar, Interdisciplinary Seminar, Annual Seminar in which Jae-Wan Lee, FIDIC President and KENCA chairman, Nelson Ogunshakin, CEO of UK, and Megan Motto, CEO of CA were invited as guest speakers. In addition, AJCE promoted networking for young engineers as well as women engineers. As a part of outreaching activities, AJCE's young professionals carried out introductory lecture on consulting engineering industry to university students about to graduate. Young Professionals Exchange Program (YPEP) between Australia (CA) and AJCE was postponed in 2015 due to unavoidable circumstances. YPEP is unique and beneficial program for young Australian and Japanese professionals that has been in operation for 21 years since its start in 1996. Over 130 young professionals participated in this program.

Regarding international activities, AJCE translated and published FIDIC Condition of Contracts following translation agreement with FIDIC after which it was disseminated through seminars to members, consulting engineers and contractors in Japan.

In May 2015, eight AJCE members participated in ASPAC Tehran Conference. In September, a delegate of 41 members participated in FIDIC Dubai Conference. Both conferences were held in Middle-East where expectation to and role of consulting engineers in the development of infrastructure seem enormous. Despite of complex international circumstances and different political and religious affiliations, people will not stop longing for a world of safety and peace. It is also a challenge for Japanese consulting engineers to enrich people's

livelihood in the world while keeping its standard of living and prosperity. The Sustainable Development Goals (SDGs) adopted by General Assembly of the United Nations in August 2015 suggests us the way forward.

### Current and Future of Consulting Engineering Industry in Japan

Consulting engineering industry in Japan started in 1945 to respond the needs for reconstruction of nation after World War II. Since then, our industry has evolved according to the economic growth of the nation. However, domestic market has reduced in the last 20 years due to economic downturn, population decrease and aging of society. On the other hand, our nation has been struggling from disaster prevention such as earthquake, typhoon, flood, volcanic eruption, etc. In addition, we have challenges in maintenance and repair of infrastructure that was built in the economic high-growth period. In the past, Tokyo Olympic Games held in 50 years ago became the driving power of national development. In contrary, challenge of Tokyo Olympic Games in 2020 will be to demonstrate engagement in sustainability for full-fledged society.

### Birth of New CE Association in Japan through Consolidation

CE associations in Japan have been working independently in different disciplines as well as in separate overseas and domestic market. Among these organizations, AJCE was established in 1974 by a body of independent consulting engineers. In the same year, AJCE became a member of FIDIC. In April 2016, AJCE will consolidate with related CE association and change name to "Engineering and Consulting

Firms Association, Japan (ECFAJ)". By succeeding AJCE, ECFAJ will represent Japan as FIDIC member association. ECFAJ will be the largest CE association in Japan in charge of oversea projects including Official Development Assistance (ODA). We believe that ECFAJ can contribute further in the activity of FIDIC,

development of CE industry, development of economic growth in developing countries while strengthening international cooperation. It will be appreciated if we could have continuous support and advice from FIDIC board members, secretariat as well as FIDIC MAs.

## AJCE will consolidate with ECFA - Platform for the Future -



**Masatsugu KOMIYA**  
Vice-President, AJCE  
Executive Director, Yachiyo Engineering Co., Ltd.

AJCE will consolidate with ECFA (Engineering and Consulting Firms Association, Japan) on April 1, 2016, and the largest Japanese international consultant association will be born. The name of the new association will be "Engineering and Consulting Firms Association (ECFA), Japan" (FIDIC registration name will be ECFAJ).

Both AJCE and ECFA have left great footprints in consulting industry, as well as great reputation records from the customers. Although they share the same objective as consultants, each association has kept its independent activity under different organization with different operation and management rules.

However, since the request from Japanese industrial sector to integrate the accumulated experience and knowledge of AJCE and ECFA has become much stronger in recent years, related officials including chairmen of both associations have been cooperatively working with enthusiasm during the last four years to realize the consolidate. And as the result, the consolidation agreement was signed on December 15, 2015, in which it is agreed that the new organization would start its activity from the next Japanese fiscal year (April 1, 2016).

On the other hand of the start of new organization, AJCE will succeed its glorious history of over 40 year to ECFAJ. With my heart filled with deep emotion and memories, I would like to express my deepest gratitude to all related parties including FIDIC officials for their support given during such a long period of time.

Since the world is confronting with serious issues threatening the global social life such as large

scale disasters, environmental problems, energy matters, and so on, role of consultants is becoming increasingly important when considering the consistent needs of infrastructure development.

During the last 70 years, Japan has drastically recovered from postwar devastation, and as the synergistic effect of infrastructure development, remarkable economy growth was achieved. Realization of our tough and strong infrastructure is the result of our continuous study from the disaster that strikes Japan. Japan is proud of having such indomitable spirit, culture of empathy, and high-quality infrastructure. Japanese consultants are more than ready to contribute to the world-wide market by providing its cutting edge technology that has been protecting its own country.

A consultant is required to have total engineering capability in order to accomplish planning, design, construction supervision, operation and maintenance services, as well as management skill to control organizational, legal, business operation, and contractual management issues.

ECFA, having 50-years history, consists of Japanese firms of both "hard" (physical) and "soft" (non-physical) consulting services in ODA field. Objective of ECFA is to promote economic development and international cooperation in the developing countries.

Integration of accumulated knowledge and knowhow of AJCE with that of ECFA will strengthen the total performance of Japanese consultant industry, in terms of introducing FIDIC policy such as, effective application of FIDIC contracts form, contract management by adjudicators, capacity building, appropriate treatment of QBS, and other issues.

Target activities of the new association are as follows;

- 1) Increase and enhance its influence by releasing constructive opinions to Japan and abroad, with the aim of further improvement of the consultant's business environment.
- 2) Participate in FIDIC as the representative organization of Japan, and appeal the international status of member companies.
- 3) Introduce and promote FIDIC contracts form to strengthen negotiation skill of member companies to create international contract agreement.
- 4) Create opportunities to communicate with

overseas consultant industry, to promote further internationalization of member companies.

- 5) Contribute to the development and growth of international consultant industry of Japan.

I strongly believe that every Japanese consultant has an important mission to contribute to the world, helping all nations, regions, races, peoples in overcoming prejudice and harmonizing cooperation.

I sincerely hope that the new association will be a platform for Japanese consultants who are working in global scale, and contributing to the improvement of people's life and peacefulness of the world.



**ECFA-AJCE Signing Ceremony of Consolidation, Dec. 15, 2015**

## Seek Growth Abroad



**Keiji SASABE**  
 Director, AJCE  
 President, CTI Engineering International Co., Ltd.

Do you know "Nattoh"? Have you ever tried it? "Nattoh" is a traditional Japanese food made from soybeans. The characteristics of the product are peculiar flavor, smell and sticky texture. Any Japanese person knows "Nattoh." Some love it, others dislike it. For foreigners visiting Japan, "Sushi," "Sashimi," "Tempura," or "Sukiyaki" are obvious popular Japanese food. Only few, however, enjoy "Nattoh." I personally know only one non-Japanese person who loves "Nattoh."

It is said that the size of the Japanese "Nattoh" trade is currently 200 billion Yen. It was a popular food in Eastern Japan until about forty to fifty years ago. Now you can find it at every supermarket in the Western Japan as well. It has become a national food. "Nattoh" is popular as health food, and due to the health food trend, the consumption of the product in the country has been rising in the last thirty years. However, it has reached its limit because of the decrease in the country's population. In addition, the increase of the cost of soybeans (the material of the product) and oil (the material of the plastic package) has forced the manufacturers to look for the new market overseas.

The manufacturers have found the limit of the domestic market, and developed a new taste "Nattoh" that appeals to non-Japanese people. They have taken a new action in Europe and the United States; for example, handing out samples in places like food expo, or promoting directly to the 3 star Michelin restaurants. I heard that the "Japanese Sake" trade took the same action at much earlier stage. The fact that they selected Europe and the United States as a new market seemed very surprising and new to me. You might think, "Why Europe or America? They would never like the flavor of Nattoh!"



**Japanese Sake**



**Nattoh**

Trans-Pacific Strategic Economic Partnership Agreement (TPP) came to a basic agreement on October 5, 2015 after two years the Japanese government joined the negotiation. Tariff will be eliminated step by step within five years period. The group is composed of twelve transpacific countries, and it is considered to be a start of a huge economy that shares 40% of the global GDP. It is also expected to set the standard for the world trade.

There are various discussions on pros and cons for Japan regarding joining TPP. One of the cons is

that the cheap agricultural products will be imported to Japan from countries such as the United States, which will give a great damage to the country's agricultural industry. It is said that the Japan's agriculture has less international cost competitiveness because they have developed under the careful protection by the Japanese government. Is the Japanese agricultural industry going to decline as a result of joining TPP? Remember the challenge of "Nattoh" trade. Create new agricultural products that are competitive in overseas countries. I believe that the Japanese farmers are taking this matter seriously, and that there are many talented people who can lead Japan's agriculture to succeed in the world.

Now, let's get to the point and talk about our industry, Japan's construction. Japanese general contractors have developed their overseas deployment in 1970s. Although the number differs depending on the year, the total sales of overseas projects in the year of 2014 amounted to 1,800 billion Yen (the total number of 49 companies of the Overseas Construction Association of Japan, Inc. (OCAJI)). Since the size of the domestic construction investment is said to be about fifty trillions, the overseas deployment shares about 4% of the whole industry. Due to the decrease in Japanese population, the decrease of domestic construction investment is inevitable. We have to strategically go abroad.

The sales of overseas projects in the last ten years in Japan's development consultants industry are

increasing, and the amount is currently about 100 billion Yen (data of the major 80 development consultants), although there are yearly fluctuations. In 2014, 16% of the sales from the budget other than Official Development Aid (Japan's ODA and those of Multilateral Development Banks) was 15.1 billion Yen of the total sales of 93.3 billion Yen. Every Japanese development consultant is seeking deployment abroad. I believe that there is much space for the development in the field of non-ODA budget, and that this is the important element of further development of the Japanese development consultants in the future.

Japanese development consultants have grown through the implementation of projects by Japan's ODA and MDB. The strength of the Japanese development consultants are; highly ranked engineers and specialists, high quality work, and overall planning (master plan formulation). Now is the time, with the strength, to accelerate deployment to seek growth abroad. As presented in this newsletter, the Japan's development consultants association has entered the new era through the uniting of Engineering and Consulting Firms Association (ECFA), Japan and Association of Japanese Consulting Engineers (AJCE). It is going to improve the ability to send out messages and to keep our influence in FIDIC. I hope the Japan's development consultants will seize this opportunity to strengthen the collaboration with the worldwide consultants and seek growth abroad.

AJCE Activity 2015

**January**

**AJCE New Year Celebration Party**



**February**

**3rd Contract Administrator Seminar [see page 15]**



**May**

**ASPAC**



**August**

**YP Seminar [see page 10]**



**Social Networking "YAKAI" [see page 10]**



**September**

**FIDIC 2015 Dubai Conference**



**November**

**3rd Contract Administrator Training Workshop**



**CE Promotion**



## July

2015 Tehran Conference



AJCE Annual Seminar 2015  
[see page 11]



4th AJCE-Cup Futsal Game [see page 9]



## December

Interdisciplinary Seminar 2015 [see page 17]

[see page 15]



in University [see page 10]



5th AJCE-Cup Futsal Game [see page 9]



## AJCE Activity 2015

# Activities of Young Professionals (YP) in 2015

Young Professional Sub-Committee

### 1. AJCE Annual Seminar in 2015

AJCE Annual Seminar is held annually on subjects closely linked to CE or construction industry. This year, Young Professional Sub-Committee (YPSC) had an opportunity to present overview of activities, and future endeavor to enhance consulting industry. Detail is briefly summarized below.

- YPSC was established in December 2009 to promote following 3 networking activities;
- 1. Networking with domestic CE (YP),
- 2. Networking with oversea CE (YP)s, and
- 3. Networking beyond generations and industries.
- YPSC started by 9 members and has grown to 21 in July 2015. Key members of YPSC went through changes in this period. According to the increase of members, activity has gradually expanded.
- Activities such as Young Professionals Exchange Program (YPEP) between CA and AJCE, YP Award, networking event for woman engineers, lectures to university students, etc. contributed greatly for member increase. Together with these activities, YP network has been expanding.



Mr. Sumihiro Sawabe  
Chair, Young Professional Sub-Committee

### 2. AJCE-Cup Futsal Games

AJCE-Cup Futsal Games started in 2013 and has grown to one of the regular events. It was

successfully convened twice in this year. The first one was held in May and the second in November 2015. Games in May and November were overwhelmed by approximately 70 players (8 teams) and 40 players (5 teams) respectively. Though the games started at 7 p.m. after work, players showed quick and energetic performance. After the tournament, players moved to a pub to celebrate winners. All the players agreed to hold futsal games on regular basis. AJCE-Cup Futsal Game will continue.



4th AJCE-Cup



5th AJCE-Cup

### 3. 2015 YP Seminar

Prof. Kuninaka, Institute of Space and Astronautical Science, Aerospace Exploration Agency (JAXA) in Japan was invited as a speaker for 2015 YP Seminar, " Hayabusa II Development Project". This seminar was convened for broadening the perspective of engineers through the communication with professionals in different fields which is difficult to experience in everyday work.

In June 2010, the asteroid exploring satellite "HAYABUSA", returned to earth after 7 years of travel by collecting samples from the surface of asteroid "Itokawa". This breaking news may still be fresh in your memory. Prof. Kuninaka engaged in "HAYABUSA" project from the planning, launching, operation and to the return of "HAYABUSA" in which his major task was to develop electric propulsion engines (ion engines). Following the first "HAYABUSA", he engaged in "HAYABUSA II" project as the project manager and successfully launched the satellite.



Prof. Hitoshi Kuninaka

In the seminar, he covered a broad range of topics including history of rocket development, technical issues such as engines and space engineering, and challenges or secrets to bring the project to a success as a project manager. Speaker showed us a video of the first "HAYABUSA" from launching to return to the earth with interpretations. The scene that "HAYABUSA" burnt out by heat and released the capsule and shouting of staffs, "Welcome home! Welcome home!" moved heart of audience.

Prof. Kuninaka explained following objectives for the "HAYABUSA II" project: 1. Enhance scientific knowledge, 2. Draw momentum in carrying out unique new space exploration technology, and 3. Challenge continuously to the space frontier. This will also deliver encouraging message to young professionals who will play a key role in the management and development of consulting engineering industry.

#### 4. Social Networking Event, "YAKAI"

Following the YP Seminar, social networking event called as "YAKAI" was held. About 25 YPs from several companies participated. This event provided an opportunity to disseminate and share activities of YPs. Some participants commented that this event is quite useful since there is little networking opportunity with other companies in the same industry."



YAKAI

#### 5. CE Promotion in University

YPSC has been conducting lectures on CE and CE industry to University students since 2010 to advocate CE profession and to invite them to enter into our profession. On 2nd December, 2015, five YPSC members presented issues on CE industry to 80 students, some about to graduate. In order to advocate CE industry, speakers emphasized that works of CE is contributing greatly in economic and social development while keeping sustainable environment in the world. In addition, speakers informed students that CE profession is indeed rewarding and enjoyable.



#### Closing Remark

From its start in 2009, YPSC grew from 9 to more than 20 members in 2015. YPSC gradually widened its scope of activity according to member reinforcement. In 2015, YPSC achieved original mission drafted in 2009. We are certain that communication and networking among YP both in Japan and overseas have been in progress as the activity of YPSC has strengthened. Above all, important issue is to keep networking momentum through YP activities that aim at future progress of CE industry. YPSC would like to continuously exert its effort in this respect.

AJCE Activity 2015

# AJCE Annual Seminar 2015 Strategic Challenges for Consulting Business

Technical Training Committee

Date and time: 24 July 2015 (Friday), 2015  
13:00 – 17:00  
Place: Grand Arc Hanzomon Hotel  
Fuji West Room  
Participants: 115 people



Vice President of the International Federation of Consulting Engineers (FIDIC) and Chief Executives of two FIDIC member associations were invited for the seminar on the current state and future prospects of the international consulting business. AJCE Young Professionals (YP) subcommittee also gave a presentation on the future development of the consulting industry. Despite the hot weather, the turnout for the event was great and there were active discussion during the question and answer session.

## 1. Challenges for the Sustainable Growth of Asian Engineering & Consulting Industry

Jae-Wan Lee, FIDIC Vice President, KENCA Chairman

### - KENCA's activities

The mission of Korea Engineering & Consulting Association (KENCA) is to promote the development of the engineering industry in Korea. KENCA was established in 1947 by the Korean government based on the Engineering

Promotion Act in the same year. KENCA provides education, training and technical assistance to members.

### - Best practices of the Korean engineering industry

Orders received by consulting engineering (CE) companies in 2014 was from 82% domestic and 18% overseas.

Korean Engineering, Procurement and Construction (EPC) contractors achieved exceptional increase in overseas sales in the period from 2005 to 2014.

The following best practices were mentioned: (1) In the Middle East, Korean contractors got number one position in terms of contracts, and (2) Acquired licenses for desalination plants through M&A.



Jae-Wan Lee, FIDIC Vice President

### - Trends of the global engineering market

Market trend is changing toward larger and more complex projects. In the world market, we are required not only technologies, but also complete solutions. Therefore, even specialized companies are integrating and transforming in order to be able to cope with larger and more complex projects.

**- Increasing the sustainable competitiveness of the Asian engineering industry**

Korea recognizes that it has a different business culture compared with leading European and American companies, so as the case in Japan. Language skills are a particular challenge for Asian CE companies. For us, it is also important to consider how we can change. We have to try to make the construction industry more attractive including young people around the world.

**- The mission of the CE industry**

Our everyday life is supported by various infrastructure technologies and facilities, and you cannot discuss life without acknowledging its relationship with engineering. In order to optimize infrastructure, CEs are involved in many different stages from preparation of master plans and feasibility studies (F/S) to detailed design and maintenance. Our core competence as engineers is technology combined with experience. I would like to emphasize that engineering has an important meaning for human life.

**2. An Overview of ACE Strategic Corporate Activities in Responding to the Changing Domestic and Global Competitive Business Landscape**  
**Nelson Ogunshakin, ACE Chief Executive**

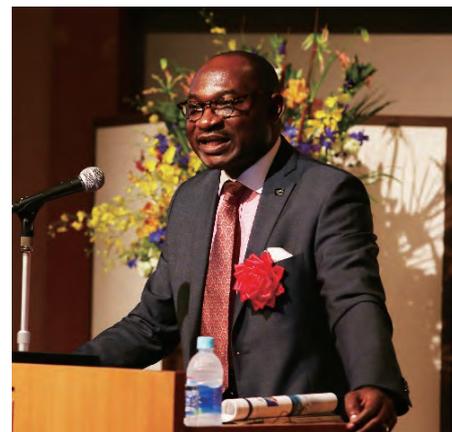
**- ACE's activities**

Association for Consultancy and Engineering (ACE) was established in the same year as FIDIC in 1913 and is funded with private capital without government financing or intervention. ACE's roles include advocating the interests of CE companies to private stakeholders, educating young engineers, pursuing further cooperation with other industries, proposing infrastructure investments involving the government, and preparing standard terms and conditions for the UK and European markets similar to what FIDIC is doing. Although ACE's membership overwhelmingly consists of companies with under 50 employees, there is ongoing polarization as more large companies are becoming members. ACE organizes various annual events to which also politicians are invited, and there are also meetings for young engineers like in Japan. Every Wednesday, ACE also publishes an email newsletter with infrastructure information which

has around 25,000 subscribers.  
[\(http://www.infrastructure-intelligence.com/\)](http://www.infrastructure-intelligence.com/)

**- Expansion into international markets**

There are reports that the Japanese industry is expanding overseas, and since England has very low barriers to entry, the UK market could be an opportunity for Japanese companies. However, the UK industry is complex and entry is thus very dangerous for companies which fail to understand the procurement process. Since the cultural dynamics in each region can be completely different, it is necessary to understand these dynamics when entering international markets.



Nelson Ogunshakin, ACE Chief Executive

**- Current M&A situation**

The consulting industry is getting more and more consolidated. However, as 70% of M&As end in failure, large companies which carry out M&A to expand their business have to be careful. Internal analysis is first necessary when implementing M&As, and it is important to clarify the needs and wants of the parties involved. Next, target companies should be identified, but evaluation is not possible unless an appropriate due diligence process can be completed. Also, integration after the M&A is also crucial. Unless systematically performed, there is a risk that corporate value will be damaged. For the restructuring of the industry, both integration and division are expected to proceed in parallel. When companies grow they will later inevitably be split up. Our industry does not exist only for the purpose of organizational growth, and I do not agree with the notion that growing big is beautiful.



**3. Learning from the Past, Understanding the Present, Embracing the Future**  
**Megan Motto, CA Chief Executive Officer**

**- Consult Australia activities**

Consult Australia (CA) review their strategic planning every three years. In Australia it has been recommended that the services provided by public organizations be undertaken privately, and CA provide not only technical support for the growth and diversification of private enterprise, but also contribute towards the creation of the greater business environment with a bottom-up approach, making appeals to government, as well as sponsoring courses and conferences. Additionally, CA actively lobbies to improve the standing of consulting engineers as advisors to government, as well as to obtain better positions, more beneficial contracts and better working conditions

**- The market environment of consulting engineers**

With the falling off of improvements in the resources industry infrastructure and a shift from investment to production, it is said that the construction industry in Australia is at a crossroads. Additionally there are the impacts of a lull in Chinese demand for resources, drops in the prices of minerals and reviews of governmental support for the construction industry. In the future, there will be discussions as to what extent investment in infrastructure will continue, with eyes turning towards the Asian market. The following requirements are deemed necessary for market expansion: 1) mutual understanding between different cultures, 2) Free Trade Area (FTA) activities, 3) the hiring of overseas personnel, 4) FIDIC networking activities, 5) progress in M&A.

**- The current M&A situation**

Regarding M&A, the priorities are capitalization and appealing to stockholders who have short term viewpoints, however, with the consulting engineers' focus on value, there is an increasing importance placed on long term strategies. M&A is about the growth of enterprise and profit, but the business of consulting engineering must in the future endeavor to sell and ensure that the value of technology and consultancy is understood.



Megan Motto, CA Chief Executive Officer

**- Nurturing expertise**

The business of consulting engineers in Australia suffers from a lack of expertise in the long term and the CA has implemented the Future Network Program to nurture young engineers for the next generation. The program is aimed not just at the creation of networks of technicians, but also clients, banking institutions, planners, journalists and government personnel. The participation rate of women in the workforce is not just an issue for women but also the responsibility of top management. It is a certainty that the ability to adapt changes will be crucial in the future.

**4. Young Professional's Challenges for Future Generations**

**Sumihiro Sawabe, YP sub-committee chairman, AJCE Technical Training Committee.**

**- The consulting engineering business in Japan**

After the end of the Second World War, postwar reconstruction and high economic growth pulled significant development in consulting engineering business in Japan. In view of the recent price reduction in public works projects, shrinking of domestic market, low share of

overseas market (both ODA and non-ODA) in comparison with that in domestic, etc., Japanese consulting industry is challenged to overcome such difficulties. In addition, CE industry is facing aging of the consulting engineers which indicates difficulty in keeping/increasing young professionals. It is essential that the know-how and experience of senior engineers should be transferred to young generation. Together with improvement in work environment that is linked to good work-life balance, this endeavor can enhance participation of young engineers as well as female engineers in CE industry.

**- YP Sub-committee activities**

AJCE has been placing importance in capacity development of young professionals. In this connection, Young Professional (YP) Sub-committee was established in December 2009. Following networking activities were set as the main objectives: 1) networking with domestic Young Professionals, 2) networking with overseas Young Professionals, 3) expand networking to various generations. Young Professional sub-committee (YPSC) started by 9 members and increased to 21 in July 2015. Addition of YPSC members have expanded the scope of activities. As the result of enhancement of activities, we achieved initial goals by 2014 that were set forth in 2009. In the course of these development, YPSC has contributed significantly for supporting Young Professional Exchange Program (YPEP) between Japan and Australia, establishment of Young Professional Award, promotion & support of networking among female engineers, advocate CE industry to university students, etc. At present, YP networking is steadily growing.

**- Future prospects**

We are certain that achievement accumulated by the activity of YPSC will contribute in the development of CE industry in Japan in the future. In this context, we will continue expanding networking and training events that are initiated by young professionals.



Sumihiro Sawabe,  
AJCE YP sub-committee chairman,

**5. Closing Comment**

Every year AJCE holds annual Seminar that focuses on issues of interest relevant to CE industry. In this year, we invited 3 keynote speakers who play a key role in FIDIC as well as respective FIDIC member association. They were FIDIC Vice-president (at that time), Dr. Jae-Wan Lee, Dr. Nelson Ogunshakin, CEO of ACE and Ms. Megan Motto, CEO of CA. The seminar also provided golden opportunity for YPSC to express their thoughts and future prospect in the development of CE industry.

It is my pleasure if this article would contribute in the enhancement of consulting industry in the future.

## AJCE Activity 2015

# 3rd Contract Administrator Training Workshop for the Overseas Construction Project

Contract Administrator Training Subcommittee,  
International Activity Committee

Date and Time: November 27, 2015 10:00-19:30  
Venue: Conference room, Oriental Consultants Co., Ltd.  
Number of Participants: 28



Mr. Toshio KURASHIGE,  
Nihon Suido Consultants, Chairman of  
International Activity Committee

### Introduction

The Overseas Contract Administrator Training Subcommittee was established in 2012 to enhance the ability of engineers who will be assigned as Contract Engineer or Project Manager in the overseas project.

This workshop was organized for targeting the persons who have experience in overseas projects not less than 3 years. The lecturer explained the essential clauses of the conditions of contract in the FIDIC Red Book MDB Harmonised Edition 2010 mainly in regard to "Extension of Time" and "Additional Payment". Following that, as a workshop, after the explanation of the backgrounds of a case by the lecturer the participants discussed on the case in separate 5 groups and made presentations on their conclusions.

In the opening address by Mr. T. KURASHIGE, Chairman of International Activities Committee, he stressed that the importance of proper contract administration had been increasing for the overseas construction projects; therefore, this workshop should be a good opportunity for the

participants to get the knowledge of contract administration.

### Explanation of the Clauses in FIDIC Red Book MDB version 2010 Mr. A. SHIROYA

Before case study session, Mr. A. SHIROYA explained key contractual terms for facilitating discussions in the case study session. He expressed that comprehensive knowledge on contract administration is essential for the appropriate project management. He first explained several basic principles for contract administration in the common law jurisdiction, such as "Contra Proferentem", "Quantum Meruit", "Prevention Principle", "Time at Large" and "Estoppel". After that, he explained fundamentals of claims and definitions & interpretation in some essential words in the Conditions of Contract.

He then explained with practical examples in which all clauses relevant to "Extension of Time", "Additional Payment", "Variations", "Claim procedure" and finally "Dispute Resolution Procedure" in the FIDIC Red Book MDB Harmonised Edition 2010.



Mr. Akira SHIROYA, Adjudicator,  
Nippon Koei Co., Ltd.  
Chairman of the Subcommittee

**Workshop: Group discussion on “Extension of Time” and “Additional Payment” in case study Mr. M. KAIDO**

Participants were first separated into 5 groups (5-6 persons each) for group discussions and then the programme proceeded as follows:

1. Self-introduction
2. Outline of the case
3. Outline of the Technical Specification
4. Group discussion Part 1 & 2
  - 4-1. Outline of the issue
  - 4-2. Group discussion
  - 4-3. Presentation
5. Group discussion Part 3 & 4
  - 5-1. Outline of the issue
  - 5-2. Group discussion & Presentation
  - 5-3. Presentation



Mr. Masaru KAIDO, Adjudicator,  
Principal of the Kaido & Associate  
Member of the Subcommittee

6. Q&A

In the group discussion, the Part 1 & 2 were allocated for Variation & Additional Payment, and the Part 3 & 4 were for Delay, Disruption and Extension of Time.

Mr. M. KAIDO stressed the importance of validation of the claim. The notice of claim should be submitted to the Engineer within 28 days after the Contractor became aware, or should have become aware, of the event or circumstance to be considered claimable.



Group Discussion

**Closing Address**

In closing address, Mr. A. SHIROYA expressed that the subcommittee will continuously hold this kind of workshop for experienced engineers and also seminars for less experienced engineers to enhance practical skills of project management and contract administration in overseas construction projects.

**Post-Workshop Party**

Following this workshop, small post-workshop party was held for an hour to exchange opinions between participants and lecturers in regard to subjects in this workshop and any contractual issues.

## AJCE Activity 2015

# Interdisciplinary Seminar 2015 "Infrastructure Development and Cutting-Edge Technology"

Technical Exchange Committee

Date : December 1, 2015

Venue: CTI Engineering, Room 10A

Speakers: Junji Shibata : Director, Oriental Consultants Global

Junjiro Onoda: Professor Emeritus, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency

Tomoki Watanabe: Professor, Tokyo Institute of Technology



The Technical Exchange Committee (TEC), composed of professional consulting engineers serving in the field of construction, machinery, electricity, etc. has been working for exchanging of information and raising capacity of members through committee activities. As a part of activities, captioned seminar was planned and implemented. Outline of the seminar is reported in the following sections.

### 1. Qatar National Master Plan, Mr. Junji Shibata

Qatar gained independence from UK whose capital locates in Doha. Its physical features shows round cape covered by sand locating in the Persian Gulf. National land is only 11,000m<sup>2</sup> that is smaller than Akita prefecture in Japan. Population is 1.68 Million in 2010. Qatar has strong financial power which is attributable to export of natural gas. Therefore, the nation has strong

incentive in education, medical care, tourism, ITS, art while keeping progress in economy and culture.

Oriental Consultants Global won international competition for Qatar National Master Plan which was carried out for 2 years, 2005-2006 after which contract was signed in 2007. The project took 5 years of implementation for field survey, database formation, space-development, district-development, city planning, training of professionals, etc. and completed in 2012.



Mr. Junji Shibata

### 2. Development of Solid-Fuel Rocket, Dr. Junjiro Onoda

There are two types of rocket fuels; liquid and solid. Former has high fuel efficiency and able to control propulsion. However, its structure is complex and propulsion power is low as compared with that of solid fuel. Contrarily, latter has low fuel efficiency and difficult to control propulsion but has simple structure, strong power and capacity of long distance flight. Space development in Japan has started by Professor Itokawa who designed so-called pencil-type solid fuel rocket. Since then solid fuel rocket has remarkably evolved, and contributed greatly to Japanese space development. In particular, it was used for cutting-edge science satellite, "HAYABUSA".



Dr. Junjiro Onoda

Speaker presented history of solid fuel rocket development and its contribution to the space engineering, space-plasma physics, astronomy, space physics, sun-physics, moon-planet exploration. Now low-price solid fuel rocket is in progress.

### **3. Challenges for Development of Oversea Railway Business, Prof. Tomonori Watanabe**

Development of overseas railway business and associated challenges was selected as one of the typical cases of infrastructure development in international market. In UK, Japanese firm contracted large orders in railway project. Infrastructure development reflects social and cultural environment in the subject country. In order to apply and deploy Japanese business



Prof. Tomonori Watanabe

model in overseas railway projects, it is essential to know the fact that business surplus in passenger railway is solely achieved by Japanese railway companies whereas that in freight train business goes to USA, Canada and Australia.

It is observed that in the trend of railway standardization in Europe, it is initiated by France, drafted by Germany and applied to other countries. This process of standardization in Europe is now expanding to international arena and showing overwhelming presence. In 1995, TBT (Technical Barriers to Trade) was integrated in WTO (World Trade Organization). Since then, TBT is applied in railway field in addition to international railway standard.

AJCE Activity 2015

# AJCE Delivered FIDIC Module 1 and 2 Training Workshop with Active Participants

Professional Development Committee

Date and time: 1<sup>st</sup> to 4<sup>th</sup> February 2016  
 9:30 – 17:30  
 Place: Tokyo



**- Background**

The demand for training of contract management is increasing in line with economic and social infrastructure projects in developing and emerging countries, especially in Asia. For consulting engineers, contract management skill is essential in preparation of bidding documents for construction, procurement of contractor, and contract administration during construction as the “Engineer”.

FIDIC standardized the contents of 5 training modules for FIDIC contracts in order to harmonize lecture scenarios.

- Module 0 : Professional Service Agreement
- Module 1 : Practical Use of the FIDIC Contract
- Module 2 : Management of Claims and the Resolution of Dispute
- Module 3 : Dispute Adjudication Boards: Duties and Responsibilities
- Module 4 : Management and Administration of FIDIC Contracts

These modules (2 days each) are frequently held worldwide (perhaps nearly 100 events annually) mostly by private training providers. However, there are less opportunities for Asian countries

including Japan to have such trainings.

**- Program**

To cope with the high demand of training opportunity for contract management in Japan, AJCE firstly organized Module 1 and 2 training workshops in 2013 with more than 30 participants. This is the second workshop in Japan.



**- Trainers**

AJCE invited two experienced international contract experts, Mr. Geoffrey Smith and Mr. James Perry, as trainers. They are listed in FIDIC President’s List of Dispute Adjudicator and also registered as FIDIC Accredited Trainer.

The comprehensive workshop materials of more than 500 slides for 2 modules were developed by them.



**- Participants**

The workshop received 49 participants, not only from consulting firms but also from contractors, law firms and government bodies. There were lively exchange of questions and answer during the workshop.

**- Future Events**

AJCE plans to continuously provide training opportunities of FIDIC Contracts to meet requirements of its member firms and the construction industry, also after April this year when AJCE will consolidate with Engineering and Consulting Firms Association (ECFA), Japan.



Project Accomplishments by AJCE Members

# Non-Revenue Water Control Project in Sao Paulo State

**Principal Firm (s)** Chuo Kaihatsu Corporation

**Project Site** Sao Paulo, Brazil

**Client** Sabesp(Companhia de Saneamento Básico do Estado de São Paulo)

**Finance** JICA (L/A)

**Period** March 2014–February 2018

**Type of Project** Management Consulting Services



**Project Outline**

In Sao Paulo state, the water loss rate (non-revenue water rate) is as high as 31.9% in 2011. JICA and Sabesp, the water supply and sewerage company of Sao Paulo, signed the loan agreement in 2012 in order to reduce non-revenue water rate for efficient use of existing water resources in the state. The reduction of non-revenue water contributes to optimize financial condition of the public entity that shall provide sustainable water services.

**Details**

- ◆ Main technical activities
  - replacement of water pipes and networks (674 km)
  - replacement of connections (875,035 units)
  - renewal of water meters (1,590,333 units)

◆ Indicators

Water loss indicator	Original 2008	Target 2018
Loss rate (Micro-measured), IPM	34.4 %	25.8%
Loss rate (Billed), IPF	27.9 %	20.7%
Loss rate per connection per day, IPDt	436 L/unit/day	321 L/unit/day

◆ Service

Our company offers a management consulting services with a consortium partner for the Sabesp Program of Water Loss Reduction and Energy Efficiency.



Project Accomplishments by AJCE Members

# Mombasa Port Development Project

**Principal Firm (s)** Japan Port Consultants, Ltd.



**Project Site** Mombasa, Kenya

**Client** Kenya Port Authority (KPA)

**Finance** Japanese ODA Loan

**Period** Nov. 2008 – Feb. 2016

**Type of Project** Consulting Services (Detailed Design & Construction Supervision)

### Project Outline

Mombasa Port is the one and only international port in Kenya. It is highly important for international logistics not only for Kenya, but also for the neighboring countries, such as Uganda, Rwanda, Burundi, South Sudan. The amount of container handling in Mombasa Port has increased to over one million TEU / year now and grown 2.5 times in the last 10 years.

We proposed three new berths, carried out detailed design of one of them as Phase 1 and now, are supervising construction works toward successful completion.

### Details

- Land Reclamation: 42ha
- Soil Improvement: 35ha (by PVD)
- Container Terminal: 28ha  
(Pavement, Drainage and Facilities)
- Pier Berth No.20: L=210m, WD=-11m
- Pier Berth No.21: L=350m, WD=-15m
- Small Berth: L=283m, WD=-4.5m
- Revetments
- Roads  
(Access, Intersection and Connection)
- Buildings and Utilities
- Cargo-Handling Equipment



Location



Three New Berths



Phase 1



Project Site (2015)

Project Accomplishments by AJCE Members

# The Urgent Rehabilitation Project of Tanjung Priok Port in Indonesia

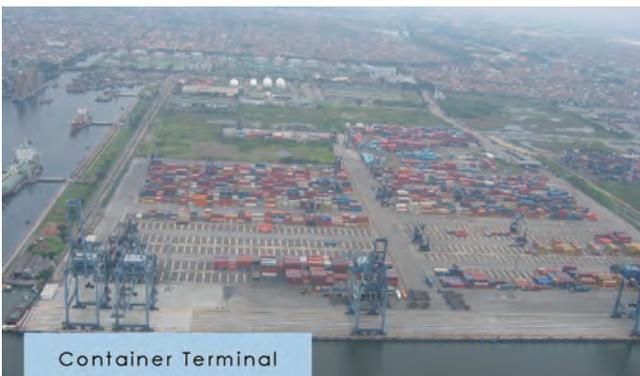


Approach Channel

<b>Principal Firm (s)</b>	Nippon Koei Co., Ltd. <b>NIPPON KOEI</b>
<b>Project Site</b>	Tanjung Priok Port, West Java, Indonesia
<b>Client</b>	D/D: Japan International Cooperation Agency (JICA) C/S: Ministry of Transportation (DGST)
<b>Finance</b>	JICA/ Japanese ODA Loan
<b>Period</b>	Dec. 2009 - Feb. 2015
<b>Type of Project</b>	Engineering Services for Detailed Design and Construction Supervision.



Tanjung Priok Port



Container Terminal

**Details**

- Widening of approach channel and port inner basin at -14.0 m depth by dredging (8.02 million cubic meter)
- Relocation of breakwaters: 1,470 m long
- Provision of supplemental navigation aids

**Project Outline**

Tanjung Priok Port is the largest international port in Indonesia; it handles about half of the container traffic of the country. With the increase in cargo throughputs and increased demand of calling ships, the port has been suffering from traffic constrain due to the restricted regulation of single lane traffic in the port. Also the narrow port inner basin has high risk in safe operation of vessels in the port.

Nippon Koei provided consultancy services of reviewing detailed design and construction supervision under Japanese ODA loan.

The project consisted of widening of shipping lanes from 125 m one-sided traffic (single lane traffic) to 300 m two-sided traffic (two-way traffic) for approach channel and widening of water basin inside of the port as well. These improvements enhanced the shipping efficiency to manage future demands as international hub port and securing safe maneuvering operation of vessels calling the port.

Project Accomplishments by AJCE Members

# Nhon Trach Water Supply Project in Vietnam Southern Vietnam Water Supply Project (Dong Nai Province)

**Principal Firm (s)** Nippon Koei Co., Ltd.

**Project Site** Bien Hoa City, Dong Nai Province, Viet Nam

**Client** Dong Nai Water Joint Stock Company

**Finance** Japanese ODA Loan

**Period** Sep. 2000 – Apr. 2015

**Type of Project** Engineering Services for Detailed Design, Pre-Construction and Construction Supervision

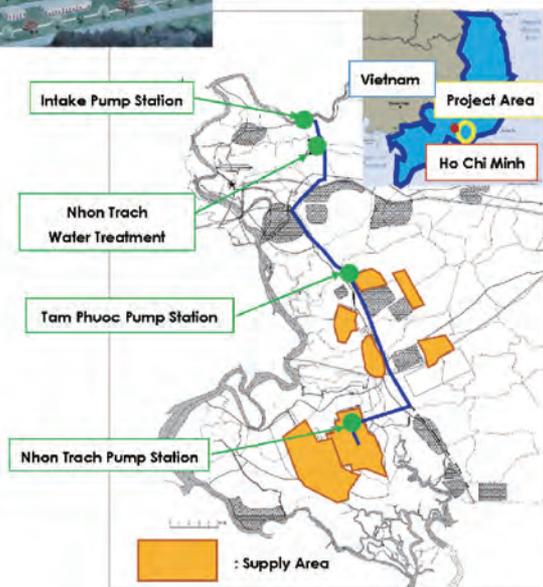


Water Treatment plant (105,000m<sup>3</sup>/day)



Tam Phuoc Pump Station (27m<sup>3</sup>/dayx4nos.)

Visitors from the local school



### Project Outline

Dong Nai province in southern Viet Nam has been urbanizing rapidly because the foreign direct investment and the labor force have been growing briskly. The government of Viet Nam deemed it urgently necessary to improve both living and investment environments. However, water supply in this region still lags behind other infrastructure, such as electricity supply and transportation.

The Nippon Koei project covered the whole water supply facilities: water intake facility, pump devices, water pipes, and a filtration plant.

It improved the capacity to supply enough water for daily and industrial use, from 200,700m<sup>3</sup>/day to 303,340m<sup>3</sup>/day.

### Details

- Intake Pump Station
- Water Treatment Plant (105,000m<sup>3</sup>/day)
- Tam Phuoc Water Pump Station
- Nhon Trach Pump Station
- Transmission Pipeline (45 km)
- Distribution Pipeline (41km)

Project Accomplishments by AJCE Members

# Enhancement of Capacity for Solid Waste Management in Kosovo

**Principal Firm (s)** KOKUSAI KOGYO CO.,LTD  
**KOKUSAI KOGYO CO.,LTD.**

**Project Site** Prizren municipality, the Republic of Kosovo

**Client** Japan International Cooperation Agency (JICA)

**Finance** JICA

**Period** September 2011 - August 2015

**Type of Project** Technical Cooperation

**Project Outline**

Solid Waste Management (SWM) was one of the most critical issues in the field of environmental policy in Kosovo. In particular, waste collection service was insufficient and the waste collection rate was extremely low.

This project improved the SWM system including not only the collection system, but public awareness and residents' discharging manners in Prizren municipality in Kosovo as well.

**Project features:**

- Current situation and problems on SWM has

achieved by compiling the current conditions and problems through the baseline survey.

- Waste collection services were commissioned in accordance with the plan to introduce an appropriate SWM.
- Bell collection services has been expanded on the entire territory of the municipality, and residents discharged waste in accordance with the waste discharging rules introduced by this project.
- 90 home composters were disseminated through this project as experimental activity, and the municipality distributed 500 composters in 2014 based on the experience obtained in this project.

Before the Project	After the Project
Waste had been scattered around the containers placed in the high-rise residential area.	Waste no longer scatters around the containers after the regular collection was been introduced.
7m <sup>3</sup> containers and their surroundings had been the waste dumping site.	Dumping sites of garbage were eliminated by removal of the containers, and introduction of the regular collection service.
Waste scattered around the containers	Surrounding area of the containers has been kept clean since the introduction of the regular collection service.



Location map

## Project Accomplishments by AJCE Members

# Urban Flood Control System Improvement in Selected Cities in Indonesia

**Principal Firm (s)** Yachiyo Engineering Co., Ltd.



**Project Site** Indonesia

**Client** Directorate General of Water Resources, Ministry of Public Works and Housing, Government of Indonesia

**Finance** JICA Loan

**Period** November, 2011 - July, 2017

**Type of Project**

- ◆ Review D/D, T/A, S/V
- ◆ Assistance for PMU

### Project Outline

The objective of the Project is to mitigate flood damage in important urban cities vulnerable against flood damage by improving flood control infrastructure, assisting for upgrading the administrative capacity of river basin management offices and preparing integrated water resources management plan with a view to supporting the national agenda of adaptation of climate change, thereby contributing to economic and industrial development in urban cities in Indonesia.



CCSP Bank Protection Works (Padang)



SSP Bank Protection Works (Palembang)



Masonry Bank Protection Works (Brangkal)

### Details

Sub-project	River	Scopes
Padang (Package-1)	Anai (a=539 km <sup>2</sup> )	Design Discharge: 1,300m <sup>3</sup> /s (1/25), Channel Improvement: 4.1km, Bank Protection, Riverbed Excavation, Dyke, Inspection Road
Palembang (Package-2)	Bendung (a=19 km <sup>2</sup> )	Design Discharge: 45m <sup>3</sup> /s (1/15), Channel Improvement: 5.5km, Inspection Road, Rehab. of Damaged River Bank
Surabaya (Package-3)	Wonokromo	Design Discharge: 419m <sup>3</sup> /s (1/25), Bank Protection, Riverbed Excavation, Dyke
Mojokerto (Package-4)	Brangkal (a=252 km <sup>2</sup> )	Design Discharge: 420m <sup>3</sup> /s (1/25), Rehab. of Weir, Channel Improvement: 7,950m, Bank Protection, Mobile Pump
Gorontalo (Package-5)	Bolango (a=520 km <sup>2</sup> )	Design Discharge: 200m <sup>3</sup> /s (1/20), Channel Improvement: 5.3km, Mobile Pump, Bridge
Manado (Package-6A, 6B)	Tondano (a=545km <sup>2</sup> )	Design Discharge: 420m <sup>3</sup> /s (1/5), Channel Improvement: 1.7km, Bank Protection, Dyke, Drainage Outlet, Pedestrian Bridge, Formulation of MP, Hazard Map

Project Accomplishments by AJCE Members

## CONSULTING ENGINEERING SERVICES ON THE REHABILITATION PROJECT OF THE OUTER BANGKOK RING ROAD (RP-OBRD)



**Principal Firm (s)** CTI Engineering International Co., Ltd.



**Project Site** Pathum Thani and Ayutthaya Provinces, Kingdom of Thailand

**Client** Department of Highways (DOH), Ministry of Transport, The Kingdom of Thailand

**Finance** Grant Aid by Japanese Government

**Period** Jan. 2013 - Apr. 2015 (28 month)

**Type of Project** Detailed Design and Construction Supervision

**Project Outline**

RP-OBRD is a rehabilitation project of the Outer Bangkok Ring Road (OBRD), which connects between Bangkok and Northern part of Bangkok along the Chao Phraya river basins, including major industrial estates area in Thailand.

OBRD is one of indispensable road (full access control motorway) damaged by the historical flood disaster occurred in 2011, resulting severe economic losses due to the dismemberment of transportation network over 1 month.

The main objectives of the Project are;

- i) to prevent road-flooding caused by the severe flood disaster equivalent level in 2011,
- ii) to contribute sustainable economic growth in the Chao Phraya river basins to keep function of transportation system and road network even in the flooding conditions for the future.

**Details**

The objective section is 15km long of the total 30km intermittent water-flood area.  
(4 lanes: One Way [South to North])

**[Project Scope]**

- > Temporary Detour Construction/Removal [Total Approx. 19km]
- > Raising Road Elevation (20cm~120cm) with pavement works [Total Approx. 12km]
- > Improving Road Facilities (Drainage Pipes, Median Crossing Entrances, Concrete Barriers, Slope Protection etc.)
- > Incidental Road Works (Sign Posts, Road Marking etc.)

**[Project Features in Management Aspects]**

It is necessary to manage high-standard safety traffic control during the project, due to long-term occupation of full-access control motorway.

**<Images of After Completion>**



[Usual Condition]



[Flooding Condition]

Project Accomplishments by AJCE Members

## Consulting Service for Integrated Water Resources and Flood Management Project for Semarang

**Principal Firm (s)** CTI Engineering International Co., Ltd.



**Project Site** Semarang, Indonesia

**Client** Ministry of Public Works and Housing (PU)

**Finance** JICA Loan IP-534

**Period** Dec. 2007 – Jun. 2016  
(103 months)

**Type of Project** ◆ Review of Detailed Design  
◆ Construction Supervision

### Project Outline

Semarang City, capital of central Java regency, has been exposed to complex water-related problems such as shortage of water supply, flush flood and habitual inundation by storm, associated with excessive abstraction of groundwater and land subsidence. All of the issues are closely interactive and being the great hindrance of socio-economic sustainability and environment of Semarang City.

In order to cope with these complexes and interactive issues, the Project was carried out through the financial of JICA Loan.

### Project Scope

The scope of the Project is enumerated following components:

#### Component A

1. River Improvement Works
  - Total length = 8,850 m
  - River Amenity Facilities
2. Rehabilitation of Simongan Weir
  - Conservation of historical civil structure
3. Flood Monitoring Facilities

#### Component B

1. Construction of Jatibarang Dam
2. Conservation of Catchment Area and Development of Greenbelt surrounding Reservoir

#### Component D

1. Non-structural Measures for Disaster Management
2. Non-structural Measures for Watershed Management

The construction works of the Jatibarang dam and Garang River-West Floodway improvement works had been conducted since 2009 for 5 years under the Pumali-Juana watershed management office, ministry public works.

On January 3, 2015, after 8 months passed from reservoir filling, the reservoir water surface was reached to the Normal Water Level.



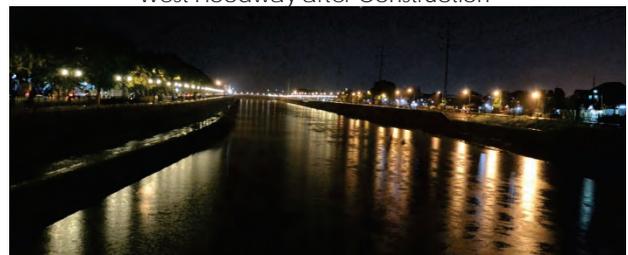
Jatibarang Dam: Bard's-eye View



Jatibarang Dam: Upstream View



West Floodway after Construction



Night View of West Floodway



Rehabilitation of Simongan Weir

## Project Accomplishments by AJCE Members

# The Project on Rehabilitation and Recovery from Nepal Earthquake

**Principal Firm (s)** Oriental Consultants Global Co., Ltd.



**Project Site** Nepal  
( Kathmandu / Gorkha / Sindhupalchok / Lalitpur / Bhaktapur )

**Client** Japan International Cooperation Agency (JICA)

**Finance** Japanese Grant Aid

**Period** July 2015- July 2017

**Type of Project** Consulting Service for Technical Cooperation

### Project Outline

The purpose of the Project is to comprehensively support the process of early rehabilitation and reconstruction of the affected areas and the formulation of a disaster resilient nation and society by referring to the experience and lessons learned from the disasters and reconstruction in Japan.

The Project is designed to implement a prioritized reconstruction project to fill the demand-supply gap which arises during the transition from a humanitarian assistance phase to rehabilitation and reconstruction. The prioritized project will be implemented in the early stage of the Project considering the participation of the residents. The prioritized project will be basically procured by JICA but the mode of procurement is depending on the size of the project. At the same time, the Project is designed to develop additional projects such as Grant Aid Program and Loan Projects. For the above-mentioned purposes, the Project will conduct information collection, preparation and project management of prioritized reconstruction projects, project formation and technical assistance (including design and cost estimation) to implement aid projects promptly.

### Details

#### ◆ Outputs:

- Formulation of national level and district level plans
- Promotion and dissemination of seismic resistant buildings and structures
- Formulation of prioritized reconstruction project (Program grant aid)
- Formulation and implementation of Quick Impact Projects (QIPs)



Earthquake damage research at Gorkha



Seminar for residents



photo interpretation of Landslide area

Project Accomplishments by AJCE Members

# Greater Colombo Urban Transport Development Project Outer Circular Highway to the City of Colombo

**Principal Firm (s)** Oriental Consultants Global Co., Ltd.



**Project Site** Sri Lanka

**Client** Japan International Cooperation Agency  
Road Development Authority

**Finance** JICA

**Period** 1998 - 2015

- Type of Project**
- ◆ Feasibility Study
  - ◆ Basic & Detailed Design
  - ◆ Tender Document Preparation
  - ◆ Design Review & Construction Supervision

**Project Outline**

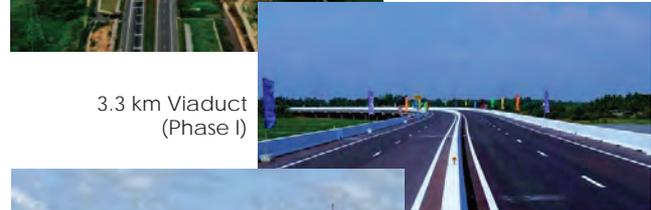
Outer Circular Highway to the City of Colombo is a new access controlled circular expressway, linking Colombo - Katunayake Expressway and Southern Expressway. It is 10 - 15 km away from the city center and 29.10 km long in total. It will connect high-priority trunk roads and intercity expressways, to be built radiating from Colombo City and disperse the traffic from / to Colombo more effectively, resulting in easing traffic congestions in Colombo Metropolitan Region.

**Details**

- ◆ Phase I: Kaduwela - Kottawa
  - 11 km long 4-lane Expressway (future 6 lanes)
  - 2 nos. Main Road Viaducts: 3,275 m
  - 2 nos. Interchange Ramp Bridges: 303 m
  - 8 nos. Overpass Bridges: 594 m
  - 3 nos. Interchanges with toll plaza  
(Double Trumpet Type, Partial Two-Quadrant Cloverleaf Type, Half Diamond Type)
  - 8.7 km Section of Soft Ground Treatment  
(Gravel Mat, Band Drain, Geotextile, Surcharge and Gravel Replacement Methods)
- ◆ Phase II: Kadawatha - Kaduwela
  - 8.9 km long 4-lane Expressway (future 6 lanes)
  - 1.9 km long 4-lane National Highway (A1 Bypass)
  - 8 nos. Main Road Bridge and Viaducts: 4,742 m
  - 10 nos. Interchange Ramp Bridges: 1,745 m
  - 5 nos. Overpass Bridges: 226 m
  - 2 nos. Interchanges with toll plaza  
(Diamond Type, Partial Two-Quadrant Cloverleaf Type)
  - 3.2 km Section of Soft Ground Treatment  
(Gravel Mat, Band Drain, Geotextile, Surcharge, Gravel Replacement and Gravel Compaction Pile Methods)



Kottawa Interchange (Phase I)



3.3 km Viaduct (Phase I)



Athurugiriya Interchange (Phase I)



Kaduwela Interchange (Phase II)



Viaduct (Phase II)



Opening Ceremony (Phase II)  
17 Sep. 2015

Project Accomplishments by AJCE Members

# Hussain Sagar Lake and Catchment Area Improvement Project

Principal Firm (s) NJS

Project Site Hyderabad, India

Client Hyderabad Metropolitan Development Authority (HMDA)

Finance JICA

Period 2007 to 2016

Type of Project PMC, detailed design and construction supervision

### Project Outline

The Project is aimed to improve the water quality of Hussain Sagar Lake, provision of reliable recycled water supply, provide sewerage service in the Catchment of the Lake, construction of interception and diversion works, sewerage and treatment facilities, pollution abatement, dredging of sediments in the lake, thereby improving overall sanitary conditions in the catchment area of the Lake.

### Details

Lake Hussain Sagar, built in 1562 A.D. during the reign of Qutub Shahi dynasty was utilized for irrigation and drinking water needs up to 1930. Total catchment area of the Lake is 240 sq. km and direct catchment area of the Lake is 67 sq. km. Over these years due to urbanization untreated or partially treated sewage entered the lake, thereby deteriorating the lake water quality and aesthetics of the lake water. As part of the project three sewerage treatment plants and interception and diversion systems have been constructed around the Hussain Sagar Lake to treat the influent wastewater to highest standards using advanced treatment plants that include nutrient removal, BOD and turbidity. The high quality treated wastewater is then discharged to the lake as well as reused partially within the area for non-potable applications. The project also included construction of various sewerage networks, dredging & disposal of sediments, lake aeration and water quality monitoring. Over the past couple of years the lake water quality has shown remarkable recovery and the overall water quality of the lake has improved compared to earlier years.



INAGURATION PHOTOS OF 20 MLD STP Dated 7<sup>th</sup> Dec 2012



20 MLD STP



INAGURATIONSTONE



AERATION TANK



INLET AND TREATEDWATER SAMPLES

Project Accomplishments by AJCE Members

# The Thakhek Water Supply Development Project

<b>Principal Firm (s)</b>	Nihon Suido Consultants Co., Ltd. 
<b>Project Site</b>	Thakhek district, Khammouane province, Lao PDR
<b>Client</b>	Ministry of Public Works and Transport, Lao PDR
<b>Finance</b>	Japan International Cooperation Agency (JICA)
<b>Period</b>	June 2013 – Dec. 2015
<b>Type of Project</b>	Grant aid project of JICA



Project Location Map

### Project Outline

The Prime Minister issued Decision No. 37/ PM, dated 30 September 1999, on Management and Development of the Water Supply Sector for Lao People’s Democratic Republic (Lao PDR). According to this Decision, the Government prepared a sector investment plan (SIP) to provide 24-hour water supply to 80% of the population in urban areas by the year 2020.

However, as of 2012, the water supply coverage rate in Thakhek was only 58%. This project aims to improve and expand the water supply in urban areas of Thakhek district, Khammouane province, providing an uninterrupted 24-hour water supply to 80% of the urban population in Thakhek District by the year 2020.

### Details

The main components of the project include:

- 1) Construction of a new intake facility (16,500 m<sup>3</sup>/d)
- 2) Construction of a new water treatment plant (WTP, 16,500 m<sup>3</sup>/d)
- 3) Construction of two new elevated tanks (600m<sup>3</sup> and 700m<sup>3</sup>)
- 4) Installation of pipelines (10.8km of transmission mains and 39.7km of distribution mains).
- 5) Training for the basic operation and maintenance of the new WTP, and for management of the water distribution system.



Perspective drawing of facilities



Intake facility (16,500 m<sup>3</sup>/d)



WTP (16,500 m<sup>3</sup>/d)



Elevated tank (600m<sup>3</sup>)

# CKC

*Water,*

*Disaster Prevention,*

*Environment,*

*Agriculture,*

*and*

*Human Resource*

*Development*



**ODA Loan Project**  
Tiete river basin depollution Project in Brazil



**ODA Loan Project**  
Sanitation Improvement Project for  
Baixada Santista Metropolitan Region,  
Brazil



**Technical Cooperation Project**  
Management of Non-revenue Water in Kenya

**CONTACT**



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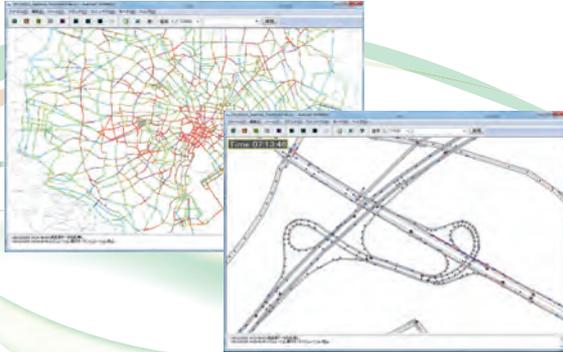


**i-Transport Lab. Co.,Ltd.**

ITL was established in 2000 funded by university professors, aiming to bridge the academic research fruits to the market. The main products of ITL are traffic simulation and data processing software tools. Developing a new horizon of traffic simulation technology is our main focus.

**Services Provided:**

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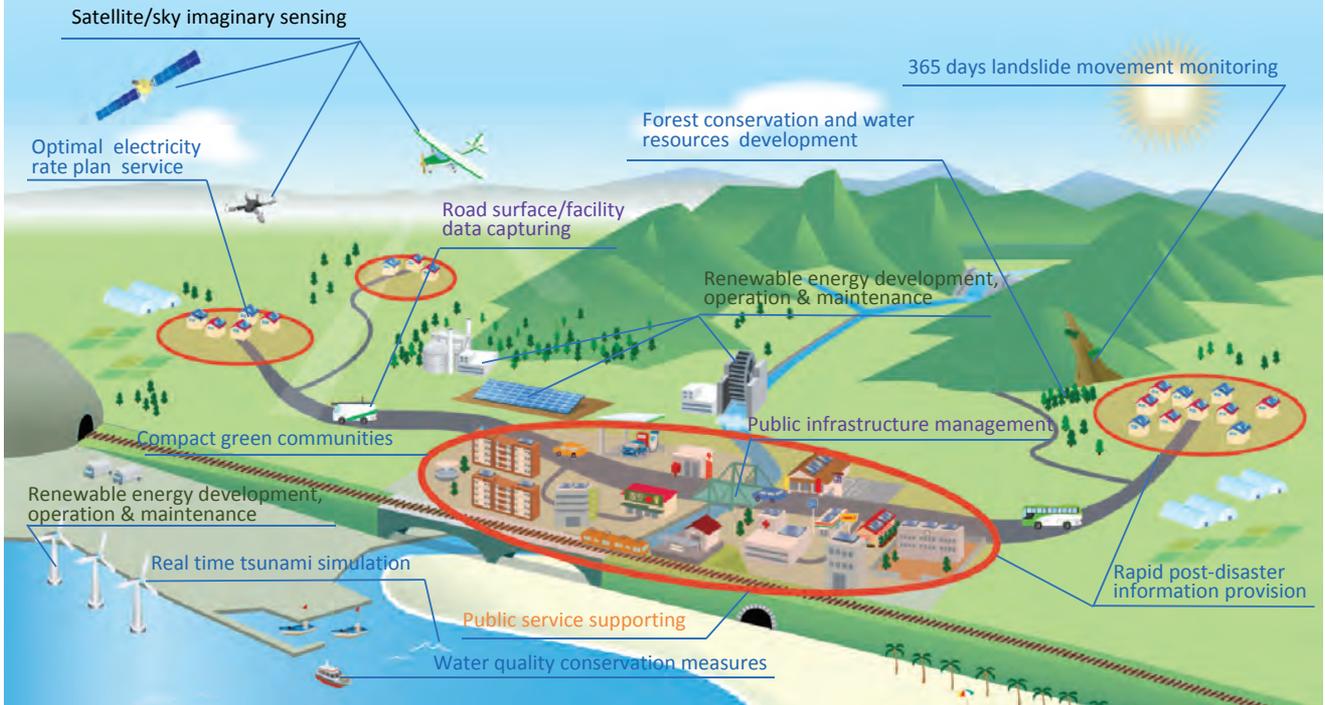


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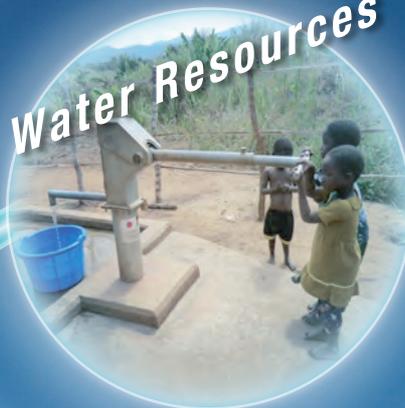
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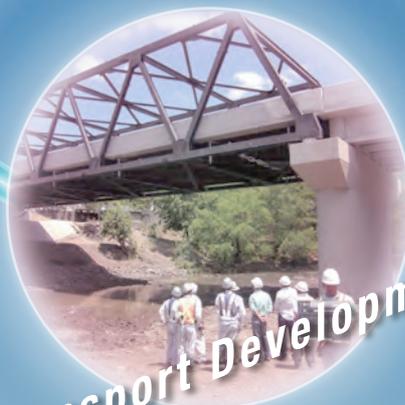
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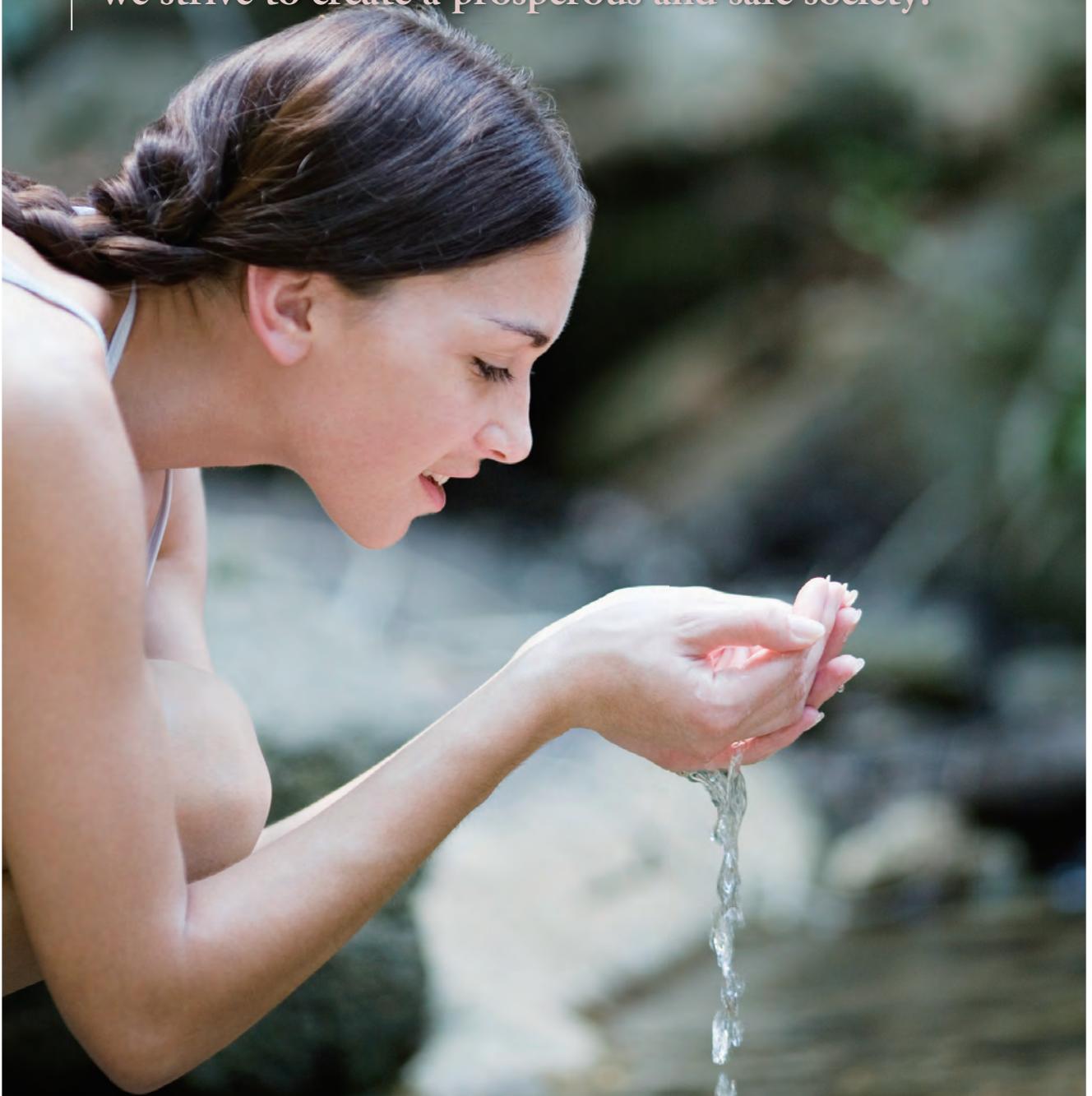


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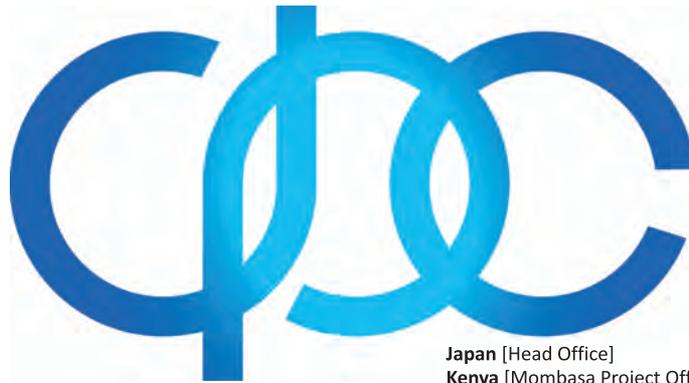
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Around 150 world leaders offered silent prayer for the victims of the terrorist attacks in Paris, must have made a strong impression on citizens in the world, two weeks after the terrorist attack, at the 21<sup>st</sup> Session of the Conference of the Parties to the U.N. Framework Convention on Climate Change (COP21) in Paris. Poverty is stated to have become a breeding ground for terrorism, and the relationship between poverty and terrorism has received more attention. CEs are fully involved in poverty reduction through planning and management activities in developing countries.

The Japanese government considers the export of infrastructure development as one of the central pillars of its growth strategy and has focused on marketing through cooperation between the public and private sector. CEs are expected to play a more active role to expand cooperation in developing countries.

Above-mentioned international and national movements, CEs must fulfill their responsibility in fields of poverty reduction and infrastructure development in tandem.

AJCE with 42 years of history and ECFA, Engineering and Consulting Firms Association Japan, with 52 years of history will consolidate on April 1, 2016. This will be a driving force of brushing and stepping CEs up.

March 2016  
Makoto ASHINO

## Editor's note

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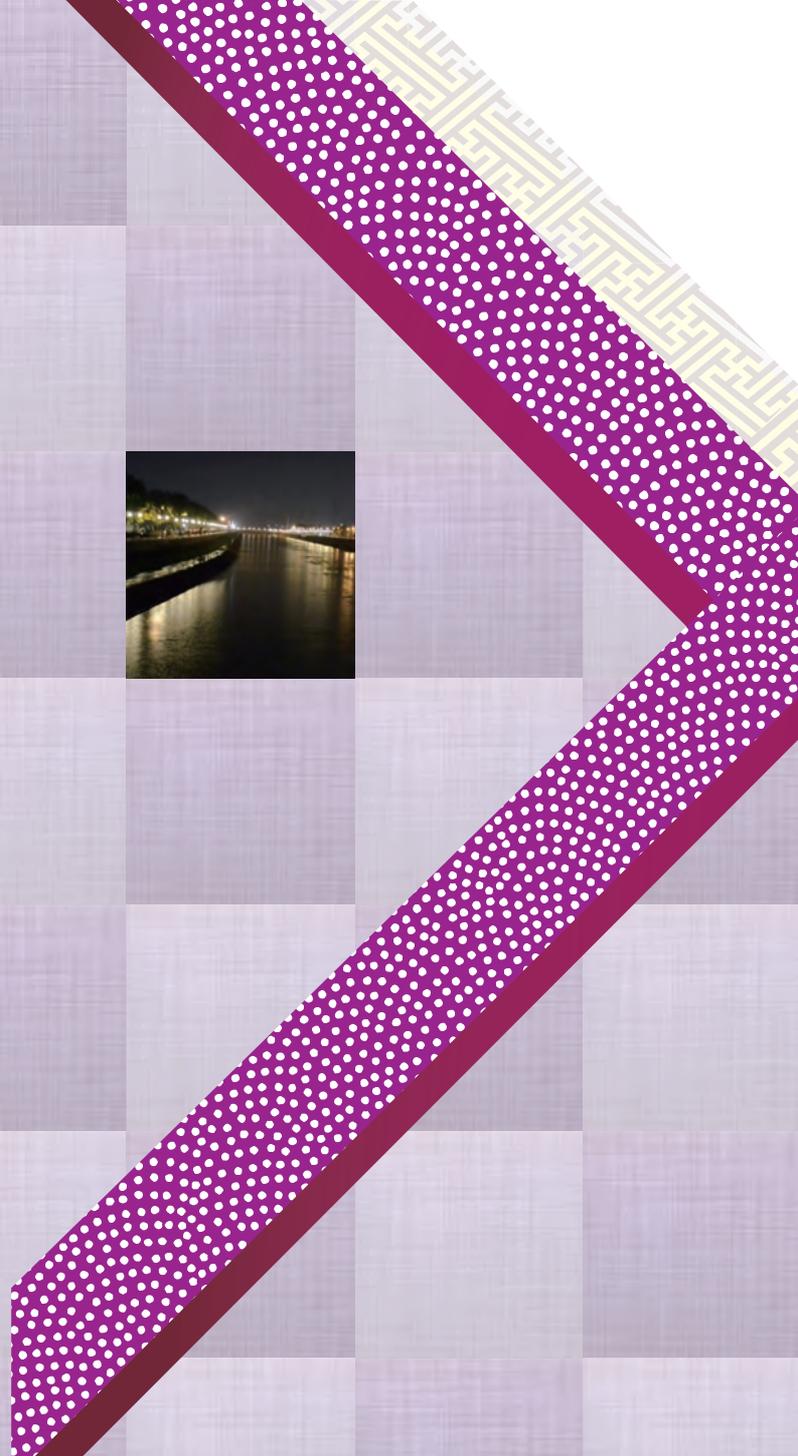
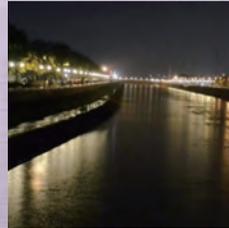
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