ISSUE 10
MAY 2025

ASPAC NEWS

QUARTERLY NEWSLETTER OF FIDIC ASIA PACIFIC

CONTENTS

FROM THE EDITORIAL DESK

It is satisfying to see the development of ASPAC newsletter over the last few years. We have been able to produce quarterly newsletter as per schedule every year. My sincere thanks to the editorial board and MAs which have made good contribution to make the newsletter an interesting publication.

Considering the volatile and dynamic world situation, we have to change ourselves. The lessons learnt during covid helped us to communicate online without leaving home, meetings were replaced by group chats, and seminars and conference replaced by webinars! Group chats and webinars quickly became trans-national, adding increased values to the deliberations. It was quickly realized that the adversities have a brighter side and one can convert the shortcomings into benefits hitherto inaccessible.

The world is facing big challenges arising out of climate change and new technologies such as AI which is going to cause major disruption. The biggest impact was on the global issues like environmental decline that threatened the world.

Time is now to plan for future, look for sustainable solutions, adapt new technologies, train manpower, become competitive by developing innovative solutions. In brief, TRANSFORM.

Today the need for interaction is only getting bigger. FIDIC Asia Pacific will try to bring us closer by constant interactions and collaborations. Let us pool our resources for this future preparation!

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FIDIC ASIA PACIFIC PRESIDENT'S MESSAGE

SUDHIR DHAWAN

President
FIDIC Asia Pacific
Email: president@fidicaspac.org

Dear Members,

It is both a privilege and a pleasure to connect with you again through this edition of ASPAC newsletter.

Our newsletter is more than just an update—it's a reflection of the vibrant and engaged community we continue to build together. Within these pages, you'll find important announcements, upcoming events, highlights of recent activities, and contributions from members that showcase the talent and spirit within our association.

Over the past few months, we've made great strides in several key areas holding Webinars, interaction of young professionals. We have agreed to expand young professionals' group by having 2 persons from each MA.

Our forthcoming events are two conferences being organised by ACEP, Pakistan on " Use of FIDIC conditions of contract for transparency and efficient project delivery " in Islamabad on 20th and 21st May 2025 and FAP Annual Conference in Bali, Indonesia being organised by INKINDO from 18th to 20th August 2025.

Our main objective is to strengthen member engagement through holding of technical webinars, training and through this newsletter. Your involvement is what drives our progress, and I encourage you to share your voice and ideas as we plan for what's ahead.

Looking forward, we have exciting initiatives lined up, and the newsletter will remain a central way for us to keep you informed and connected. If you have suggestions or would like to contribute content for future issues, we would love to hear from you.

Thank you for your continued support and for being an essential part of our community.

Warm regards,

Sudhir Dhawan
President, FIDIC Asia Pacific

BALI GREETS THE WORLD:

FIDIC ASIA PACIFIC CONFERENCE AND INKINDO'S NATIONAL WORKING MEETING SET TO TAKE PLACE

INKINDO's National Working Meeting, held in conjunction with this event, holds significant meaning for national construction service players, particularly technical consultants.

Konstruksi Media – Bali is more than just a tourist destination. It is the breath of culture, the pulse of spirituality, and a reflection of hospitality rooted in centuries-old traditions. From children dancing in the banjar to subak farmers safeguarding a UNESCO heritage, Bali lives in a rhythm of tradition and openness to the world. Amidst modernization, the Balinese people continue to preserve their local values steadfastly—a rarity in today's globalized world.

On a humanistic level, Bali teaches us about balance in life. The concept of Tri Hita Karana—harmony among people, nature, and the divine—is not just a philosophy but a way of life. Visitors can sense the peaceful aura radiating from how Balinese people greet, share, and respect differences. Bali is not merely a "place"; it is a "feeling."

Economically, Bali is a foreign exchange hero. Before the pandemic, this small island contributed over 50% of the national tourism sector's foreign exchange earnings. With the swift recovery of tourism in the post-pandemic era, Bali has once again become a backbone of the service and trade sectors—not only in tourism, but also as a magnet for major international events such as the G20 Summit, Miss World, and the upcoming FIDIC Asia Pacific (FAP) Conference 2025, held in synergy with INKINDO's National Working Meeting (RAKERNAS).

The FIDIC Asia Pacific (FAP) Conference is an annual gathering organized by the International Federation of Consulting Engineers (FIDIC), bringing together stakeholders in the engineering and construction sectors from across the Asia Pacific region.

This event serves as a platform for discussing challenges and opportunities in sustainable infrastructure development, covering topics such as climate resilience, technological innovation, and best practices in project governance. The conference also strengthens cross-country collaboration and encourages knowledge exchange to improve the quality and efficiency of the construction sector.

The decision to host the FAP Conference and INKINDO's RAKERNAS in Bali is no coincidence. Bali not only offers world-class venues and facilities but also an atmosphere that nurtures cross-cultural and international collaboration.

At this conference, leaders in construction and infrastructure services will be treated not just to forums and discussions, but to an authentic experience intertwined with Bali's local harmony—opening new dimensions for deeper thinking and collaboration.

In the eyes of the world, Bali is Indonesia's most recognized face. It is the nation's showcase—arousing curiosity about the beauty and diversity of the archipelago. Its breathtaking nature—from seas to mountains—its vibrant rituals, and its people's appreciation for diversity and mutual cooperation, make Bali a gentle yet powerful symbol of Indonesia's cultural diplomacy.

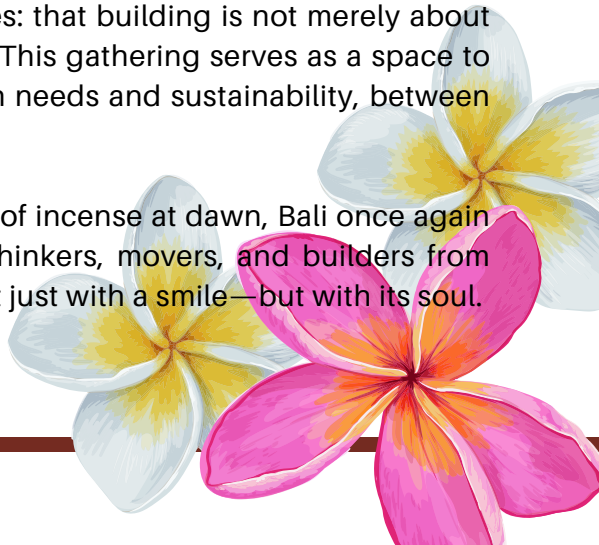
Bali's emergence as a host for major international meetings reflects its capacity not only in tourism, but also in diplomacy and strengthening Indonesia's global presence. The FIDIC Asia Pacific Conference, in particular, gathers construction service stakeholders from across the region, while also inviting local players to compete and synergize on a global stage.

INKINDO's RAKERNAS, held alongside this conference, carries important significance for national construction service providers, especially technical consultants. Bali is not just a location, but a symbolic space to discuss the future of a more sustainable and inclusive construction industry—one rooted in local wisdom. Just as the Balinese people care for nature and culture, so too must development harmonize with the environment.

Through this event, Bali becomes a witness to Indonesia's assertion of its identity: modern yet deeply rooted, open yet dignified. Amid the tides of globalization, Bali shows that harmony and progress can reinforce each other. This is an important lesson for the infrastructure world, which often remains rigid in numbers and materials.

Finally, Bali offers a gentle yet profound message to delegates: that building is not merely about concrete and steel, but about preserving life and civilization. This gathering serves as a space to rethink humanity's role in shaping a future balanced between needs and sustainability, between technology and values.

And so, amidst the sound of trickling water and the fragrance of incense at dawn, Bali once again takes center stage. This time, not only for tourists, but for thinkers, movers, and builders from across the Asia Pacific. And as always, Bali welcomes them not just with a smile—but with its soul.



GET REGISTERED FOR FAP ANNUAL CONFERENCE

FIDIC ASIA PACIFIC CONFERENCE 2025

NEW TECHNOLOGIES TRANSFORMING ENGINEERING AND CONSTRUCTION INDUSTRY

BALI

18 - 20 AUGUST 2025

- Regional Collaboration such as through Collaborative and Remote Work Technologies
- Automation and Robotics for Data Collection, Construction, Operations, and Maintenance
- Building Information Modelling (BIM) and Simulations for Sustainability
- Artificial Intelligence (AI)/ Machine Learning (ML) and their Governance

National Association of Indonesian Consultants (INKINDO)
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https://www.fapcbali2025.inkindo.org

https://www.inkindo.org inkindo@inkindo.org @inkindo.org @inkindo_org INKINDO

INKINDO

AUGUST
18 - 20

Bali Beach Convention Center
Sanur

FIDIC ASIA PACIFIC CONFERENCE 2025

CALL FOR ABSTACTS

Sub Themes

- **Regional Collaboration:** Fostering collaboration among consulting engineers and various stakeholders in the Asia Pacific Region.
- **Collaborative Technologies:** Utilizing collaborative technology platforms to support advanced hybrid and remote portfolio, program, and project management.
- **Artificial Intelligence:** Examining the impact of Artificial Intelligence (AI) and Machine Learning (ML) on engineering practices.
- **Sustainable Design Technologies:** Integrating Building Information Modelling (BIM) and other advanced technologies in sustainable engineering design
- **Sustainable Construction and Operation Technologies:** Exploring cutting-edge and sustainable technologies in construction and operational equipment (e.g., natural condition data collection/imaging, prefabricated construction materials, high-efficiency water treatment technology, smart mobility, etc.)
- **Governance of Projects:** Addressing collaboration and technological disruptions such as AI in governance (e.g., public policy, contractual claims/disputes, etc.).

Submission Dead line	15th May 2025
Submission Email	https://linktr.ee/FAPCONFERENCE2025BALI

more information

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FAP MID YEAR- CONFERENCE-2025

We are delighted to announce the upcoming FIDIC Asia Pacific Mid-Year Conference 2025, scheduled for May 20–21, 2025, at the Mövenpick Hotel, Centaurus, Islamabad, Pakistan. This prestigious event, hosted by the Association of Consulting Engineers Pakistan (ACEP) and endorsed by FIDIC Asia Pacific, will bring together leading professionals from the engineering and infrastructure sectors to discuss the pivotal role of FIDIC contracts in promoting transparency and efficiency in project delivery.

Featured Speakers

The conference will feature a distinguished lineup of speakers from across the globe, each bringing unique insights and experiences.

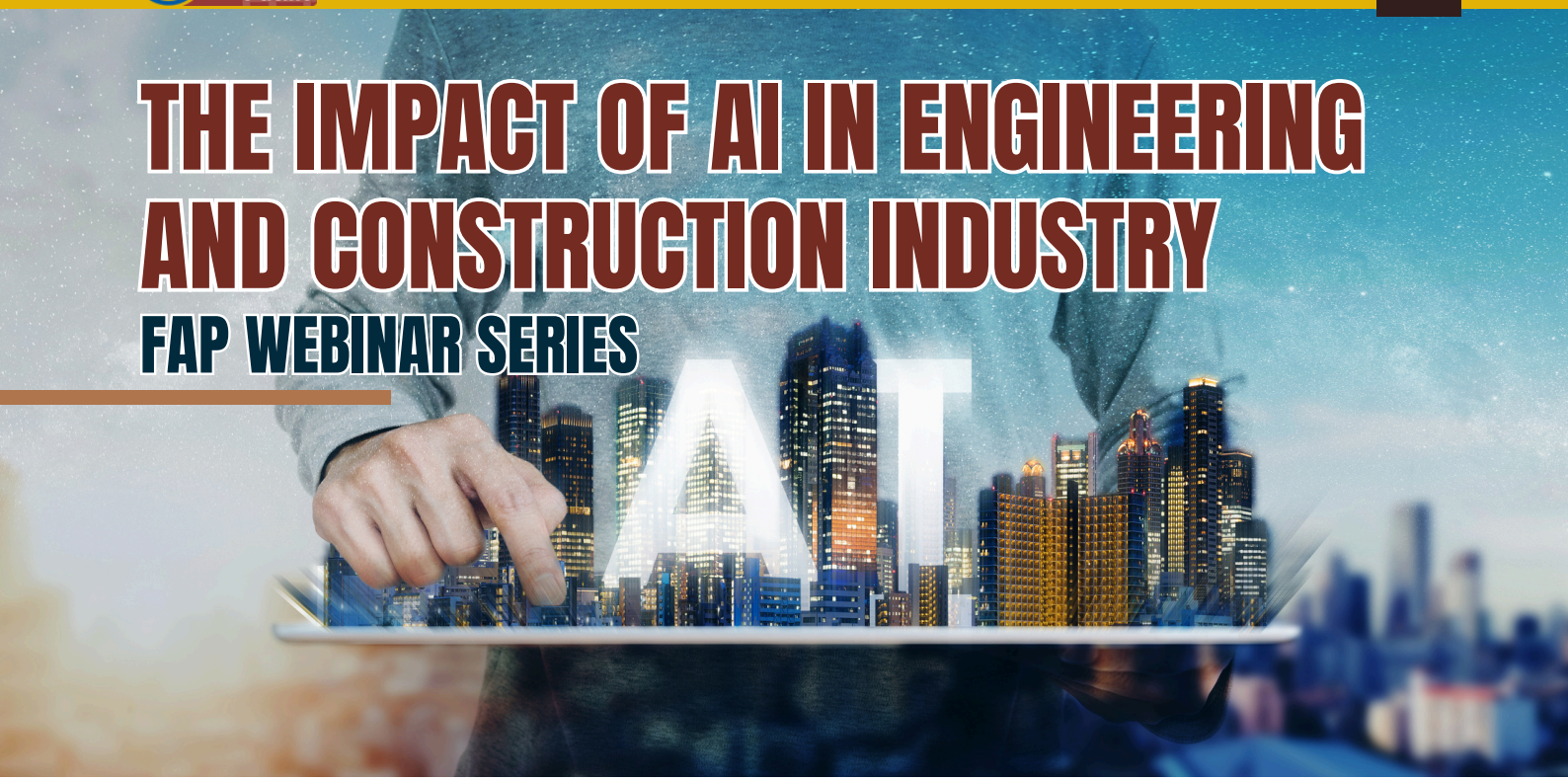
Why You Should Attend?

- In-depth Sessions on the practical application of FIDIC contracts
- Panel Discussions focusing on risk management, dispute resolution, and sustainable infrastructure
- Networking Opportunities with global industry leaders and professionals
- Case Studies showcasing successful project implementations across the Asia Pacific region

SCAN TO REGISTER

THE IMPACT OF AI IN ENGINEERING AND CONSTRUCTION INDUSTRY

FAP WEBINAR SERIES



This FAP Webinar provided deep insights into how Artificial Intelligence (AI) is transforming the engineering and construction sectors, covering both technical applications and legal, strategic implications. The event brought together global experts from Korea, India, and Nepal, among others.

🗣️ Opening Remarks

Hae-Kyeong Lee (President of KENCA),
Sudhir Dhawan (President of FAP),
Catherine Karakatsanis (President of FIDIC)
welcomed participants and emphasized the urgency and potential of integrating AI across infrastructure development sectors.

🎤 Keynote Speech

Sangchul Kim (Bae, Kim & Lee LLC, Korea):
"AI and the Future of Engineering & Construction"
Focused on how AI reshapes contracts, project management practices, and legal frameworks in engineering and construction.

🧩 Session 1: Introduction to AI and Its Impact on Construction Engineering

- **Y. David Lee** (DOHWA Engineering, Korea):

Explored how AI is transforming day-to-day operations in construction engineering.

- **Changbum Ryan Ahn** (Seoul National University, Korea):

Discussed opportunities and risks in implementing AI within the construction process.

🛠️ Session 2: AI and Advanced Tools in Construction Engineering & Management

- **Hongjo Kim** (Yonsei University, Korea):

Presented on Generative AI-powered design and engineering.

- **Dr. Ajay Pradhan** (CEO, C2S2, India):

Shared AI applications and advanced tools in project management.

- **Sudhir Thapa** (Forefront Engineering, Nepal):

Highlighted BIM-based AI automation in design and construction.

🚀 Session 3: AI-driven Innovations in Infrastructure, Capital Projects, and Smart Contracts

- **Nilesh Shrivastava** (Accenture, India):

Discussed GenAI and its applicability in infrastructure and capital projects.

- **Abhishek Shrivastava & Mumtaz Afal & Prabal Singh** (Systra, India):

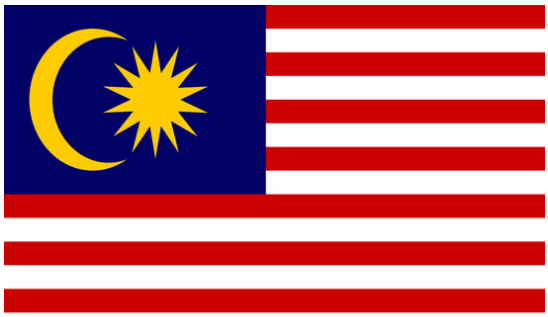
Showcased how smart contracts powered by blockchain and AI are revolutionizing project delivery.

🙏 Closing Remarks

- **Widhon Chiamchittrong** (Vice President of FAP):

Concluded the event with appreciation for the speakers and organizers, and highlighted the ongoing role of AI in shaping the future of infrastructure.

GET TO KNOW MEMBER ASSOCIATIONS OF FIDIC ASIA PACIFIC



MALAYSIA

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1. Introduction

The Association of Consulting Engineers Malaysia (ACEM) was established in 1963 with the object of promoting the advancement of the profession of consulting engineering.

ACEM's head office is in Kuala Lumpur with two branch offices in the states of Sabah and Sarawak respectively.

2. Membership

ACEM has 4 main categories of membership:

- Individual Member
- Panel Firm Member
- Associate Member
- Affiliate Member

As of 4 April 2025, ACEM's membership comprises 848 Individual Members representing 481 engineering consultancy practices.

The membership numbers in the respective categories are shown as follows:

3. ACEM Council 2024-2025

President : Ir. Chong Chew Fan
Deputy President : Ir. Anuar b Mohd Aris
Honorary Secretary : Ir. Sharifah Azlina bt Raja Kamal Pasmah
Honorary Treasurer : Ir. Ahmad Rashidi b Zainudin
Immediate Past President : Ir. K. Sundraraj
Council Members : Datuk Ir. Ts. Br. Dr. Amarjit Singh
Ir. Amin b Ramli
Ir. Amirul Hisham b Hj. Ismail
Ir. Foo Kam Fai

Ir. Khamsah bt Rais
Ir. Shah Izzni Talif b Mohd Adnan
Datuk Ir. Chin Shu Ying (Chair, Sabah Branch)
Ir. Rudy Zulfika b Yusof (Chair, Sarawak Branch)

4. Activities planned for 2025
(i) ACEM 62nd Anniversary Dinner
(ii) ACEM Engineering Awards 2025
(iii) ACEM Outstanding Consulting Engineer Award 2025
(iv) Membership Outreach programmes - ACEM Forum 2025 and ACEM Talk for Practising Engineers specifically to discuss issues relating to the practice of consulting engineering.
(v) Training and Education activities such as
– Technical Seminars and Webinars
– Webinars on Award winning projects
– Site Supervision Courses
– Bridge Engineering course, etc.
(vi) Publications – ACEM monthly newsletter (Suara Perunding) and ACEM Directory 2025/2026

MA'S FEATURED SO FAR

- Indonesia - Indonesian National Association of Consultants (INKINDO)
- Vietnam - Vietnam Engineering Consultant Association
- Japan - Engineering and Consulting Firms Association (ECFA)
- China - China National Association of Engineering Consultants (CNAEC)
- Nepal - Society of Consulting Architectural and Engineering Firms (SCAEF)
- Philippines - Council of Engineering Consultants of the Philippines (CECOPHIL)
- India - Consulting Engineers Association of India (CEAI)
- Pakistan - Association of Consulting Engineers Pakistan (ACEP)
- Australia - Consult Australia
- New Zealand - The Association of Consulting and Engineering New Zealand Incorporated (ACENZ)

Interested in featuring your MA?

Email us the MA details: **editorial@fidicaspac.org**

WEWA-ELLANGAWA SYSTEM (TCS) - MODEL FOR CLIMATE-RESILIENT WATER MANAGEMENT IN SRI LANKA

© FIDIC Asia Pacific Conference 2024-Nepal - Conference Book

DILINI GAMAGE | *Civil Engineer* | *Ceylon Electricity Board, Sri Lanka*

ABSTRACT

The Wewa-Ellangawa System exemplifies an indigenous technology in Sri Lanka that addresses the pressing challenges posed by climate change, particularly prolonged droughts and floods in Sri Lanka. This intricate network of interconnected tanks, developed over a thousand years ago, captures and stores rainwater, effectively mitigating the risks associated with climate extremes. By promoting water recycling and efficient resource allocation, the system enhances water security for agriculture, livestock, and local communities. Key features of the Wewa-Ellangawa System include its ancient socio-ecological framework, naturalized design that harmonizes with the environment, and a distributed layout that optimizes resource use. The governance structure surrounding this system is concentric on community participation and shared responsibility, which ensures that local needs are met while safeguarding downstream users. Historically rooted in the dry zone of Sri Lanka, the tank cascade systems have thrived in a landscape characterized by limited rainfall and flat terrain. They have played a crucial role in sustaining ecosystems during dry seasons while fulfilling human water needs. The functionality of the Wewa-Ellangawa System illustrates how traditional practices can inform modern water management strategies. In light of contemporary climate challenges, this study highlights the governance mechanisms inherent in the Wewa-Ellangawa System as a model for enhancing climate resilience. By integrating traditional knowledge into current policies and practices, stakeholders can develop adaptive strategies that address both flood and drought risks effectively. This approach underscores the importance of participatory governance in fostering sustainable resource management in regions vulnerable to climate shocks.

Keywords
wewa-ellangawa, tank cascade, indigenous technology.

I.Introduction

As climate change increasingly impacts global ecosystems, the need for resilient and sustainable practices has become a pressing concern. In Sri Lanka, significant challenges arising from climate change include prolonged droughts and floods.

The Wewa-Ellangawa - tank cascade system (TCS), a prime example of indigenous technology, offers a remarkable solution to these issues and provides valuable insights for enhancing climate resilience strategies.

TCSis part of a traditional water management strategy in Sri Lanka, particularly prominent in the north central area of the island. This system is an intricate network of interconnected tanks that collect and distribute water to enhance water security and make maximum use by promoting reuse of water. Developed over a thousand years ago, these tanks capture and store rainwater on surface and under the ground, effectively mitigating the risks associated with both droughts and floods. By channeling water between tanks, the system efficiently manages limited resources while also recharging groundwater tables. This approach supports agriculture, livestock, and local communities, demonstrating the sustainable use of water resources—an increasingly critical issue in the context of climate change.

Key Features of the System:

- Ancient socio-ecological system
- Highly efficient water management and recycling methodology
- Naturalized design that works in harmony With the environment.

II.TOPOGRAPHICAL AND CLIMATE CONDITIONS

The TCS date back to ancient times, specifically during Sri Lanka's first kingdom in written history, the Anuradhapura period (5th century BC to 11th century AD)[4]. This area belongs to the dry zone of the country, receiving rain water for only 3–4 months per year from northeast monsoon rains. However, the first and second kingdoms of Sri Lanka, located in this region, had been populated for over 2000 years, with the majority of their food requirements supplied through irrigation.

The terrain is relatively flat with sparse vegetation typical of dry monsoon forests, shrub lands, riverine forests, and open grasslands. A few rivers originating from the central hill country flow across this area but are insufficient to meet the demands of the local population. It is these TCS that have historically contributed to human water needs while allowing ecosystems to thrive during dry seasons.

III.FUNCTIONALITY OF WEWA-ELLANGAWA SYSTEM

A cascade system is defined as a "connected series of tanks organized within a 'meso-catchment' of the dry zone landscape, storing, conveying and utilizing water from an ephemeral rivulet" [2]

"Wewa" is the building block of the Wewa-Ellangawa System. Even though it looks like a tank which retains water, but it's functionality is more sophisticated than an ordinary tank. However, for easy usage of language the term "tank" is used for the "Wewa" in this article. Tanks, paddy fields, watersheds and canals are integrated and interwoven with the natural environment (naturalized) making up this irrigation water management system. [3]

Water originating from the catchment area initially flows into forest tanks, which serve as settlement tanks designed to trap silt, mud, and fallen leaves carried by surface runoff. These tanks not only provide water for wildlife, thereby keeping animals away from villages, but also recharge groundwater in forested areas, sustaining ecosystems during dry seasons. The number of forest tanks within a particular Tank Cascade System (TCS) may vary depending on the size of the catchment area.

Subsequently, water flows into major village tanks intended for irrigation and domestic purposes. Supplementary tanks, known as Olagam Wewa or upper village tanks, may also be present within this system.

The interplay between these tanks and the canals that transport water among them facilitates groundwater recharge, thus characterizing the TCS as a socio-ecological system.

Depending on the topography determined by geology and subsequent geomorphic changes in that topography, 4 types of TCS can be identified as linear, crescent shaped, dendritict and fan-like [6]. Figure 1 shows a typical layout of a TCS.

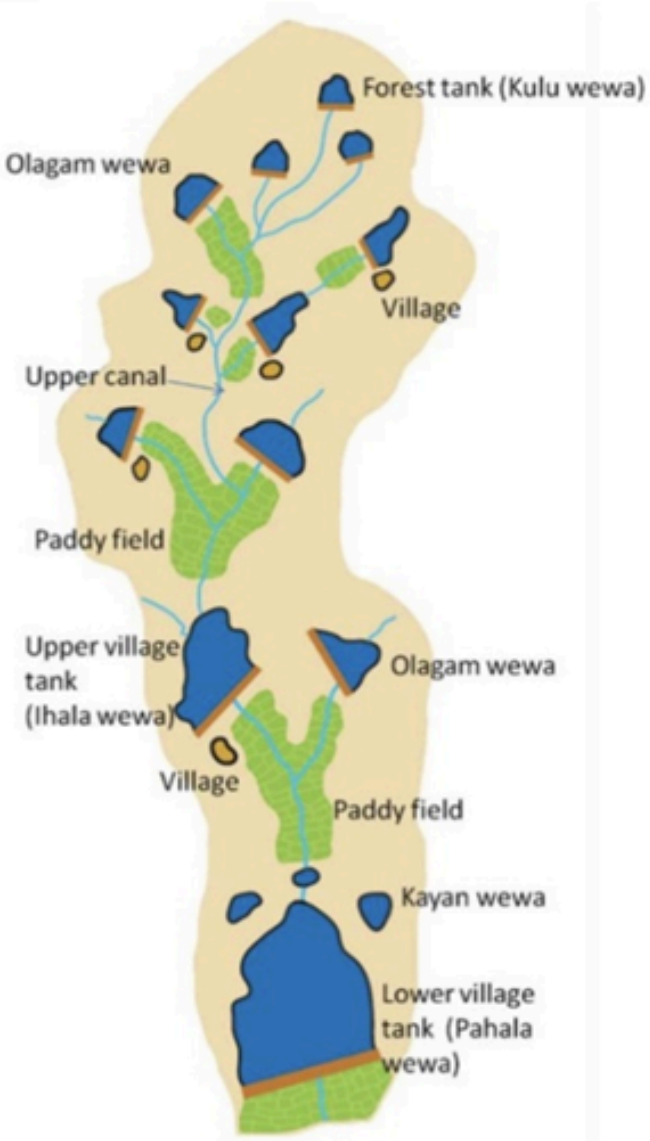

Figure 1: Typical Layout of a Wewa- ellangawa (Tank Cascade System)

IV.SUSTAINABLE ENGINEERING CONCEPTS ASSOCIATED WITH THE SYSTEM

1.Materials and Technology

Numerous sustainable concepts underpin the TCS. All materials utilized in constructing tanks or canals are derived from natural sources.

The dams are primarily earth dams (Figure 2), with soil compacted using traditional methods involving elephants, cattle, and goats to achieve optimal compaction levels. This ancient knowledge has informed modern engineering practices; for instance, the sheep foot roller exemplifies this continuity.

Remarkably, many ancient dams continue to function effectively with minimal maintenance. An example is the Kala Wewa dam, constructed around 460 CE, which remains operational today.

Larger tanks in Sri Lanka often feature rip-raps—rubble packs placed on the inner toe of tank bunds to prevent wave attrition during storms. For instance, the Kudawilachchiya tank, an abandoned tank in Sri Lanka showcases a rip-rap constructed from neatly cut stones measuring around 300mm x 400mm x 900mm over a length of 3 kilometers.

Figure 2: Rip Rap of the Kudawilachchiya tank, Sri Lanka

Another significant element is the Bisokotuwa, a chamber-like structure made from stone slabs or thick brick walls located within the dam and connected to the water outlet (Figure 3).It is believed that this feature acts as a surge tank that mitigates water hammer effects caused by abrupt sluice closures (Figure 4).

Figure 3: a Bisokotuwa of an ancient tank

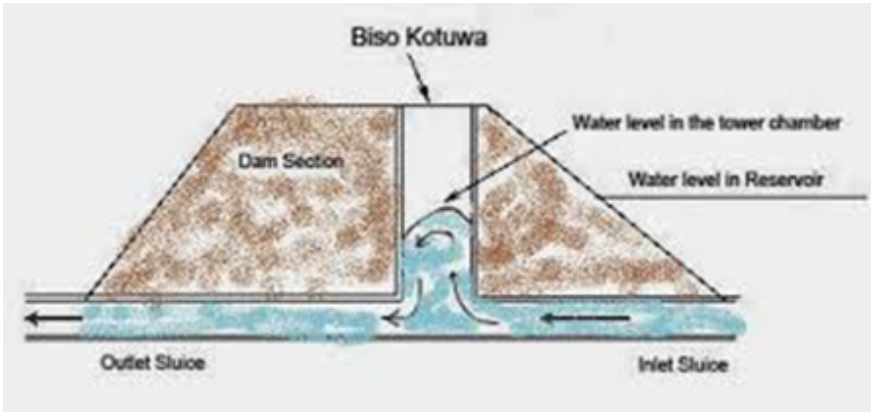

Figure 4: Cross section and function of Bisokotuwa[7]

2.Water Filtration and Treatment

The TCS employs various natural water treatment methods. Initially, debris from the catchment area settles in Kulu Wewa (forest tank). Before entering the major Wewa, water passes through two additional filtration systems: Goda Wala (water hole) and a grass filter (Perahana). These filters trap remaining debris and silt, allowing clean water to enter the tank.

Additionally, a water puddle known as Kattakaduwa forms between the dam and paddy fields where seepage occurs through the dam.

This area serves as a bioremediation trap for salts and contaminants due to its dense vegetation. The plants and trees grown in that area can absorb heavy metals such as chromium and lead.

Figure 5: Water filtration & treatment methods associated with tanks [1]

The canals were constructed from earth with low gradients—such as the famous Yoda Ela canal with a maximum gradient of 20 cm per kilometer—minimizing bank erosion while recharging groundwater along their lengths. The Kumbuk tree (Terminalia Arjuna) is often planted along canal sides to purify water by absorbing contaminants.

3.Mitigation Methods for Evaporation of Water

To minimize evaporation from the water surface of the tank, a tree belts known as Gas-Gommana has been maintained along both sides of the tank. These belts act as windbreaks that reduce dry winds' contact with water surfaces, thereby decreasing evaporation rates. (Figure 6)

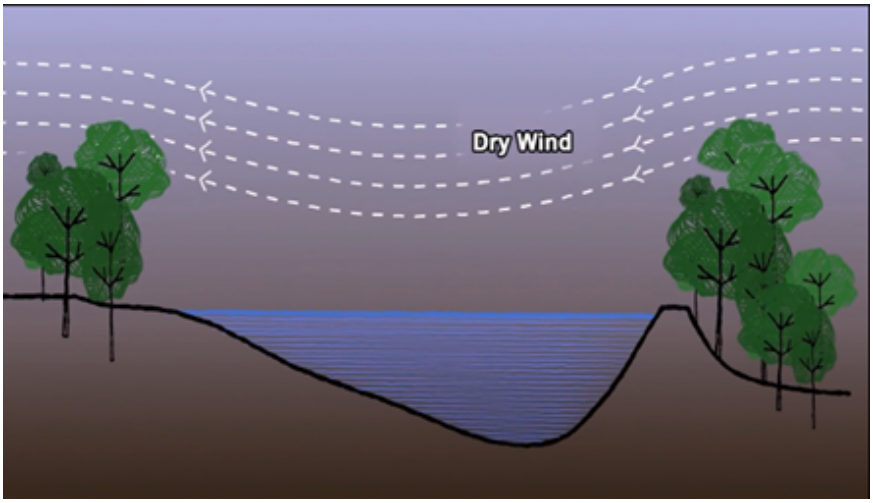

Figure 6: Effect of Gas-Gommana on water evaporation [1]

V.FLOOD CONTROL AND DROUGHT MITIGATION

The TCS plays a crucial role in flood control and drought mitigation.

The Kalinguwa (twin tank system) exemplifies an innovative engineering solution designed to address drought and flooding impacts in Sri Lanka. This system as shown in Figure 7, consists of a large tank divided into two sections: Tank B for irrigation and Tank A for overflow management during heavy rains.

As to Tennakoon M.U.A [6], a small earth bund runs upstream (C-D), perpendicular to the main bund of the tank complex. The uppermost shoreline (H1) indicates the maximum water level reached when the main spillway (I) releases a one-foot thick volume of water. Once spilling ceases, this maximum level recedes to a lower shoreline (H2). The gap between these shorelines is crucial for preventing bund breaches during periods of excessive water inflow. If water levels rise too high, an outer spillway at point G can be opened to release excess water. This design allows surplus water from Tank B to flow into Tank A, effectively reducing pressure on the main tank and preventing potential breaches.

After the monsoon season ends, continuous irrigation from Tank B causes its water level to drop rapidly, moving from H1 to lower shorelines toward the tank bottom (Mandakaluwa). In contrast, Tank A retains more water due to its limited irrigable area downstream. Consequently, while Tank B faces a deficit, Tank A can hold surplus water. If additional irrigation is needed in Tank B, surplus water from Tank A can be transferred through a sluice gate at point F, replenishing Tank B and ensuring adequate water supply for downstream fields. Overall, this innovative tank design, featuring a diagonal bund and associated structures, effectively addresses two critical challenges: preventing bund breaches during heavy rains and mitigating drought impacts by managing water resources efficiently.

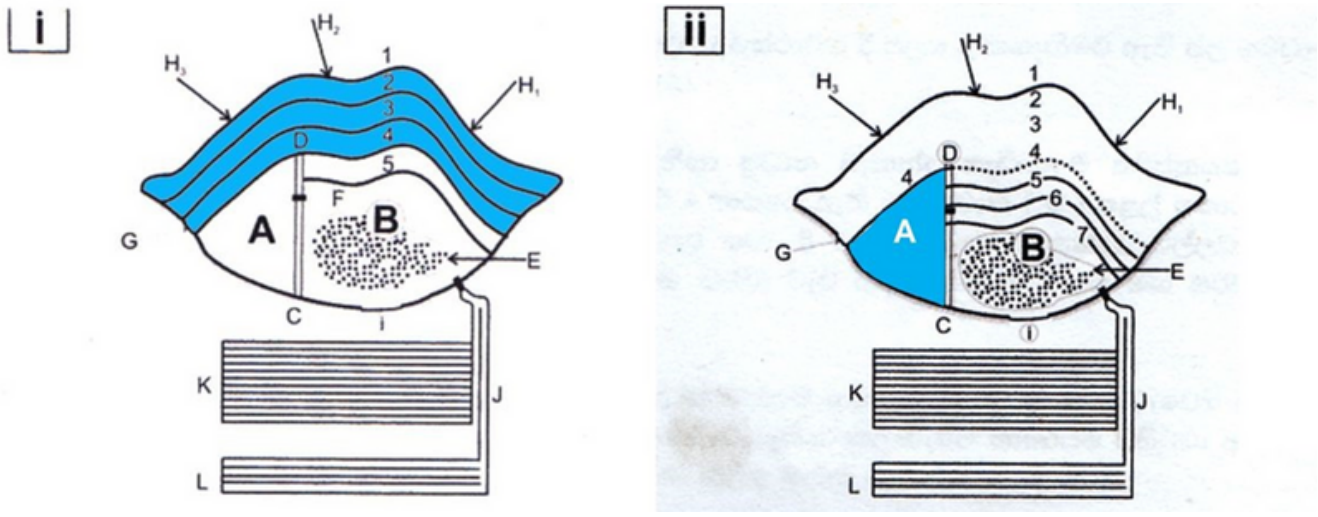

Figure 7: Kalinguwa (twin tank system) i) As a Flood Control Device, ii) As a Drought Mitigation Device [6]

Historically, tank bottoms or Mandakaluwa were designed to retain some water by positioning the lowest sluice slightly above ground level. (Figure 8)[6].This design ensured that residual water supported fish species capable of surviving in muddy conditions until subsequent rainy seasons. During droughts, this remaining water served as a vital drinking source for village livestock. However, decades of silt accumulation have diminished this capacity.

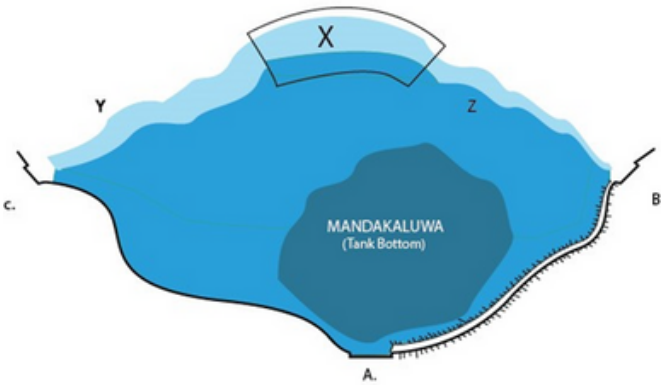

Figure 8: Mandakaluwa, the tank bottom [6]

VI. GOVERNANCE OF THE SYSTEM

A critical aspect of indigenous technologies is their governance framework. Traditional governance systems supporting the TCS were founded on principles of community participation, shared responsibility, and equitable resource management. Communities historically collaborated with local leaders to construct and manage these tanks and canals.

In recent decades, governance has shifted significantly from farmers to government officials; resulting in diminished community engagement in maintenance efforts. Industrial agriculture and centralized irrigation projects have further eroded local involvement in tank management, leading to deterioration within cascade systems.

The socio-cultural context surrounding these tank systems is vital for their governance. Local communities have historically depended on these resources not only for irrigation but also for daily activities such as bathing and washing. However, growing concerns about water quality have led to decreased usage for drinking purposes, undermining community engagement.

VII. CONCLUSION

Legal frameworks governing water management often overlook local knowledge and practices essential for effective governance. It is imperative that effective governance integrates ecological considerations with socio-economic realities to enhance resilience within communities reliant on such systems. The study of the TCS underscores the necessity for policies that empower local communities while promoting sustainable management practices. Incorporating ancient systems into modern governance could significantly bolster climate resilience.

Strategies for Improved Governance

1. Community Engagement: Revitalizing community participation in decision-making processes can enhance stewardship of tank resources.

2. Integrated Management Approaches: Combining ecological assessments with socio-economic data can lead to more effective management strategies addressing both environmental sustainability and community needs.
3. Legal Reforms: Updating legal frameworks to reflect local practices can strengthen governance structures surrounding water management.
4. Education and Awareness: Raising awareness about these systems' importance can help shift perceptions regarding water quality and promote more sustainable usage patterns.

By adopting these strategies, it is possible to foster greater climate resilience while ensuring sustainable management of vital water resources within communities reliant on traditional systems like TCS.

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FIDIC Future Leaders

FUTURE LEADERS CORNER

FUTURE LEADER ?

THIS IS YOUR OPPORTUNITY

- To meet future leaders in the region and grow your network
- To share your expert ideas and knowledge
- To challenge yourself in competitions
- To get recognized internationally

JOIN

FUTURE LEADER'S FORUM

SCAN TO REGISTER

*Age limit: **Upto 40** years

AN INITIATIVE OF

FIDIC ASIA PACIFIC FUTURE LEADER'S EXECUTIVE COMMITTEE

FIDIC ASIA PACIFIC EMERGING LEADER'S AWARD

As we stand on the threshold of a new era filled with endless possibilities, innovation, and transformative change, we are thrilled to present a detailed preview of our upcoming awards to be held at the Annual FIDIC Asia Pacific Conference in Bali,Indonesia in August 2025. The awards are designed to honour and celebrate the trailblazers, visionaries, and change- makers who are shaping the future of our industry and community.

We are excited to announce that we will soon be accepting nominations for our upcoming awards program, which aims to recognize and celebrate the outstanding achievements, innovative initiatives, and impactful contributions of individuals, organizations, and projects within our industry.

Why Nominate?

Nominating a deserving individual, organization, or project for an award is a meaningful and impactful way to:

- Recognize and celebrate excellence, innovation, and achievement
- Honor and showcase the contributions and successes of individuals and organizations

Inspire and motivate others to strive for excellence, embrace innovation, and make a positive difference

- Strengthen and promote the reputation, credibility, and visibility of our industry.

How to Nominate?

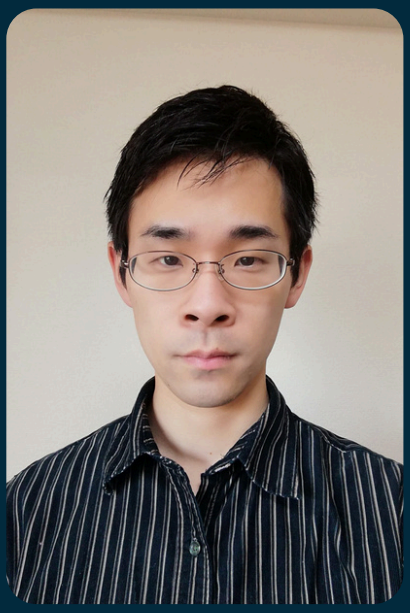
Once we announce award categories and evaluation criteria on our social media and email communication to MAs, you will be able to submit your nominations online by completing the nomination form and providing the required information, supporting documents, and endorsements.

Stay Connected:

We encourage you to follow us on social media to stay informed about the latest news, updates, and announcements regarding our awards program and other exciting initiatives. We look forward to receiving your nominations and celebrating the achievements and contributions of the exceptional individuals, organizations, and projects within our industry.

Thank you for your support, participation, and commitment to excellence, innovation and success.

ANNOUCING THE NEW OFFICE BEARERS OF AFLEC FOR YEAR 2025/2026



CHAIRMAN

SHUNTARO KINNO

VICE-CHAIRMAN

ABDUL HASEEB MANSURI

GET TO KNOW A FUTURE LEADER

Feruza (Firuza) Bobokulova is a partner of MY LAWYER Law Firm, who directs the Firm's practice in international arbitration and construction. In particular, Feruza Bobokulova advises different participants of the construction and infrastructure projects that are realized in Uzbekistan and beyond and that are financed by international financial institutions, foreign government financial organizations, and others. Feruza Bobokulova also represents the interests of state entities and private parties in dispute adjudication board proceedings as well as in international arbitration.

Up to now, Feruza Bobokulova has represented different parties in the arbitration proceedings conducted under the ICC Arbitration Rules, the UNCITRAL Arbitration Rules, Vienna Rules, and London Chamber of Arbitration Rules.She has also represented the parties in sports arbitration, including in the proceedings at the Court of Arbitration for Sport (CAS).

Feruza Bobokulova is a FIDIC Certified Adjudicator and a FIDIC Certified Trainer in Fundamental Construction Contracts, including Silver Book. She is also a FIDIC Certified Contract Manager. Moreover, Feruza Bobokulova is the first Honorary Member of the Association of Consulting Engineers of Uzbekistan as well as a member of the FIDIC Asia Pacific Future Leader's Executive Committee. Feruza Bobokulova was the first member of the International Court of Arbitration of the International Chamber of Commerce (ICC), who was appointed from Uzbkeistan and who has served two terms.

At the moment, she is the ambassador of the Vienna International Arbitral Center appointed from Uzbekistan. Feruza Bobokulova is also a member of the Executive Board of the Turkic Arbitration Association, a member of the Chartered Institute of Arbitrators (London, England), and a member of the Dispute Resolution Board Foundation. In addition, Feruza Bobokulova teaches international law and arbitration at Westminster International University in Tashkent. In 2024, Feruza Bobokulova received the "Emerging Leaders' Award" of the FIDIC Asia Pacific for her oustanding contribution towards development of engineering consutancy in the region. The publication Global Law Experts recognized Feruza Bobokulova as "The Arbitration Expert of the Year in Uzbekistan" in 2020.

FERUZA BOBOKULOVA

Partner
MY LAWYER
Uzbekistan

EVENTS FROM LAST QUARTER

Australia
Consult Australia

- Role of Superintendent [24 February 2025]
- Contracts for Consultant [25-27 February 2025]
- Boardroom Luncheon with Ken Morrison [26 February 2025]
- Collab X 2025 [5-6 March 2025]
- Awards for Excellence Gala Dinner – Sydney [27 March 2025]
- Future Leader Program 2025 – Melbourne [10 April 2025]
- Future Leader Program 2025 – Sydney [10 April 2025]
- Boardroom Luncheon with John Bradley, Secretary at Department of Energy Environment and Climate Action [15 April 2025]
- Boardroom Luncheon with Andrew George Chief Executive Officer of WaterNSW [30 April 2025]

China
China National Association of Engineering Consultants (CNAEC)

- The China Engineering Consulting Association held a 2025 branch work meeting [2 April 2025]

India
Consulting Engineers Association of India (CEAI)

- CEAI National Awards Ceremony [10 January 2025]
- CEAI Annual General Meeting [10 January 2025]
- Interaction with FIDIC Board Members [4 March 2025]
- Webinar on DAM Safety [28 March 2025]
- Webinar on Post-disaster Rehabilitation & Rebuilding: Need of Integrated Management Principles [4 April 2025]

Indonesia
Indonesian National Association of Consultants (INKINDO)

- ISO 37001:2016 Awareness Training for the Preparation of Anti-Bribery Management System (SMAP) Implementation Documents [6 February 2025]
- CAD Webinar for Infrastructure with ZWSOFT [13 & 20 March 2025]
- DPP Inkindo DIY signed an MOU with PT. Direktif Utama Indonesia (Business & Investment) [6 March 2025]

Japan
Engineering and Consulting Firms Association (ECFA)

- Future Leaders Seminar [10 January 2025]
- Dispute Board Seminar (Co-hosted by JICA) [29 January 2025]
- JICA Environmental and Social Consideration Study Group (Practitioners) [January]
- Overseas Project Contract Manager Training Seminar (Beginner-Intermediate) [12 February 2025]
- Introduction to Yen Loans (Co-hosted by JICA) [18 February 2025]
- Contract Manager Training for Overseas Projects Workshop (Intermediate-Advanced) [February]

EVENTS FROM LAST QUARTER

Malaysia

The Association of Consulting Engineers Malaysia (ACEM)

- Luncheon Webinar Construction Site Safety Management [06, 07, 13, 14 January 2025]
- Case Study on Usage of ChatGPT in Technical Design [15 January 2025]
- Luncheon Webinar Construction Contract Management [06, 10, 17, 24 February 2025]
- Luncheon Webinar Fire Protection Systems and Safety Measures in Construction [05, 12, 19, 26 February 2025]
- Luncheon Webinar Sustainable Mechanical Systems [05, 12, 19, 26 March 2025]
- Luncheon Webinar Procurement Project Management in Malaysia [06, 13, 20, 27 March 2025]
- ACEM Webinar Series Site Supervision Course General Module 2025 [08 & 22 March, 12 & 26 April 2025]
- E-Invoicing Implementation for Engineering Consultancy Practice (ECP) Training [12 February 2025]
- Webinar on the Use of Passive and Active Initiatives in the Construction of a Green Highrise Office Building [25 March 2025]
- Webinar "Passing pae" (BEM Outcome-Based Professional) [8 April 2025]
- ACEM Forum 2025 at Hotel Armada Petaling Jaya [17 April 2025]
- Course on Bridge Engineering at Hotel Armada Petaling Jaya [22, 23, 29, 30 April 2025]
- Luncheon Webinar Sustainable Structural Engineering Building Resilience in Malaysia's Infrastructure [21, 22, 28, 29 April 2025]
- Luncheon Webinar the Final Step Best Practices for Smooth Construction Project Handover [16, 17, 23, 24 April 2025]

Nepal

Society of Consulting Architectural and Engineering Firms (SCAEF)

- Training on Motorable Bridge Design and Design Verification for Beginners [19-25 January 2025]
- Supported the 10th Edition Nepal BuildCon International Expo [20-23 February 2025]
- Food Items Handover Program at Kathmandu [1 March 2025]
- Supporting Partner for the 3rd International Transport Conference [11-13 April 2025]

New Zealand

The Association of Consulting and Engineering New Zealand Incorporated (ACENZ)

- Panel Discussion: How to be Resilient in Tough Times [09 April 2025]

EVENTS FROM LAST QUARTER

Philippines *Council of Engineering Consultants of the Philippines (CECOPHIL)*	• Meeting of the Board of Directors [4 March 2025] • Participation in Philippine Construction Arbitration Conference (Deconstructing Construction Through the Elements of Climate, Law, Technology and Finance) [10 March 2025] • Participation in Review and Drafting of the Implementing Rules and Regulations for New Procurement Law (Republic Act No. 12009) • PH AESO Mapping and Scanning Workshop [18 March 2025]
Singapore *The Association of Consulting Engineers Singapore (ACES)*	• ACES Courses Series on Eurocode 7 Geotechnical Design (2nd Run) [18-20 March 2025] • ACES-Geberit Seminar: Sanitary Plumbing Systems and SuperTube Technology [11 April 2025]
Thailand *Consulting Engineers Association of Thailand (CEAT)*	• Project Management for Engineering Consulting Businesses [5-7 February 2025] • Consulting Engineers Association of Thailand Annual General Meeting [19 March 2025] • Special Seminar on "Working with Consultants in Thailand and ASEAN: A Global Executive to Share Views and Experience" • Training Course on Integrated Project Cost Risk Analysis and Construction Scheduling [27-28 March 2025] • 2-Day Course: FIDIC Contract Management and Administration Course [3-4 April 2025] • Construction Project Management and Engineering Works Designed by The Employer According to FIDIC (PINK Book) Course [10 April 2025] • PAC-DMS: Delay Management System by AI (Building Works) Seminar [25 April 2025] • Training Course on Building Information Modeling (BIM) [30 April 2025]
Vietnam *Vietnam Engineering Consultant Association*	• Fidic Construction Contract Overview, Principles of Effective Application and Terms Course [21 February 2025] • FIDIC Training Course on "Conditions of Contract for EPC/Turnkey Projects (Silver Book 2017 and Revised 2022)", Ho Chi Minh City [4-5 April 2025] • FIDIC Training Course on "Conditions of Contract for EPC/Turnkey Projects (Silver Book 2017 and Revised 2022)", Hanoi [11-12 April 2025] • Training Course on "Specialized Bidding Professional Services on Contractor Selection" [25-26 April 2025]

NEWS FROM FIDIC

Industry leaders share insights, ideas and workable solutions at third annual infrastructure summit in Madrid

The third annual Global Leadership Forum Summit, organised by FIDIC, which took place in Madrid recently, saw around 100 of the world's infrastructure leaders coming together to collaborate to discuss workable solutions to the key challenges facing the industry and the planet.

Leaders attending the two-day event from 10-11 April 2025 discussed the central issue of change and how to make it happen, as well as the climate crisis and decarbonisation, future proofing engineering, the next chapter for AI, carbon management and the net zero transition, how the industry works better together – and, crucially, the leadership needed to make that happen.

NEWS FROM FIDIC

Smart Infrastructure: Equality, Resilience and Innovation for a Sustainable World

The world's leading engineers and construction industry professionals are set to gather in South Africa, from 21-23 September 2025 when FIDIC, the International Federation of Consulting Engineers, holds its annual Global Infrastructure Conference in Cape Town.

The conference theme this year is a very topical one. Smart Infrastructure: Equality, Resilience and Innovation for a Sustainable World will set the framework for some essential and timely discussions on the future of infrastructure and how it will be delivered in a changing world. The conference will bring together a high-profile line-up of expert speakers, global influencers, industry experts and sector leaders together in one place for three days of discussion, debate, and networking.

It’s also extra fitting that the 2025 conference is hosted in Cape Town as the G20 presidency is handed over to South Africa, with a theme for the year around fostering solidarity, equality and sustainable development.

UPCOMING EVENTS

Australia *Consult Australia*	Consult Australia is organizing following ; • South Australia's 20 Year Infrastructure Strategy Boardroom Luncheon with Jeremy Conway, Chief Executive of Infrastructure SA [6 May 2025] • Industry Forum with the CEO of SA Water & CEO of Department for Environment and Water [23 May 2025] • Role of the Superintendent (in person) [27 May 2025] • Contracts for Consultants (in person) [28-30 May 2025] • Boardroom Luncheon with James Sherrard, NSW Building Commissioner [17 June 2025]
India *Consulting Engineers Association of India (CEAI)*	CEAI is organizing the following ; • Parallel Flanged Sections and Tubular Sections Seminar, Ahmedabad [June 2025]
Malaysia *The Association of Consulting Engineers Malaysia (ACEM)*	ACEM is organizing the following ; • Course on The Role of a Mechanical Engineer in an Engineering Consultancy Practice [3, 10, 17 May 2025]]
Philippines *Council of Engineering Consultants of the Philippines (CECOPHIL)*	CECOPHIL is organizing the following ; • Participation in FIDIC Asia Pacific Conference in Bali, Indonesia [18-20 August 2025] • Participation in FIDIC Global Infrastructure Conference in Cape Town, South Africa [21-23 September 2025]
New Zealand *The Association of Consulting and Engineering New Zealand Incorporated (ACENZ)*	ACENZ is organizing following ; • ACE New Zealand SME Summit [21 May 2025] • Futurespace 2025 [22-23 October 2025]
Thailand *Consulting Engineers Association of Thailand (CEAT)*	CEAT is organizing following ; • EPC/Turnkey Construction Project Contract Management [To Be Announced] • Net Zero [21 May 2025] • Visiting Foreign Work [June 2025] • View Work in the Country [To Be Announced] • Project Risk Management in Practical Application [6-7 June 2025] • Criteria and Methods for Determining the Median Price of Government Construction According to the Procurement Act [12 June 2025] • 1st EDMS Training [13 June 2025] • Training for the 9th Generation Construction Leaders Project [21 June – 13 December 2025] • Improve the Efficiency of Construction Management and Control for Engineering Projects with Chat GPT [To Be Announced] • 2nd EDMS Training [14 November 2025]
Vietnam *Vietnam Engineering Consultant Association(VECAS)*	VECAS is organizing following ; • BIM Manager Course, Ho Chi Minh City [16-18 May 2025] • BIM Manager Course, Hanoi City [23-25 May 2025]

We invite our member associations to share their constructive feedbacks and inputs to incorporate in the next issue of the newsletter.
Member associations are requested to circulate this newsletter among their members and seek articles, news and information related to past and future events to enhance the network and to represent more parts of the region.

Thank you
Editorial board

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