



For a Better Quality of Life

ACECC OUTLOOK

The Asian Civil Engineering Coordinating Council

Editor: Prof. Han Ay Lie

<https://www.acecc-world.org/>

The 46th Executive Committee Meeting (ECM) of the Asian Civil Engineering Coordinating Council (ACECC)



February 29 – March 2, 2024
Manila, Philippines



Message from the ACECC Chair

by Prof. Jae-Woo Park

Korean Society Civil Engineers (KSCE)



The 46th ECM in Manila from February 29 to March 2, 2024 was an excellent example of how successful our ECM can be. The last ECM in the Philippines was in 2012. The warm hospitality and good management by the PICE became only warmer and better this time! We would like to express our heartfelt gratitude to all the PICE members, including President Emil K. Sadain, Immediate Past President April Frances Agatha G. Flores, and Past President Robert S. Licup. We all were taken excellent care of by our PICE friends. We had nine technical committee seminars along with FLF seminar and the PICE technical session in Manila. This showed us a very desirable future ECM program model: more technical programs by our technical committees and more involvement with local members of the host society.



One of the exciting developments since our last newsletter is the new ACECC webpage. I want to use this opportunity to thank the Webpage Upgrade Task Force that was initiated after the Taipei ECM. The Task Force was led by Dr. Seunghak Lee, our Planning Committee Chair. Prof. Han Ay Lie and the HAKI team, Mr. Brian Parsons and the ASCE web team.

The webpage is our face to the world, so the new webpage effectively represents us in a better and more efficient way. This will also serve as the ACECC resource center for the outside as well as for ourselves.

All of us should frequently visit our new webpage <https://acecc-world.org/> and keep making constructive suggestions to make our webpage better!



Message from the Secretary General

by Dr. Udai P. Singh

Asian Civil Engineering Coordinating Council



It was a pleasure to attend the activities of the 46th ECM in Manila, Philippines on 29th February to 2nd March, 2024. PICE was an excellent host, and the meetings, seminars, and tours were planned and implemented flawlessly. The meetings were attended by all member societies, though a couple of members took part virtually. Technical sessions/seminars, held in a hybrid mode (in person and online), made a record at this ECM, as we had 9 of them at this event: a plenary session on Philippines Infrastructure Flagship Projects presented by PICE President and DPWH Sr. Undersecretary Emil Sadain, 7 seminars organized by Technical Committees, and a Future Leaders Forum seminar. It is heartening to see our technical activities take off at ECMs, thanks to our TCs and FLF.



We have made huge strides in implementing our strategic plan approved a few years ago. The constitution and bylaws are being reviewed and a few amendments have been approved, with more to come in the near future. We are strategically planning our activities after an annual budgeting process. TCs are again getting more attention for

financial assistance for their activities during budget implementation. We have been adding one new TC at every TCCM/ECM, and this one was no exception, adding “Advancing Artificial Intelligence Education in Civil Engineering” being led by ASCE and JSCE. The challenge for most TCs is getting all or almost all of our member societies to participate in their activities.

The technical tour of Paranaque Water Reclamation Facility and New Water Facility was timely, focusing on what civil engineers are doing on water conservation using state-of-the-art technologies. The New Water Facility in Manila reminded me of the first New Water Facility designed and built in Singapore by my colleagues at CH2M HILL (the company I worked for 40 years) a couple of decades ago, taking raw municipal wastewater and treating it through multiple steps to drinking water quality, even better than that provided by conventional water treatment plants for water supply

to households. I hope more economies start utilizing similar projects to reuse and conserve their precious water resources.



Thanks to PICE for a marvelous and fruitful 3 days. Now we can start planning for the 47th ECM and ACECC's 25th anniversary celebrations. Engineering New Zealand (ENZ) will be hosting the ECM for the first time (October 20, 21, and 22, 2024 in Wellington, NZ), and we are all looking forward to it.



46th ECM Participants

Message from the 1st Deputy Secretary General

by **Robert S. Licup, PhD, APEC Eng, ASEAN Eng, ACPE**
Philippine Institute of Civil Engineering (PICE)

Having most of the members of the Executive Council of the Asian Civil Engineering Coordinating Council (ACECC), with the exception of a very few but nonetheless who attended virtually, at the 46th meeting here in Manila from 29 February 2024 to 2 March 2024 spelled the success of the event. Indeed, the menace that the COVID pandemic is gone.



There were fruitful discussions which defined several items moving forward. Due to time constraints, many technical seminars were deferred for discussions in the future. While the original plan was to take the group to a 80-meter reinforced concrete dam that is under construction did not materialize due to safety concerns because of the number of delegates that will tour the site, it was indeed good that the infrastructure projects nearby still afforded us to visit the “New Water” facility of Maynilad Water Services Co, Inc. the private concessionaire of the Metropolitan Waterworks and Sewerage System of the West Zone.

See you all in New Zealand for the 47th ECM

Message from the 2nd Deputy Secretary General

by **Prof. Han Ay Lie**
Indonesian Society of Civil and Structural Engineers (HAKI)



The 46th ECM in Manila, Philippines, was executed perfectly on February 29 - March 2, 2024. We are grateful to PICE, especially to Engr. April Frances Agatha G. Flores and her team for being outstanding hosts and organizing such a wonderful and unforgettable occasion.

Being trusted to oversee the ACECC website's appearance updates is an honor for HAKI. The new website, accessible at <https://acecc-world.org/>, promises to provide up-to-date and captivating information about ACECC and its members. Any feedback or suggestions regarding the new website would be greatly appreciated.

HAKI Organizes International Certification: ACI Concrete Field Testing Technician — Grade I

Indonesian Society of Civil and Structural Engineers has a HAKI-ACI Certification Program: Concrete Field Testing Technician - Grade I which has been implemented in 4 batches. This activity was attended by 88 participants in total from the 4 batches. This certification activity was carried out at 3 different locations: the University of Indonesia, Bandung Institute of Technology or Institute of Technology Bandung and Diponegoro University Semarang with 9 examiners divided into 3 examiners at each location. In this Certification Program, especially in batches 3 and 4, it was implemented or held to certify employees or experts from Angkasa Pura II and Jasa Marga on December 13 - 14 2023 and January 15 - 16 2024.

Apart from the HAKI – ACI Certification Program, Indonesian Society of Civil and Structural Engineers also has Professional Certification activities. HAKI founded the Ahli Struktur Bangunan Sipil Indonesia Professional Certification Agency (LSP ASBSI) to carry out this activity. Every professional seeking to earn a Certificate of Competence, commonly abbreviated as SKK, undergoes this certification process. In this activity, 460 professionals have been successfully certified with the competencies of Young Building Engineering Expert, Associate Expert in Building Engineering, and Building Engineer.



The Indonesian Society of Civil and Structural Engineers also has regular seminar activities, which are held once a year in August. Several companies operating in the construction sector, including both construction service providers and construction materials providers, were included in this 3-day seminar with exhibitions. This seminar is usually attended by around 600 participants. This year, the seminar will be held on August 20 – 22, 2024 at the Borobudur Hotel, Jakarta and will be attended by 25 companies in the exhibition.

Message from the PC Chair

by Dr. Seunghak Lee

Korean Society of Civil Engineers (KSCE)



It was a great pleasure to reunite with everyone in Manila, Philippines. I'd like to seize this opportunity to extend my heartfelt thanks to PICE for their warm hospitality and the successful orchestration of the events. At the 40th PCM, we had the chance to review the revamped ACECC website, which has certainly shown improvements in design and content organization over its predecessor. However, it will require ongoing revisions. A significant stride made during this PCM was the development of a framework for allocating ACECC funds towards our events.

This initiative is poised to invigorate our activities, especially those related to the TCs, thereby reinforcing ACECC's core identity.

Additionally, we revisited the strategic plans formulated a few years back, focusing on the actions implemented thus far and those that need prompt attention. In this context, we scrutinized the draft of the updated constitution and by-laws, which are crucial given the evolving circumstances since ACECC's inception 25 years ago. These documents warrant thorough discussion at the forthcoming PCM.



I am confident that we are on the path to reshaping ACECC in a more systematic and enduring manner. While this endeavor may take time, I am certain that with everyone's contribution, we will achieve our goals.

Message from the TCC Chair

by Prof. Kyoungsoo Park

Korean Society of Civil Engineers (KSCE)



I am happy to deliver an update on the recent activities of the technical committees (TCs) of ACECC. We have 13 active TCs through international cooperation. I would like to announce the addition of a new committee, TC-33, which focuses on Advancing Artificial Intelligence Education in Civil Engineering. The new committee, proposed by Dr. ZhiQiang Chen (ASCE) and Dr. Ji Dang (JSCE), will play a critical role in developing AI-enriched curricula and pedagogical methodologies in relation with legal and ethical issues.

The number of TC seminars in ECM has been increasing in recent years, with 3, 4, and 7 seminars in 44th, 45th, and 46th ECMs, respectively. To further facilitate TC activities and participations, the financial support for TCs is confirmed in ECM.



I would also like to acknowledge the excellent TC seminars organized by Dr. Mikio Ishiwatari (TC-21 chair, JSCE), Dr. Sarosh H. Lodi (TC-22 chair, IEP), Dr. April J. Lander (TC-26 chair, ASCE), Dr. Benito M. Pacheco (TC-27 chair, PICE), Dr. Eiki Yamaguchi (TC-28 chair, JSCE), Dr. Sung-Min Cho (TC-30 chair, KSCE), and Dr. Cris Liban (TC-31 chair, ASCE) during the last ECM.



The TC seminars are disseminated to all of our members through the ACECC YouTube channel. Please, visit the ACECC YouTube channel, and click 'Subscribe' and 'Like.' Additionally, I would like to express my gratitude to all of TC chairs and members for their leadership and active

participation in the upcoming CECAR10. I am confident that, based on our TC activities of ACECC, we can tackle challenges and critical issues in Asia.

Message from the CECAR10 LOC Chair

by Prof. Jae-Yeol Cho

Korean Society of Civil Engineers (KSCE)



Greetings!

Today, as Chair of the Local Organizing Committee (LOC) of CECAR10, I would like to report on the progress of CECAR10 for the second time in ACECC Outlook.

The Civil Engineering Conference in the Asian Region (CECAR) is a major activity of ACECC held on a triennial basis. Leaders and decision makers from academia, industry, and the public sector get together to discuss the issue of infrastructure development in the Asian region and disseminate developments and potential solutions to the world. The upcoming 10th CECAR (CECAR10) will be hosted by the Korean Society of Civil Engineers (KSCE) in Jeju, South Korea. The theme for CECAR10 is Sustainable Management and Resilient Technology (SMaRT) in Civil Engineering. Technical areas covered will include all fields of civil engineering.

The CECAR10 LOC has shared and discussed the preparation progress with ACECC leadership and secretariat through online and offline meetings every three months. The 7th meeting, which took place on February 29th in Manila during the ACECC 46th ECM, was attended by Prof. Jeryang Park, the LOC Vice-chair, on my behalf, who presented the report. The key points reported on that day are as follows: Since the official opening of the CECAR10 website on June 1st, 2023, the main page <https://www.cecarn10.org/> has been redesigned and reopened on December 11th of last year. This decision was made to make our CECAR10 stand out amidst the numerous international conference invitation emails by utilizing world maps and logos of ACECC member societies, attracting the curiosity of website visitors.



Old Version



New Version

Additionally, the confirmed corporate contributions were announced on that day. Compared to CECAR9, New Zealand has been added, bringing the total corporate contribution to \$144,800. We are confident that this will greatly assist in the successful hosting of CECAR10.

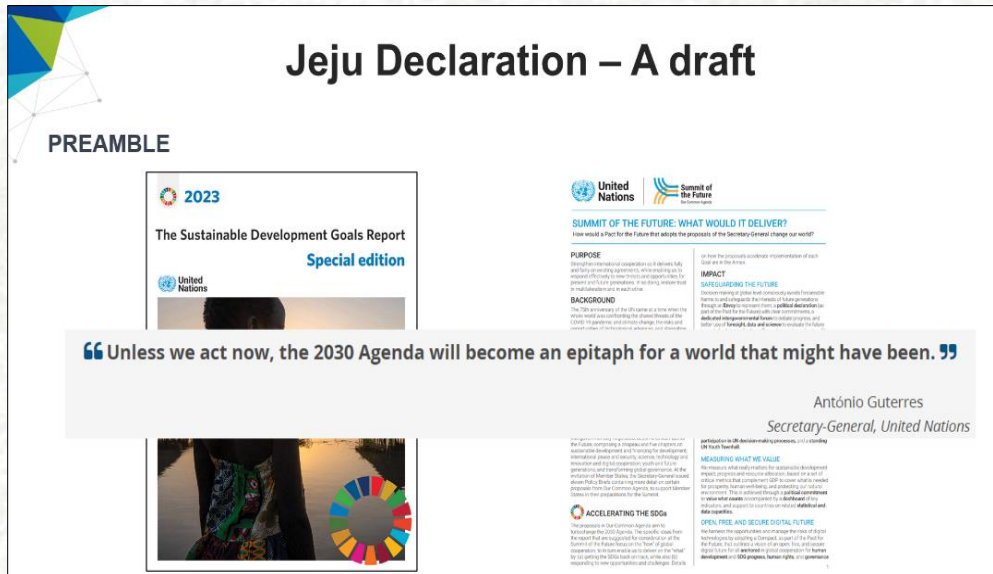
		CECAR7	CECAR8	CECAR9	CECAR10	No. of Complimentary Registration
1	ASCE	\$30,000	\$25,000	\$25,000	\$22,500	4
2	JSCE	\$30,000	\$25,000	\$25,000	\$22,500	4
3	EA	\$23,000	\$25,000	\$25,000	\$22,500	4
4	ENZ	-	-	-	\$22,500	4
5	CICHE	\$23,000	\$20,000	\$20,000	\$18,000	3
6	KSCE	\$23,000	\$20,000	\$20,000	\$18,000	0
7	HAKI	\$7,000	\$4,000	\$4,000	\$3,600	2
8	ICE(I)	\$7,000	\$4,000	\$4,000	\$3,600	2
9	PICE	\$7,000	\$4,000	\$4,000	\$3,600	2
10	MD RSCE	-	-	\$4,000	\$3,600	2
11	Fed. MES	-	-	\$1,000	\$400	1
12	IEB	\$500	\$1,000	\$1,000	\$900	1
13	IEP	\$500	\$1,000	\$1,000	\$900	1
14	MACE	\$500	\$1,000	\$1,000	\$900	1
15	VFCEA	\$500	\$1,000	\$1,000	\$900	1
16	NEA	\$500	\$500	\$500	\$400	1
	Total	\$152,500	\$131,500	\$136,500	\$144,800	33

† Corporate contribution could be restructured in a lower rate than CECAR9 by adjusting the number of complimentary registration.

Corporate Contribution for CECAR10

Furthermore, the progress on the Jeju Declaration was also reported on that day. Civil engineering technology builds civilizations, helping to make people's dreams come true and enriching their lives and society as a whole. Recognizing that our present standard of living is based on civil engineering and civil engineering technology that has developed over time, ACECC will increase its efforts to properly disseminate the role and the importance of civil engineering to society to support the continuing development of civil engineering. ACECC will continue to encourage young civil

engineers to take pride in civil engineering, sharing their ideas for the future of the civil engineering profession and encourage more youth to become civil engineers. In consensus, ACECC has made “Declaration” on sustainable development during several CECARs. CECAR10 is also preparing a Jeju Declaration.



Preparation report on Jeju Declaration during Manilla ECM

As everyone knows, the most important thing in the event is the number of people participating in the event. Let us all work together to have as many papers submitted. These days, many scholars hope that their conference papers will be published in good journals such as SCOPUS. So, even at this moment, LOC is trying to find more possibility to publish CECAR paper in SCOPUS journals.

IMPORTANT DATES!	
Call for Session Opens	June 1, 2023
Call for Abstract Opens	August 1, 2023 (~ August 20, 2024)
Notification of Acceptance	September 30, 2024
Registration Opens	January 6, 2025
Deadline for Full Paper Submission	January 31, 2025
Speaker Registration Deadline	May 31, 2025
Early Bird Registration Deadline	July 31, 2025

Jeju, where CECAR10 is held, is the first place in the world to obtain UNESCO designations in all 3 natural sciences. The value of JEJU was proved as the island was designated Biosphere Reserve in 2002, World Natural Heritage in 2007 and

Global Geopark in 2010, making the sub-tropical island the only place on Earth to receive all three UNESCO designations in natural sciences. JEJU has now become a ‘treasure island of environmental assets’ that the world has to preserve. Above all, the season in which CECAR10 is held is the most beautiful and gentle time of the year, and we are confident that all visitors will be satisfied with their stay in Jeju. KSCE promises to do our best to make CECAR10 the best event ever, and we look forward to meeting you ACECC friends.

Message from the Future Leaders Committee (FLC)

by Er. Suraj Gautam, Chair ACECC FLC
Nepal Engineers' Association (NEA)



I am deeply honored to serve as the elected Chair of the Future Leaders Committee and to be a part of this ambitious vision. Having completed the first year of my tenure (commencing January 2023), I am thrilled to witness the enthusiastic participation from our Future Leaders. The ACECC Future Leaders Platform has seen a surge of dynamism, with many emerging leaders bringing fresh energy and zeal. We warmly welcomed 12 new Future Leaders from various member economies.

Our collective aspiration is to foster a dynamic platform for sharing insights, knowledge, and experiences that transcend borders and boundaries. Throughout the past year, we have made significant progress in fulfilling our commitments. We have e-published four editions of our Newsletter in 2023, organized webinars and FLF seminars. Our Four Working Groups are working with their specific Terms of Reference. i.e. a) WG 1: Activity Management, b) WG 2: Newsletter, c) WG 3: Research & Documentation, d) WG 4: Website, Communication & Social Media Handling.



Group Picture of Future Leaders with senior ACECC leaders

The 46th ECM hosted by PICE was very engaging. ACECC Future Leaders organized a FLF Seminar on Engineering Frontiers: Global Perspectives on Infrastructure, Innovation and Leadership on the very first day, i.e. on 29 Feb 2024. The seminar featured four speakers, two from PICE, one from JSCE, and another from

IESL. It was inspiring to witness Future Leaders from the Philippines, Japan, and Sri Lanka participating in person, sharing their insightful presentations. It was their first ever experience in the FLF Platform and they really enjoyed the seminar. The seminar was also live streamed from the Facebook page of PICE (<https://www.facebook.com/picenational/videos/768639218156906>).

As a Chair, it was my second in-person experience and it is an honor to share the stage with the experienced seniors and learn from the stage of TCCM, FCM, PCM

and ECM meetings. The vibrant interactions, networking sessions, in-person event organization, and field visits were among the highlights of the in-person attendance. During the PCM meeting, ACECC FLC highlighted our overall activities and proposed recommendations to update the Future Leaders Governance document. As ACECC prepares to celebrate its 25th Anniversary in September 2024, ACECC FLC plans to publish "Innovations in Civil Engineering from the Future Leaders of ACECC." We seek technical support from ACECC Member Economies and Technical Committees to review the book chapters. Your insights and expertise will be invaluable in ensuring the quality and accuracy of the content we intend to publish. We expect your kind support and interest at aceccflf@gmail.com.

We're really amazed by the Hospitality of the PICE during the ECM. The ECM was very well organized considering the logistics and arrangements, technical tours and cultural displays. The Tinikling Dance and the performance by the cultural dancers group set the tone of the evening. Likewise, the Technical Sessions organized by the Technical Committee were relevant and captivating. The Technical Sightseeing Tour to Maynilad Paranaque WRF was particularly thrilling, offering insights from sewage treatment to potable water production. Tasting the newly obtained water from the Waste Water Treatment Plant was an enlightening experience.



Waste Water treated to introduce New
Water (Bottled)



Traditional Philippine Tinikling (Folk)
Dance

We sincerely appreciate ACECC's support in enabling Future Leaders to participate in the 46th ECM. Introducing sustainable efforts to involve Future Leaders in such forums will undoubtedly contribute to the development of the Sustainable Future Leaders Forum (FLF), promoting a diverse and inclusive culture for young civil engineers, and creating avenues for professional development and robust international technical collaboration among young civil engineers in ACECC member economies.

Feature Article: PADMA MULTIPURPOSE BRIDGE



Padma Bridge in November, 2021

(https://en.wikipedia.org/wiki/Padma_Bridge)

The Padma Multipurpose Bridge commonly known as the Padma Bridge is a two-level road-rail bridge across the Padma River, the main distributary of the Ganges in Bangladesh.^{[1][2]} It connects Louhajang Upazila of Munshiganj and Zazira Upazila of Shariatpur and a small part of Shibchar Upazila of Madaripur, linking the less developed southwest of the country to the northern and eastern regions. The bridge was inaugurated at morning on 25 June 2022 by the Prime Minister Sheikh Hasina.^[3]

The steel truss bridge carries a 22m wide four-lane highway on the upper level^[4] and a single track railway on the lower level.^[5] The bridge consists of 41 sections, each 150.12 m (492.5 ft) long and 22 metres (72 ft) wide, with a total length of 6.15 km (3.82 mi).^[2] It is the longest bridge in Bangladesh,^[4] the longest bridge over the river Padma (Padma) by both span and total length, and features the deepest pile depth of any bridge in the world at 127 m (417 ft).^{[6][7][8]} Some 13 districts of a total 21 which will be connected to the other regions of the country by the bridge have a higher average poverty. Data analysis from the bridge department reveals that on average, more than 15,000 vehicles have crossed the bridge daily.



First Span Installation on the Pier 37 & 38

(<http://www.padmabridge.gov.bd/gallery.php>)

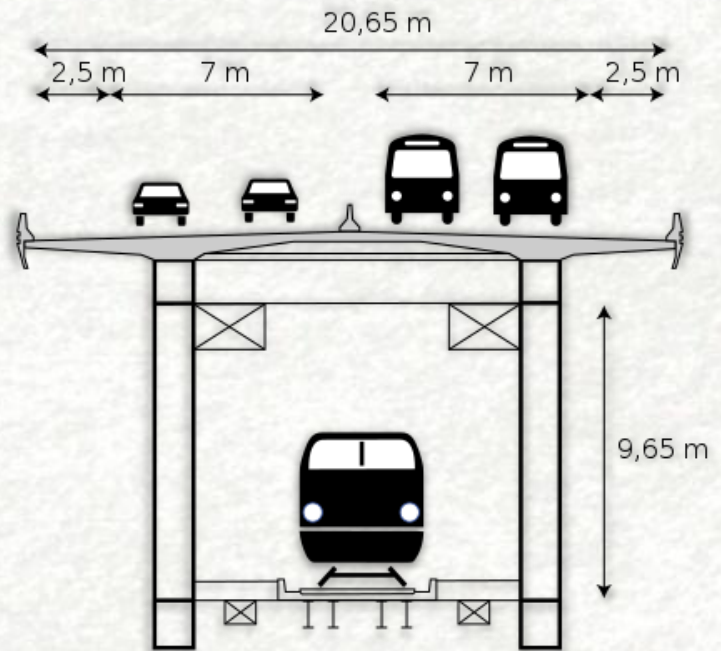
Overview of Project

The detailed design of the Padma Multipurpose Bridge is being delivered by a team of international and national consultants headed by AECOM.^[9] The team comprises AECOM, SMEC International, Northwest Hydraulic Consultants^[10] and ACE Consultants, with additional assistance from Aas-Jakobsen and HR Wallingford.

The project comprises two phases. Phase 1 includes the Design Phase leading through procurement action to the award of construction contracts. Phase 2 is the Construction Phase. A key feature of the detailed design was the integration of Bangladesh counterparts into the design team, which allowed the successful training of a significant number of Bangladesh personnel in all aspects of the project and the subsequent transfer of the high level of technology involved in this large, complex project.^[11]

Components of the project:

1. Main bridge
2. River training works (RTW)
3. Janjira approach road & selected bridge end facilities
4. Mawa approach road & selected bridge end facilities
5. Service area - 2
6. Resettlement
7. Environment
8. Land acquisition
9. CSC (main bridge & RTW)
10. CSC (approach roads & service area - 2)
11. Engineering support & safety team (ESST)



Concept of the cross section construction of the bridge

(https://en.wikipedia.org/wiki/Padma_Bridge)

Construction and Development

As of May 2021, more than 95% of the construction (all the main steel frame spans were set on the piers) of the 6.15-kilometre-long two-tier Padma Multipurpose Bridge had been completed.^[12] The China Major Bridge Engineering Corporation (MBEC), which was appointed for the main bridge, is carrying out the work. The bridge has a total of 42 pillars. Each has six piles beneath. Steel spans were placed on the pillars. The bridge has a total of 41 spans.

Work on the Padma Multipurpose Bridge is broadly divided into five parts—the main bridge, river training, two link roads and infrastructure (service area) construction. China's Sinohydro Corporation was appointed for the river training works while Bangladesh's Abdul Monem Limited was given the contract for the two link roads and infrastructure construction.

In October 2017, more than one and a half years after the main construction work began, the first span was installed between pillars 37 and 38, indicating timely progress on the project.^[13]

On 27 November 2020, construction of all 42 pillars had been completed.^[14]

The final (41st) span of the bridge was installed on 10 December 2020 at 12:02 PM.^{[15][16]}

The last road slab was installed on the span that linked pillars 12 and 13 of the Padma bridge on 24 August 2021 at 10:12 AM.^[17]

The bridge was officially inaugurated by the prime minister of Bangladesh, Sheikh Hasina, on 25 June 2022.^{[3][18]}

Usage and Benefits

According to the CPD distinguished fellow, the size of GDP would increase by 1.23% with the opening of the Padma Bridge. The south-western districts will add another 2% to the GDP^[19] through inauguration of factories and increased tourism alongside estimated 2-4% increase in wage and 6-12% increase in population.^[20] It is estimated to give US\$500M boost to commercial vehicle market of Bangladesh within 5 years of bridge opening.^[21] Lives are also expected to be saved as critical patients of southwestern regions will be able to travel to Dhaka faster avoiding hassles associated with travel by ferries for better treatment facilities.^[22]



A view of the Padma bridge truss being lifted by Tian Yi Hao crane during construction

(https://en.wikipedia.org/wiki/Padma_Bridge)

Padma Bridge is forecast to help increase progressively the number of tourists each year in the southwestern districts. Accordingly, the existing hotels in the region are forecast to earn higher profits. The bridge will connect Dhaka with Kolkata in a faster way. At least 2 hours journey time will be saved. Southern part of Bangladesh will be connected with Dhaka in a shorter time. Once the bridge is operational, another Kolkata-Dhaka International train via Mawa, Goalando, Faridpur, Kushthia, Poradaho, Darshana & Gede may be introduced.^[23] Its single rail line is run as part of the Dhaka–Jessore line and run at a speed of 120km/h like the rest of the Mawa-Bhanga section.^[24]

Toll and revenue

On 28 April 2022, the Bridges Division proposed a toll rate for the Padma Bridge and sent it to Prime Minister Sheikh Hasina for approval. On 17 May, the Ministry of Road Transport and Bridges issued a notification fixing different toll rates for different transports.^[25]

The construction cost of the Padma bridge is Tk. 30,193.39 crore. It is estimated that by 2022, the bridge will carry 21,300 vehicles per day in 23 districts of Bangladesh, which will increase to 41,600 by 2025. It will take 9.5 years to recover the toll from all of them. According to Jugantar, citing the World Bank, the revenue from the Padma Bridge in the next 31 years will be 18.5 billion dollars, which is 5.5 times the construction cost. In addition, social progress will add 25 billion dollars to the economy. The land that has been protected through river governance on both sides is worth about Tk. 1,400 crore. The bridge will save Tk. 2,400 crore on electricity, gas and internet lines. The non-operation of the ferry will save Tk. 3,600 crore. According to the agreement, the bridge authority will have to pay Tk. 36,000 crore in the next 35 years. According to the Bangladesh Bridge Authority, most of the money collected from the toll will be used to repay the loan and the rest will be used to maintain the bridge.^[26]

On 26 June 2022, a total of about 15,200 vehicles crossed the bridge in the first eight hours after the authorities opened it to the public at 6 am. According to an official from the Bangladesh Bridge Authority, Tk. 82,19,000 toll was collected between 6 am to 2 pm.^[27] On 1 July 2022, the government earned record Tk 3,16,00,000 in revenue through toll from 26,394 vehicles that crossed the Padma Bridge, the sixth day after opening of the bridge to traffic.^[28]

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ASCE Releases First-of-its-Kind Sustainable Infrastructure Standard



First time the Society has provided consensus-based standard on sustainable solutions to infrastructure projects

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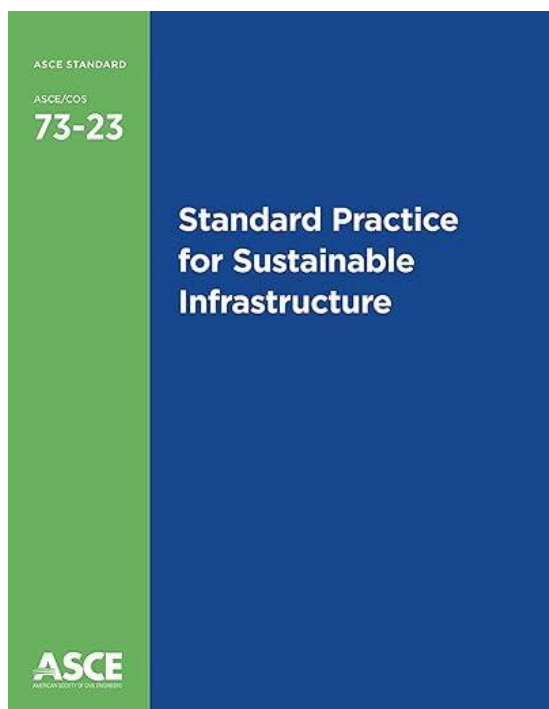
RESTON, VA — In October 2023, the [American Society of Civil Engineers](#) (ASCE) released a first-of-its-kind standard, ASCE/COS 73-23: Standard Practice for Sustainable Infrastructure, which provides guidance for infrastructure owners to develop and implement sustainable solutions through a project’s entire life cycle. It is a non-mandatory, performance-based standard designed for civil infrastructure ranging from transportation projects to water systems to the energy grid, developed over a period of five years involving a multitude of diverse stakeholders.

The standard complements existing ASCE standards and tools like the Envision rating system.

“As a leading source for minimum design loads through our most widely-adopted standard ASCE 7-22, ASCE is in an optimal position to drive the future of sustainable infrastructure through the new ASCE/COS 73-23 standard,” said Cris Liban, D.Env., P.E., Dist.M.ASCE, chief sustainability officer for the Los Angeles County Metropolitan Transportation Authority. “Implementation of this framework by

policymakers, infrastructure owners and practitioners will promote mitigation and adaptation towards environmental threats, provide innovative alternatives to current construction practices, and minimize long-term costs over a project’s entire life cycle.”

Sustainability as it pertains to infrastructure includes projects that are planned, designed, constructed, and maintained in a way that balances the economic, environmental and social benefits over the entire life cycle of the project. To achieve this, ASCE/COS 73-23 calls for infrastructure owners to develop infrastructure that achieves environmental benefits and resilience measures while ensuring



equity, mobility, inclusion and the preservation of cultural heritages and resources. Reuse of existing infrastructure to the extent that it is possible, reducing energy demand for a project and using renewable energy sources, and reducing waste and hazardous materials in the construction process and life cycle of the project are critical components of infrastructure sustainability.

For more information, and to view a video on ASCE/COS 73-23, visit the [ASCE Library](#).

ABOUT THE AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded in 1852, the American Society of Civil Engineers represents more than 150,000 civil engineers worldwide and is America's oldest national engineering society. ASCE works to raise awareness of the need to maintain and modernize the nation's infrastructure using sustainable and resilient practices, advocates for increasing and optimizing investment in infrastructure, and improve engineering knowledge and competency.

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THE ASIAN CIVIL ENGINEERING COORDINATING COUNCIL

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