



## Message from the Chairman

The Planning Committee, the Technical Coordinating Committee and the Executive Committee met in Honolulu, Hawaii, U.S.A. in March 2014. This is the first time that our eleventh member of ACECC, the Institution of Engineers, Bangladesh formally attended these meetings. Moreover, we also ratified the membership of our twelfth member, the Institution of Engineers, Pakistan in Honolulu. On behalf of ACECC may I extend, our warm welcome to these new members and look forward to their contribution to the profession of civil engineering in the Asian Region. I am also grateful to the Institution of Engineers, Bangladesh for their commitment to host these meetings in spring 2015. During the Executive Committee meeting, the representative of the Vietnamese Federation of Civil Engineering Associations formally signed the Jakarta Protocol.

There were a few new developments at the Honolulu meetings. Firstly, we managed to complete the Planning Committee meeting and the Technical Coordinating Committee meetings within half a day. The minutes of these meetings were confirmed the next day prior to the Executive Committee for the proper endorsement by the Executive Committee – an important procedural improvement of ACECC meetings. Secondly, the composition of the Finance Committee was established. Thirdly, the first Finance Committee of ACECC was formed, another important milestone in the continuing development of ACECC. I am grateful to Professor Jae-Woo Park of KSCE, Treasurer of ACECC, for accepting the responsibility to serve as the Chair of the Finance Committee. Last but not the least, this is the first ACECC meeting managed by the Permanent Secretariat. My hat is off to Dr. Kenichi Horikoshi and his team for their excellent job in organizing these meetings.

The local organizing committee of CECAR 7 met after the meetings. I am glad to report that the organization of CECAR 7 is making progress.



The ASCE Presidential Delegation led by President Randall S. Over visited the leadership of Engineers Australia and the Institution of Professional Engineers in New Zealand in February 2014 to investigate the possibility of future collaborations. Similar collaborations among ACECC members are encouraged.

The upcoming ACECC meetings will be held in Tokyo amid JSCE's celebration of their 100th Anniversary and their significant contributions to the profession of civil engineering. We are all excited to participate in the memorial event. In the meantime, I look forward to meeting all of you again in Tokyo, if not earlier.

*Albert T. Yeung*

Department of Civil Engineering  
University of Hong Kong



## Message from the ACECC Technical Coordinating Committee Chair



Dear Colleagues and Friends,

Greetings for a fruitful ACECC year in 2014!

I wish to welcome you all to the Technical Coordinating Committee in its 15th Meeting in Honolulu, Hawaii on the 7th of March 2014.

As we begin the 16th year of ACECC's formation in 1999, I am encouraged by the banner of our newly launched ACECC Newsletter "Outlook", as it indicates the outward-looking mindset of the Council and its current leadership, thus bringing hope and optimism in a fast accelerating and ever-changing engineering world.

I am equally challenged to look not only outward, but even venture further out, as demands for advanced civil engineering knowledge and its practical application are ever increasing, with the geometrical growth in population.

The unprecedented advancement in technology has likewise aided, if not prompted, the accelerating development in infrastructure to a pace that has not been seen before; and in these challenging times, the requirement for civil engineering expertise has never been so great!

Indeed, with its accomplishment in the past fifteen years since its formation after the 1st Civil Engineering Conference in the Asian Region (CECAR-1) was held in Manila in February 1998 (jointly sponsored by ASCE, PICE and JSCE), CECAR has gone a long way. More than what had been envisioned by the initial set of collaborating civil engineering societies as merely a periodic "ad hoc" fora, it has become a dynamic collaborating organization worldwide. The pioneers of CECAR and the founders of ACECC have established a vibrant international aggrupation of civil engineers, which they may not have planned, and perhaps even perceived in the first place.

The creation of the Central Secretariat and the subsequent election of the Secretary General together with the recent establishment of ACECC's Headquarters in Tokyo marked an important milestone in ACECC's history. By this move, ACECC has declared its commitment to a sustainable future for CECAR, and its determination to provide a "better quality of life" to future generations.

Being the Program Director and a member of the Steering Committee of CECAR-1 when I was then the PICE National Secretary, it is a great honor for me to be recalled back to serve for the 7th CECAR, and more so in ACECC, this time as a member of the ASCE-ACECC leadership team.

Although I did not have the privilege to be involved in the creation of ACECC in 1999, as my term of office with PICE had ended, I had kept a close watch of the developments in the Council, and was honored to be invited by ASCE to join their delegation at the Executive Committee Meeting during the 4th CECAR in Taipei. The intervening events were reuniting experiences.

The assumption of ASCE to the ACECC Leadership in August 2013, culminating in the holding of the 7th CECAR in Hawaii in 2016 is another milestone in itself. Being the convener, organizer and co-sponsor of the 1st CECAR, ASCE had courteously given way to its Asian-Pacific colleague societies to set the lead and host previous CECARs, before it would finally bring the Conference to its shores.

Borrowing from the purposes of the 1st CECAR and the set objectives of ACECC, the TCC Chair wishes to initially announce the Committee's initiatives and plans for the next three years. These shall be discussed and deliberated among the member-societies' representatives in the Technical Coordinating Committee, before they are presented to the Executive Committee for approval. Among these are:

- The formation of a panel of advisers composed of former TCC Chairs and members;
- The review of technical seminars conducted in past CECARs for lessons learned and its corresponding improvement and further development to meet ACECC's objectives and goals;

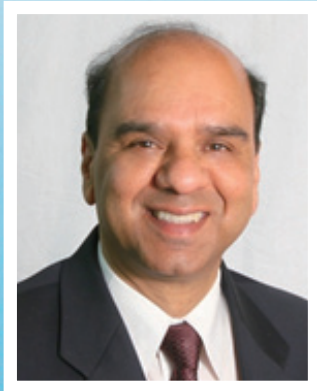
- The dissemination, promotion, and propagation of past technical committee (TC) papers to member-societies to meet their particular interest and needs, particularly in areas vulnerable to natural disasters;
- The reaching-out to end users of civil engineering services, such as governments and private sector stakeholders thru CECARs and TC seminars, to promote understanding of such services and to foster appreciation of the civil engineer's role in building better infrastructures and its contribution to creating an organized world;
- The active involvement of academia in close coordination with professionals in practice to chart the future of civil engineering education vis-à-vis the exploding information and technical knowledge via the Internet.
- And finally, to launch a new wave of insights into the non-ending challenges on how to improve productivity in the civil engineering profession, with the end in view of preserving the valuable resources of planet earth.

Our hope in TCC is to capture the spirit of inquiry in research and development, and the innovation that has always been the hallmark of design and construction. In this regard, may I invite everyone to join the Technical Coordinating Committee in its pursuit of excellence in civil engineering and in ACECC's quest for a sustainable future for the generations to come.

**POTENCIANO A. LEONCIO, JR., PE, M.ASCE, M.PICE**

Principal, P. A. Leoncio, Jr. & Associates





## Message from Chairman, Planning Committee

The Planning Committee handles organizational and non-technical matters. Some of the ongoing and future activities under this category are as follows.

### Membership

Expansion of ACECC membership is a high priority. The Institution of Engineers, Pakistan (IEP) joined ACECC as the 12th member on 8th March, 2014. We are looking into representation from several other countries: Nepal, New Zealand, Thailand, Singapore, Myanmar, Malaysia, Sri Lanka, and Cambodia. We hope to have some of them join us, at least in an observer status if not a member, at the next meeting in Tokyo in November 2014.

### Cultivating the Next Generation of Engineers

We have a sub-committee working on this goal. It is developing a self-sustaining program to work with young engineers, and looking into possibly setting up training programs. Please contact Dr. Edward H. Wang, the sub-committee chair, to participate and assist.

### Finance

A new Finance Committee was established at the last meeting (in Hawaii) under the leadership of the newly appointed Treasurer, Prof. Jae-Woo Park from KSCE. The Secretary General (from JSCE) and Chair of ACECC (from ASCE) are members of the Committee. Other members elected to the Committee are from IEB, ICE (India), CICHE, and PICE.

### Membership Dues

Annual membership dues have been updated using the 2013 GNI per capita calculations from the World Bank as per ACECC bylaws, with a small modification (Low-1: 0 to 700 US\$; Low-2: 701 to 1025 US\$). The Finance Committee will look

at the annual membership dues structure in the long run, as well as the contribution amount per member society for CECAR.

## Travel Subsidies

ACECC will continue to provide support to member society or potential member society to travel to an ACECC meeting. This support will be limited to Low-1, Low-2, and Lower Middle countries under our membership dues program classification, and to no more than one time in 3 consecutive years per organization, with a ceiling of support for 2 meetings only per organization. This support will be given to no more than 2 organizations per meeting, based on an application received no later than one month before the corresponding meeting. Only one representative per organization will be provided the travel support, which will be limited to economy class air fare and up to 3 nights' hotel room cost subject to verification by receipt from airline and hotel.

## Awards

The next set of ACECC awards will be presented at CECAR-7. KSCE is chairing the Awards sub-committee. Please work with Prof. Jae-Woo Park in making your nominations for awards.

## CECAR-7

Preparations for the 7th Civil Engineering Conference in the Asian Region, scheduled for August 30 through September 2, 2016 at the Hilton Hawaiian Village, are on track. Member societies are invited to organize one or two sessions (4 or 5 presentations per session) that will not come from the CECAR-7 Call for Abstracts or ACECC Technical Committees. Please email to the CECAR-7 Conference Chairman (Udai.Singh@ch2m.com) your proposed session(s) title, a very brief description of the proposed session(s), and the point of contact from the member society for the session(s).

More on CECAR-7 in the next issue of the newsletter.

*Dr. Udai P. Singh*

Chairman, Planning Committee

# CIVIL ENGINEERING FOR A SUSTAINABLE FUTURE

## BACKGROUND

The American Society of Civil Engineers(ASCE), the Chinese Institute of Civil and Hydraulic Engineering(CICHE), the Engineers Australia(EA), the Indonesian Society of Civil and Structural Engineers (HAKI), the Institution of Civil Engineers(ICE India), the Institution of Engineers, Bangladesh(IEB), the Japan Society of Civil Engineers(JSCE), the Korean Society of Civil Engineers(KSCE), the Mongolian Association of Civil Engineers(MACE), the Philippine Institute of Civil Engineers(PICE)and the Vietnam Federation of Civil Engineering Associations(VIFCEA), who together form the Asian Civil Engineering Coordinating Council(ACECC) believe that emerging global challenges over the last decade, including the financial crisis, population migration, food and energy crises, and natural disasters, have reinforced the need to secure and fulfill internationally agreed commitments to sustainable development.

ACECC also believes that sustainable progress toward achieving the UN Millennium Development Goals is necessary to address water and food scarcity.

For such commitments to be realized, critical infrastructure must be adapted to the impacts of climate change and resilient to natural and man-made disasters.

## THE ROLE OF CIVIL ENGINEERS

The eleven societies/institutions commit to lead internationally on the delivery of sustainable infrastructure. Civil engineers of the 21st century are called on to play a critical role in contributing to peace and security in an increasingly challenged world. Civil engineers have an obligation to protect cultural and natural diversity, and they are central to the planning, design, construction, operation, maintenance and decommissioning of infrastructure networks that underpin civil society and economic activity and protect human health and welfare. Emerging challenges have reinforced the key role of these networks in enabling global societal resilience.

Approximately 75% of the issues outlined in Agenda 21, the main action document from the 1992 Earth Summit, involve engineering and technical issues. Action by civil engineers is essential. Society needs the skills of civil engineers to attain sustainable development, yet civil engineers require global political will to enable them to apply their knowledge and expertise to appropriately adapt infrastructure to attain meaningful progress.

While the members of ACECC are committed to a civil engineering profession able to address the global challenge of sustainable development, they recognize that engineers cannot deliver this vision on their own. Civil engineers must develop new skills for a changing world, foster greater collaboration with other professionals, and promote multidisciplinary approaches. Civil engineers are committed to provide the tools and advice to governments and policymakers at national and supranational levels on the skills and infrastructure required for a sustainable future.

## **ENGINEERING PRIORITIES AND ACTION**

Recognizing the central role of their profession in addressing global challenges, ACECC members developed a Taipei Declaration on Sustainable Development in 2007 and President Communiqué in 2010.

ACECC members have since adopted and regularly reviewed action plans and undertaken a range of activities to advance sustainability in civil infrastructure. Progress in line with commitments is exemplified in adapting critical infrastructure, utilizing environmental accounting tools, addressing the water crisis and delivering on the UN Millennium Development Goals, as well as protecting our societies from natural disasters.

## **ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACTS, AND COSTS - THE TRIPLE BOTTOM LINE**

The eleven societies/institutions are committed to improving methods for identifying and considering all of a project's environmental, social and economic

costs and impacts throughout its life cycle. Practical approaches should be developed that would alter conventional accounting practices to factor in the direct and indirect environmental costs of a facility through its life-cycle of operations.

## CONDITION AND CAPACITY OF INFRASTRUCTURE

Civil engineers create and maintain society's infrastructure. Recognizing this responsibility, ACECC members are committed to collecting data on infrastructure both nationally and, through collaboration, internationally and to providing informed opinion on the condition and requisite capacity of infrastructure for sustainable development.

## ADAPTATION OF INFRASTRUCTURE TO CLIMATE CHANGE

To address climate change the engineering profession is applying the principles of sustainability, energy efficiency and innovation to the design, durable materials, construction, operation and maintenance of infrastructure. Civil engineers must develop infrastructure capable of adaptation to the impacts of climate change.

Civil engineers have relied upon historical data to design infrastructure. Such data are often incomplete and limited in duration. Now they must develop design and operational practices to withstand future climate conditions — both extremes and gradual changes. They must accommodate uncertainties because the forecasts of future climate will never be precise. This creates a challenge to existing infrastructure design approaches and practices.

## TO MAKE OUR SOCIETIES RESILIENT TO NATURAL DISASTERS

Since antiquity, the world has faced a great number of natural disasters: earthquakes, tsunamis, floods, typhoons, hurricanes, tornados and volcanic eruptions. Recently, we have become aware of rapid climate change that might lead to much larger-scale natural disasters. Civil engineers are required to play important roles in creating safe and secure infrastructure, resilient to natural and man-made disasters by sharing and growing knowledge and experience through collaboration.

## MILLENNIUM DEVELOPMENT GOALS

ACECC members support the internationally agreed upon development goals contained in the Millennium Declaration as they apply to improving the quality of people's lives around the world through science and engineering. The eleven societies/institutions will work with each other and with domestic and international organizations to engage engineers in addressing the needs of the poor through capacity building and the development of sustainable and appropriate solutions to poverty.

By helping meet the goals of the Millennium Declaration, the engineering profession contributes to a world where all people have access to the knowledge and resources to meet their basic human needs and promote sustainable development. Included are such areas as water supply and sanitation, food production and processing, housing and construction, energy, transportation and communication, income generation, and employment creation.

## COMMITMENTS

Within the foregoing areas of leadership with respect to sustainable infrastructure, the ACECC members commit to:

- Developing and collaborating on national sustainable infrastructure and resilient development strategies and action plans in their economic regions;
- Encouraging civil engineers to engage in building sustainable engineering capacity in the developing world through active collaboration with development organizations such as USAID – US Agency for International Development, Asian Development Bank, and other related assistance organizations in their economic regions;
- Working through representatives of their economic to coordinate civil engineering views within the World Federation of Engineering Organizations to enable WFEO to effectively influence programs on sustainable infrastructure and communities within UNESCO, the United Nations, the World Bank, international financial institutions and other bodies.

Signed on August 20, 2013 in JAKARTA by:

**President**  
American Society of Civil Engineers (ASCE)

**President**  
Japan Society of Civil Engineers (JSCE)

**President**  
Chinese Institute of Civil and Hydraulic Engineering (CICHE)

**President**  
Korean Society of Civil Engineers (KSCE)

**Chair**  
Engineers Australia's Civil Engineering College (EA)

**President**  
Mongolian Association of Civil Engineers (MACE)

**President**  
Indonesian Society of Civil and Structural Engineers (HAKI)

**President**  
Philippine Institute of Civil Engineers (PICE)

**President**  
The Institution of Civil Engineers (ICE India)

**President**  
Vietnam Federation of Civil Engineering Associations (VIFCEA)

**President**  
The Institution of Engineers, Bangladesh (IEB)

## Report of the ACECC 26<sup>th</sup> Executive Committee Meeting



*Kenichi Horikoshi*

ACECC Secretary General



The ACECC 26th Executive Committee Meeting (ECM), together with the 15th TCCM (Technical Committee Coordinating Meeting) and the 20th PCM (Planning Committee Meeting) was held in Honolulu at Hilton Hawaiian Village on March 7-8, 2014. This Executive Committee Meeting was the first meeting since the new ACECC leadership was organized by ASCE (American Society of Civil Engineers) after the 6th CECAR (Civil Engineering Conference in the Asian Region) held in Jakarta, in August, 2013. This was also the first meeting since the Continuous Secretariat Office was established at JSCE (Japan Society of Civil Engineers). During the meetings, all the meeting materials were distributed electronically through the ACECC website to minimize the use of paper for an ecological reason.

Among the agenda items of the ECM, one of the most noteworthy events for this meeting was that ACECC was able to welcome the 12th member from Pakistan. The Institution of Engineers, Pakistan (IEP) officially joined ACECC through the approval by the EC.

We, ACECC, will continuously invite new members from Asia.

### **Other major outcomes of the ACECC 26<sup>th</sup> ECM were as follows:**

- 1) VFCEA President Tran Ngoc Hung signed Jakarta Protocol, which had originally been signed by all the presidents of ACECC members at the CECAR 6 Conference held in Jakarta on August 20, 2013. The signing witnessed by all the Presidents/Representatives present, and by the ACECC Chair and the Secretary General.
- 2) A new ACECC organization was established to deal with ACECC finance. Prof.

Jae-Woo Park of KSCE was nominated and approved as a Treasurer. ACECC Financial Committee was also established, which consists of seven members, i.e. ASCE, JSCE, KSCE, IEB, ICE (India), CICHE, PICE.



The Chair of the Financial Committee is Prof. Jae-Woo Park.

- 3) KSCE was nominated and approved as the hostsociety of the ACECC Awarding Sub-committee.
- 4) 'ACECC Civil Engineering Seminar', which was sponsored by ASCE, was held after the 26thExecutive Committee Meeting. The ASCE Hawaii Section organizedthe seminar.
- 5) The preparation progress of the CECAR 7 (7th Civil Engineering Conference in the Asian Region) which will be held during August 30-September 2, 2016 at Hilton Hawaiian Villagewas reported.

The next 27th Executive Committee Meeting will be held in Tokyo on November 18-19, 2014, associated with the commemorative JSCE 100thAnniversary.



## ACECC Event Calendar (Feb. 2014)

- All as ACECC sponsored events are listed on request.
- Contents will be revised at the end of each month based on the latest information.
- The events listed on the table should be that official language is English and that any persons who belong to ACECC can participate.

Date	Name of Event	City Further information
Jun. 13-14, 2014	MACE: Annual Meeting	Ulaanbaatar-Mongolia.
Aug. 26-28, 2014	HAKI: Annual conference 2014	Jakarta-Indonesia
Sep. 10-12, 2014	JSCE: Annual Convention	Osaka-Japan
Oct. 7-11, 2014	ASCE: Global Engineering Conference 2014	Panama <a href="http://content.asce.org/conferences/annual2014/">http://content.asce.org/conferences/annual2014/</a>
Oct. 22-24, 2014	KSCE: 2014 CONVENTION	Daegu-Korea
Nov. 2-7, 2014	WFEO: World Engineering Conference on Sustainable Infrastructure	Abuja-Nigeria <a href="http://www.wecsi2014.org/index.php">http://www.wecsi2014.org/index.php</a>
Nov. 18-19, 2014	ACECC 27thECM	Tokyo-Japan
Nov. 20-21, 2014	JSCE: JSCE's 100 years anniversary	Tokyo-Japan
Nov. 24-28, 2014	EA: Engineers Australia National Convention	Melbourne-Australia <a href="http://www.convention2014.org.au">http://www.convention2014.org.au</a>
Dec. 6-7, 2014	CICHE: Annual Convention	Kaohsiung-Taiwan
Nov. 28-Dec. 4, 2015	WFEO: World Engineering Conference and Convention	Kyoto-Japan <a href="http://www.congre.co.jp/wecc2015/">http://www.congre.co.jp/wecc2015/</a>