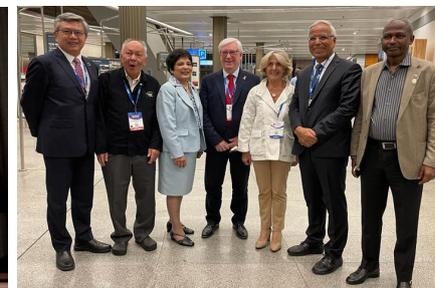




World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

Biennial Report
2023 - 2025

Engineering for Sustainable Development



WFEO at a glance

The World Federation of Engineering Organizations (WFEO) was founded in 1968 under the auspices of UNESCO and is the peak body for engineering, representing the professional engineering institutions from nearly 100 nations and some 30 million engineers.

WFEO is the international voice of engineering, recognised by the United Nations as a leading non-government organization in engineering.

WFEO works closely with UN agencies including UNESCO as well as ISO, the World Bank and other international organizations in science and engineering to address key global issues, especially to advance the United Nations Sustainable Development Goals (SDGs) through engineering.

Major Initiatives

- **WFEO at the United Nations**

WFEO co-chairs the Scientific and Technological Major Group at the United Nations with the International Science Council. WFEO participates in the High Level Political Forums, the Multi-Stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum) and holds side events annually in relation with the UN SDGs.

- **WFEO and Capacity Building for Engineering**

WFEO is working with its international partners to increase the number and quality of engineers through improving engineering education standards, the development of national engineering education systems and training for accreditation bodies, registration bodies and professional engineering institutions.

- **WFEO and Africa and Small Island Developing States (SIDS)**

WFEO initiated the Engineering Capacity Building for Africa Program (ECBAP), a 10-year initiative, leveraging Capacity Building for Sustainable Development in the context of global digital transformation. WFEO is facilitating the development of engineering capacity in Africa and SIDS to support infrastructure growth, resilience against natural disasters and climate change impacts.

- **WFEO and the UNFCCC and COP meetings**

WFEO attends the UNFCCC meetings annually and organises side events at the Conference of the Parties (COP) meetings to represent the engineering view on climate change.

- **WFEO and Diversity in Engineering**

WFEO is active in supporting diversity in engineering including women and young engineers through attraction, retention and support programs and recognition awards.

- **WFEO World Engineers Convention**

This event is held every four years and is the “Olympics of Engineering”.

- **WFEO Academy**

WFEO Academy provides training for engineering educators and assessors of engineering education programs for accreditation purposes and for the professional development of qualified engineers.

- **WFEO and International Decade of Sciences for Sustainable Development 2024-2033 (IDSSD)**

WFEO is one of the International organizations supporting the IDSSD, whose goal is to restore confidence in science, promote critical and nuanced thinking, and strengthen worldwide scientific cooperation.

Table of contents

WFEO at a glance	2
Table of contents	3
Report of the President	4
Report of the President-Elect	8
Report of the Executive Director	10
WFEO Executive Council	12
WFEO Values and Operating Principles	13
World Engineering Day 2024 and 2025	14
World Engineering Day Hackathon 2024 and 2025	16
WFEO Academy	18
WFEO and UN Relations	20
WFEO and UNESCO	22
WFEO Committees and Working Groups	23
Committee on Disaster Risk Management (CDRM)	24
Committee on Energy (CE)	26
Committee on Engineering Capacity Building (CECB)	28
Committee on Engineering and the Environment (CEE)	30
Committee on Education in Engineering (CEIE)	32
Committee on Engineering for Innovative Technologies (CEIT)	34
Committee on Information and Communication (CIC)	36
Committee on Water (CW)	38
Committee on Anti-Corruption (CAC)	40
Committee on Women in Engineering (WIE)	42
Committee on Young Engineers / Future Leaders (YEFL)	44
WFEO-UN Relations Committee (WURC)	46
Working Group on Systems Engineering (WGSE)	48
Working Group on Engineering and Climate Change (WGCC)	50
WFEO Code of Practice: Principles of Climate Change Adapt. and Resilience for Engineers	52
WFEO Engineering Capacity Building for Africa Programme (ECBAP)	54
Office of Climate Change Education ARRICE - WFEO Project	56
UNESCO-Africa Engineering Week	58
WFEO Members	60
WFEO Awards 2023 and 2024	62
World Engineering Day 2026	63
Our sponsors	65

Report of the President



Mustafa Shehu
WFE0 President

It was Saturday, 14 October 2023, when I took over the mantle of leadership of the World Federation of Engineering Organizations at a colorful ceremony witnessed by National, International, Affiliate and Associate members, Partners of the Federation as well as an array of past Presidents, which is rare in most WFE0 functions. Also at the occasion, was a huge delegation from Nigeria (more than 40) led by the Nigerian Ambassador to the Czech Republic and the President of the Nigerian Society of Engineers. I was inaugurated to lead the Federation through the 2023-2025 biennium. As I took over with lots of excitement, I am also fully aware of the huge expectation on me to lead the Federation to a higher position than I met it.



Delivering inaugural Address in Prague, 14 October 2023

At my inaugural address, I mentioned among other issues, improving our relationship with international institutions and to improve the membership of the Federation. To this effect, our effort in bringing back some institutions that were hitherto members, but for some reasons left especially among the developed countries, was successful. Furthermore, we were able to bring to the Federation's membership, many institutions from African and Asian countries as well as some sector-based institutions.

In our effort to strengthen our relationship with some international organizations, I attended the Belt and Road Conference of Science and Technology Exchange (BRST) that took place in Chongqing, China, 5-7 November 2023.



Addressing delegates at the Opening Session of the BRST Conference

The Framework Agreement between WFE0 and UNESCO was renewed and signed at the UNESCO Headquarters in Paris on 28 June 2024.



After signing the renewed Framework Agreement with UNESCO. I was accompanied to the occasion by Ania Lopez, Dr. Nahla Al-Qasimi, Jacques de Mereuil and Mukhtar Zakari

Our effort to enhance the development of engineering capacity for our members especially in Africa and Small Island Developing States (SIDS) culminated in the formation of a Taskforce on Engineering Capacity Building for Africa Programme (ECBAP) led by Prof. Gong Ke. This will also go a long way to facilitate the achievement of the UN 2030 SDGs as well as the African Union Agenda 2063 (The Africa We Want). The programme first gained support from the Chinese government through the China Association for Science and Technology (CAST) and from the Federation of African Engineering Organizations (FAEO). Subsequently, UNESCO, UNIDO, UNDESA, AU-ASRIC, AAS, UNU and UNEP have pledged their support while many other organizations have indicated interest in joining. It is a 10-year program with aim of training and up-skilling more than 100,000 engineers for industry and infrastructure demands. The program was launched in Nairobi, Kenya, on 17 March 2025.



After the Launching of the ECBAP in Nairobi, Kenya, 17 March 2025

The period under consideration witnessed the inauguration of the International Decade of Sciences for Sustainable Development (IDSSD). The Decade was proclaimed on 25 August 2023 by the United Nations General Assembly and invited UNESCO to lead its implementation through an Executive Committee for which WFEO is a member. The Committee was inaugurated on 4 September 2024. The Decade presents a unique opportunity for humanity to unlock the full potential of science in pursuing sustainable development and ensuring a safe and prosperous future for all. Governments and all other relevant stakeholders in Member States of the United Nations are encouraged to actively support the implementation of the Decade, in collaboration with UNESCO.



Members of the Executive Committee of the IDSSD after Inauguration

The prestigious World Engineering Day (WED) celebrations were held on 4 March 2024 and 4 March 2025, in Lisbon and Paris respectively. The 2024 WED, held under the theme 'Engineering Solutions for a Sustainable World', achieved a huge outreach of over 67 million people - mostly young men and women - through various social media platforms. I was pleased to receive a presentation from the immediate past Chair of the WFEO Committee of Information and Communication on the book 'Artificial Intelligence: Bias, Fairness and Beyond', a significant contribution by the Committee to the global engineering community's work in Artificial intelligence. In a remarkable display of global collaboration and innovation, the WED Hackathon 2024 concluded with resounding success. The competition went green, with all challenges aligning closely with the United Nations Sustainable Development Goal 13 - Climate Action. We had over 2500 participants from across the globe and we received more than 200 innovative submissions.



At the end of the Opening Ceremony of WED 2024 in Lisbon, Portugal

The 2025 WED celebrations were held at the UNESCO Headquarters in Paris in close collaboration with our communication partner, St. James House of London. The theme was 'Shaping a Sustainable Future Through Engineering'. The event's glamour and outreach surpassed those of previous years. Going forward, I foresee a much bigger outreach and opportunities for WFEO through the WED even if organized and hosted by other national member institutions.

In line with our policy of strengthening our relationship with the United Nations, its Agencies and International Organizations, we organized a virtual meeting with Her Excellency Amina Mohammed, the Deputy Secretary General of the United Nations on 3 April 2024. At the meeting, we highlighted to her the activities run by WFEO to accelerate the achievement of the UN SDGs as well as the need to further strengthen the relationship for the benefit of the global community. On her part she commended our effort and expressed willingness to continue partnering with the Federation in several programs.

To enhance the quality of output of our Standing Committees through reliable data, we are making an effort to partner with the International Centre of Big Data for Sustainable Development (CBAS) based in Beijing, China. To this end, we had a virtual meeting with Prof. Gretchen Kalonji on 7 February 2025. An MoU is being drafted for signing between the two organizations. Present to join me at the meeting from WFEO side were Past president Prof. Gong Ke, Martin Manuhwa, Norlida Bunyamin and Wael Abdulmajeed, who are the Chairs of CECB, CEIT and CIC respectively.



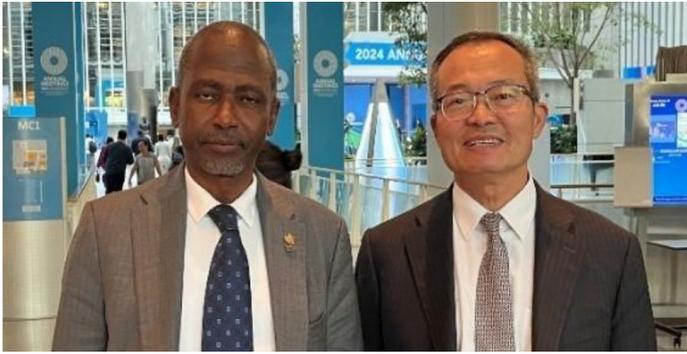
Virtual Meeting between WFEO and CBAS

Had a meeting on 11 March 2025 with Neill Stansbury, the Director of the Global Infrastructure Anti-Corruption Centre (GIACC) in London, where he commended the collaboration between GIACC and WFEO through its Committee on Anti-Corruption. He shared with me an Online Anti-Corruption Brochure consisting of Training Modules that could be accessible by our members, free of charge.

The WFEO over the years has had a strategic relationship with the Royal Academy of Engineering, UK. To that effect they compiled a Report on 'Engineers for Africa 2025' and invited me to write a Foreword to the report, which I did. I was formally presented a copy at their office in London on 12 March 2025.

On 21 October 2024, we had a meeting with the Vice President (Infrastructure) of World Bank Dr. Guangzhe Chen and key members of his department, on the collaboration with the World Bank especially in the areas of sustainable and disaster resilient procurement process, the WFEO Academy and engineering capacity building for Africa Programme.

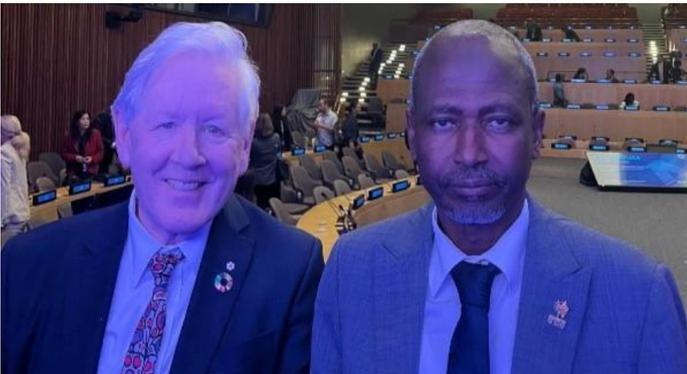
For similar reasons, on 6-8 May 2025, we attended the 2025 UN STI Forum at the UN Headquarters in New York. We participated in the Special Event organized by UNDESA and the UN Inter Agency Task team (UN-IATT) with the theme 'Celebrating a Decade of STI for the SDGs-Progress and Future Opportunities'. The session highlighted key achievements, lessons learned, and the critical role of multi-stakeholder collaboration in supporting Member States to leverage the power of STI for sustainable development.



With World Bank Vice President (Infrastructure) Mr. Guangzhe Chen

The event also served as a platform to look toward the next five years, reinforcing the global momentum generated at the Summit of the Future for STI-driven solutions to sustainable development challenges.

WFEO organized a side event with theme 'Leveraging AI to Accelerate Sustainable Development'. At the event, it was unanimously agreed that as a prelude to leveraging AI's potential, we need to acknowledge the demand for sustainable and resilient infrastructure, especially energy and water, in addition to digital infrastructure. At the end of the Session, the "Critical Infrastructure Resolution" was drafted and signed on 6 May 2025 by the participants and shared for implementation as well as for submission to the UNDESA.



With His Excellency Bob Rae, President of UN-ECOSOC at Closing session



Speaking during Special Session

As in previous years, WFEO actively participated in the 2024 and 2025 UNESCO Africa Engineering Week/Africa Engineering Conference held in Luanda, Angola and Kampala, Uganda respectively. On both occasions, the events saw a large attendance of engineers from different African countries as well as participants from Asia, Europe and the Middle East. The conferences were also attended by Ministers from engineering-related Ministries and Chief Executives of engineering parastatals. This is a clear testimony to the growing success achieved over the years through this program which was initiated by WFEO in 2014, which aims to improve the skills and capacity of engineering personnel in Africa.

Though serving a global organization, it is pleasing and humbling to be recognized locally at home. The Kano State Governor, His Excellency Abba Kabir Yusuf organized a State Banquet to honor some citizens of Kano State who excelled and contributed outstandingly in their own fields of endeavor locally and internationally. I am among the recipients of the Awards. The occasion took place at the Government House, Kano, Nigeria, on 2 February 2025.

On the invitation of many of our Partners, National and International Member Institutions, I attended many conferences and activities in China, United Arab Emirates, United Kingdom, Malaysia, Kenya, Ghana, Russia, Hungary, Indonesia, Iraq, Slovenia, Austria, just to mention a few. The trips were all towards solidifying our relationship with those institutions as well as extending the outreach of WFEO to a wider audience.

The WFEO Standing Technical Committees, Policy Implementation Committees and Working Groups have done very well during this period in spreading the activities of WFEO globally. The Water Committee released a publication on 'Engineering, Water and Food Nexus' which has been sent to UN-Water and shared among our members. The Committee on Engineering Capacity Building has been very active especially on the Engineering Capacity Building for Africa Program (ECBAP). The Energy Committee, Young Engineers/Future Leaders, Women in Engineering Committees and the Working Group on Climate Change have organized many webinars throughout the period under review. I thank them for their dedication and commitment. I also thank the National Member representatives at the Executive Council and International Members for their cooperation and support. Many of them have represented me in occasions I could not attend while some have joined me in some of my outings.

The Secretariat, though slim in workforce, is alive to its responsibilities by responding promptly to all issues and providing information when requested. I thank them all.

Looking forward, I foresee a stronger and more effective WFEO in the years ahead after reviewing our Strategic Plan and exploring alternative ways to raise finances for effective and wider reach. I thank the global engineering community under WFEO for giving me this opportunity to serve the world.

Engr. Mustafa B. Shehu
President of the World Federation of Engineering Organizations

List of President Shehu's international engagements:

Inaugural Executive Board Meeting of WFEO, Prague, Czech Republic, 15 October 2023

Inaugural Executive Council Meeting of WFEO, Prague, Czech Republic, 15 October 2023

Belt and Road Conference on Science and Technology Exchange, Chongqing, China, 5-8 November 2023

30th Institution of Engineers of Kenya (IEK) Convention, Mombasa, Kenya, 14-17 November 2023

2023 World Internet of Things Convention, Beijing, China, 19-21 November 2023

41st Conference of ASEAN Federation of Engineering Organizations (CAFEO-41) Bali, Indonesia, 21-23 November 2023

2023 National Engineering Conference and Annual General Meeting of Nigerian Society of Engineers, Abuja, Nigeria, 27 November - 1 December 2023

Visit to His Highness the Emir of Kano, Kano, Nigeria, 19 December 2023

Visit to Former President of Nigeria, His Excellency Olusegun Obasanjo, Abeokuta, Nigeria, 24 December 2023

2nd African Union (AU)-African Scientific, Research and Innovation Council (ASRIC) Engineering Conference, Cairo, Egypt, 29-31 January 2024

25th Gulf Engineering Forum- Society of Engineers UAE, Dubai, UAE, 7-8 February 2024

World Engineering Day (WED), Lisbon, Portugal, 4 March 2024

WED, Institution of Engineers Singapore, 4 March 2024

WED Message to Philippine Technology Council, Doha, Qatar, 8-9 March 2024

WED Message to Myanmar Engineering Council, 12 March 2024

WED Message to Institution of Engineers Pakistan, 12 March 2024

54th Annual Conference of the Ghana Institution of Engineering, Accra, Ghana, 19 March 2024

Virtual Meeting with the UN Deputy Secretary General, Amina Mohammed, 3 April 2024

2024 Zhongguancun ZGC Forum, China Association of Science and Technology, Beijing, China, 28 April 2024

2024 World Digital Health Forum Conference, Beijing, China, 29 April 2024

Engineering Partnership Convention by Engineers Board of Kenya, Nyere, Kenya 7-10 May 2024

Message at 30th Anniversary of Chinese Academy of Engineering, Beijing, China, 10 May 2024

Ethiopian Customs Commission (ECC) Training Centre, Addis Ababa, Ethiopia, 3-6 June 2024

Presidential roundtable Conference of the Circular Cities Network, Ljubljana, Slovenia, 24-26 June 2024

Signing of Renewal of the Framework Agreement between UNESCO and WFEO, UNESCO Headquarters (HQ), Paris, 28 June 2024

International Conference on Engineering Education Accreditation (ICEEA) 2024, Myanmar, 23-24 July 2024

Message to Workshop for developing Southern African Development Community (SADC) Mutual Recognition Agreements (MRAs) for Professional Service, Johannesburg, South Africa, 2-4 September 2024

Inauguration of IDSSD Executive Committee, UNESCO HQ Paris, 4 September 2024

UNESCO Africa Engineering Week and Conference, Luanda, Angola, 9-13 September 2024

Courtesy Visit to UNEP Headquarters, Nairobi, Kenya, 17 October 2024

Courtesy Visit to African Academy of Sciences, Nairobi, Kenya, 17 October 2024

WFEO Executive Council Meeting, Kigali, Rwanda, 18 October 2024

Official Visit to the World Bank HQ, Washington DC, USA, 21 October 2024

Official Visit to the Department of State, USA, Washington DC, 22 October 2024

Official Visit to the HQ of the American Society of Civil Engineers, Washington DC, 22 October 2024

Official Visit to UNEP Office, New York, USA, 24 October 2024

Official Visit to UNDESA, UN HQ, New York, 24 October 2024

2024 World Internet of Things Convention, Beijing, China, 3-5 November 2024

2024 International Engineering Congress by FEIAP, Taizhou, China, 8-9 November 2024

International Forum for Sustainable Development, UNESCO Russia, St Petersburg, Russia, 11-15 November 2024

6th World Landslide Forum, Florence, Italy, 14-17 November 2024

World Science Forum 2024 by International Science Council, Budapest, Hungary, 20-23 November 2024

Continental Conference on Transforming STEM in Africa by UNESCO, Addis Ababa 26-28 November 2024

ECC Training Centre, Addis Ababa, Ethiopia, 29 November 2024

Banquet of Honour by Kano State Governor, Government House, Kano, Nigeria, 1 February 2025

Meeting with International Research Centre of Big Data for Sustainable Development (CBAS), Virtual, 7 February 2025

World Engineering Day Celebration, UNESCO HQ, Paris, France, 4 March 2025

WFEO Executive Board Meeting, Paris, France, 5 March 2025

WFEO Executive Council Meeting, Paris, France, 6 March 2025

Meeting at Royal Academy of Engineering, London, UK, 10 March 2025

Meeting with Global Infrastructure Anti-Corruption Centre (GIACC) Director, London, UK, 11 March 2025

Forum on Global North-South Cooperation to Achieve SDGs, London, UK, 11 March 2025

Launching of Engineering Capacity Building for Africa Programme, Nairobi, Kenya, 17 March 2024

2025 BRICS Engineering Congress, Shenzhen, China, 24-26 April 2025

10th Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals (2025 STI Forum), New York, USA, 7-8 May 2025

2025 Mechanical Engineering Distinguished Lecture by NIMEchE, Abuja, Nigeria 14 May 2025

Nigerian Institution of Civil Engineers Distinguished Lecture, National Executive Council (NEC) HQ, Abuja, Nigeria, 24 May 2024

53rd Session of the UNIDO Industrial Development Board, Vienna, Austria, 30 June 2025

Resilient Engineering Innovation for Future-Oriented Resilient Infrastructure (REINFORCE2025) Conference, Virtual, 15-16 July 2025

International Conference on Engineering Education Accreditation (ICEEA) 2025, Virtual, 30-31 July 2025

Engr. Ibrahim Kaleel Inuwa Distinguished Lecture, Kano, Nigeria, 9 August 2025

UNESCO Africa Engineering Week/Conference, Kampala, Uganda, 14-19 August 2025

20th World Council of Civil Engineers (WCCE) General Assembly, Abuja, Nigeria, 24 September 2025

Report of the President-Elect



Seng-Chuan TAN
WFE0 President-Elect

I was elected President-Elect of the World Federation of Engineering Organizations (WFEO) at the General Assembly held in Prague, Czech Republic, on 14 October 2023. In my election address, I articulated a forward-looking vision for WFEO building upon the remarkable contributions of the current and past Presidents to advance our global mission through five strategic pillars:

- **Elevate Engineering Education Standards** in developing countries to empower future generations.
- **Strengthen Capacity Building and Career Pathways** to enhance professional credentials and facilitate global mobility.
- **Champion the UN Sustainable Development Goals** and foster climate resilience through engineering innovation.
- **Reinforce WFEO's Financial Sustainability and Governance** to ensure long-term institutional strength.
- **Expand WFEO's Global Influence** by deepening engagement across international networks and partnerships.



Declaration of election result. From left: Executive Director Jacques de Mereuil, Immediate Past President Jose Vieira and Treasurer François Lureau

Guided by these priorities, I initiated the revitalization of World Engineering Day to foster global participation, advanced the Accreditation Programme for the WFEO Academy, and began positioning WFEO as a global Knowledge Centre for Engineering. I look forward to collaborating with our members and partners to elevate WFEO's global impact and leadership to new heights.

World Engineering Day for Sustainable Development

As President-Elect, I was honored to chair World Engineering Day for Sustainable Development, a flagship initiative that underscores the essential role of engineering in advancing the UN Sustainable Development Goals. The 2024 theme, "Engineering Solutions for a Sustainable World", celebrated in Lisbon, highlighted innovation as a catalyst for addressing global challenges. The 2025 theme, "Shaping Our Sustainable Future Through Engineering", celebrated in Paris, calls for mobilizing the global engineering community to champion inclusive, resilient, and ethical development. Together, these themes reaffirm engineering's transformative power in building a sustainable and equitable future, and reflect WFEO's commitment to global collaboration, capacity building, and visionary leadership.



Addressing the closing remarks at the World Engineering Day, Paris, 4 March 2025

Gulf Engineering forum

In support of regional engineering excellence, WFEO participated in the 25th Gulf Engineering Forum held on 7–8 February 2024, in Dubai. Under the theme "Smart Engineering for a Sustainable Future", the forum convened engineers, policymakers, and innovators to explore technology-driven sustainability.

WFEO President Mustafa B. Shehu delivered a keynote on "Engineering for a Sustainable Future" while President-Elect Seng-Chuan Tan presented on "Sustainable Infrastructure", emphasizing inclusive design, climate resilience, and ethical practice. The forum advanced WFEO's mission to empower engineers as key contributors to the UN Sustainable Development Goals through capacity building and cross-border collaboration.



WFEO Ex-Council members and Gulf Engineering Union Council members

International Engineering Congress

The World Federation of Engineering Organizations (WFEO) supported the 2024 International Engineering Congress (2024IEC), held on 8–9 November in Taizhou, China. During the opening ceremony, the Africa, America, Asia and the Pacific Accord (A3P Accord) was formally signed by representatives from FAEO, UPADI, and FEIAP, with UNESCO and WFEO serving as official witnesses. The A3P Accord establishes a collaborative framework for the mutual recognition of outcome-based engineering education accreditation systems that demonstrate international substantial equivalence. It also promotes the development and global mobility of Engineers, Engineering Technologists, and Engineering Technicians.



Signing of A3P Accord by FAEO, UPADI and FEIAP and witness by UNESCO and WFEO

Geospatial World Forum

Presented a keynote address at the 16th Geospatial World Forum, held from 22 to 25 April 2025 in Madrid, Spain. Centered on the theme "Spatial Computing & Digital Twin Enterprise," the forum highlighted the fusion of digital and physical realms through advanced geospatial technologies. On this global stage, WFEO reaffirmed its dedication to promoting geospatial innovation as a foundational pillar of sustainable development and ethical engineering worldwide. Spatial computing and digital twin technologies are not merely technical breakthroughs—they are transformative tools that empower engineers to design resilient cities, optimize resource use, and mitigate climate risks. These innovations align directly with WFEO's mission to promote engineering excellence in service of the UN Sustainable Development Goals.



From left: SDG Data Alliance ED Dr. Greg Scott, GEOSA President Dr. Eng Mohammed Yahia Al-Sayel, WFEO President-Elect, Seng Chuan TAN, Geospatial World CEO Sanjay Kumar

World Robot Conference

Delivered a keynote address at the 10th World Robot Conference, held from 8 to 12 August 2025 in Beijing, China. The conference, themed "Making Robots Smarter, Making Embodied Agents More Intelligent," spotlighted the rapid convergence of artificial intelligence, robotics, and ethical engineering—an intersection that powerfully aligns with the mission of the World Federation of Engineering Organizations (WFEO). In advancing this mission, WFEO remains deeply committed to fostering global collaboration, shaping inclusive and forward-looking policy frameworks, and championing engineering ethics as we navigate the evolving landscape of intelligent technologies.



WFEO President-Elect Seng-Chuan TAN was interviewed by Phoenix Finance TV host Zora Liu Meixi

Report of the Executive Director



Jacques de Méreuil
WFE0 Executive Director



Jacques de Méreuil at the 2024 World Engineering Day Celebration in Lisbon, Portugal

Changing Times for the WFE0 Secretariat

After nearly a decade of service, I will retire from my role as Executive Director at the end of 2025. Throughout this period, the Secretariat has worked to support the Executive Board, the Executive Council, and various committees in strengthening WFE0's role as a global platform for engineers and promoting its mission to foster innovation, collaboration, and professional excellence. Over the years, WFE0 has expanded its international collaborations, launched key initiatives, and contributed to the advancement of the global engineering community.

In September 2025, Dr. Moez Chakchouk joined the Secretariat as a future Executive Director by January 2026. He has already demonstrated a strong commitment to further developing WFE0's international presence and impact.

Secretariat Operations

General Overview

The WFE0 Secretariat is based at UNESCO Headquarters in Paris. The Secretariat is responsible for administrative operations, compliance with internal and external regulations, member engagement, and support for strategic objectives and regular events. The Executive Director serves as a non-voting member of the Executive Board and Council, as outlined in the Federation's Constitution.

The Secretariat is composed of permanent staff directly employed by the Federation: as of today, the Executive Director and his successor, the Operations Officer Théo Bélaud and the IT & Communication Manager Ivan Juiz.

Offices and Facilities

The Secretariat rents two offices in the Bonvin building at UNESCO. A hybrid work model with flexible hours has been maintained to manage costs and ensure continuity.

Alternative office arrangements are under review. Retaining a presence at UNESCO remains a viable option for both operational and visibility purposes, with the current rental costs representing approximately 8% of overall administrative expenses.

Administrative Functions

Accounting

WFE0 has adopted updated accounting methods to enhance financial oversight. The Secretariat manages quarterly accounts, working closely with an external accounting firm to ensure accuracy and compliance.

Human Resources

The Secretariat oversees employment contracts, payroll, social security declarations, and staff benefits. Recruitment processes are also partly or entirely managed internally.

Membership Management

Membership invoices are issued annually, with reminders sent quarterly. The Secretariat is responsible for maintaining member records and updating fee structures in accordance with General Assembly decisions and changes in the UNESCO Member States assessment index.

The Secretariat also supports the Membership Committee and Executive Board in reviewing and processing new membership applications.

Since our GA assembly in Prague, the Federation has welcomed new national members (the USA - return -, Niger, Ireland, Azerbaijan), affiliate members (ABET from USA) International members (INCOSE, return of EAMC) and associates, and more institutions have started the application process this year.

Governance Support

The Secretariat assists in convening Executive Board meetings, preparing agendas, minutes, and relevant documentation. In-person and online meetings are held regularly. The Secretariat also supports key Board committees, providing administrative and logistical assistance in delivering their mandates.

Communications and Outreach

The Secretariat maintains and regularly updates the WFEO website, promoting the Federation's leadership, initiatives, and contributions toward the UN Sustainable Development Goals. Social media channels are used to enhance visibility, with increased activity around online events and webinars.

The Secretariat produces promotional content and manages post-event media, including video editing and dissemination. The bimonthly "Flash Info" newsletter provides updates on Federation activities and topics relevant to the engineering community. A redesigned website is scheduled to launch in 2026.

Staffing

Accounting Role Transition

Since the Prague General Assembly in October 2023, the Secretariat's staff has experienced some changes: our part time Finance Officer Isabelle Cafaro, who has helped the Federation so much in improving our financial and administrative management, has decided to retire on 30 April 2025. Following her departure, tasks were redistributed within the team. Training and increased support from the external accounting firm have helped ensure continued compliance, though additional workload has been absorbed by remaining staff.

The Secretariat's team was reinforced in the preparation of WED2025 by the recruitment of a Junior Communication Officer (temporary position), from November 2024 to March 2025.

Executive Director Recruitment

The Secretariat supported the recruitment process for the new Executive Director, managing application flow, interview logistics, and liaison with an external consultant. The process attracted over 250 applications and led to a successful appointment.

Capacity and Strategic Outlook

WFEO's Secretariat is currently small relative to the scope and ambition of the Federation. With only three permanent staff, operations rely heavily on each team member, which presents sustainability challenges and limits capacity to fully meet stakeholder expectations. In the short term, a realistic goal is to increase the team size to 4–5 staff members, with particular focus on enhancing administrative capacity.

Event Support and Coordination

WFEO Events

WEC 2023 and General Assembly – Prague

Significant coordination was required in the lead-up to WEC 2023, working closely with the national host and partners. Despite limited external support, the events were successfully delivered, with effective collaboration between the host organization and the Secretariat.

World Engineering Day (WED) 2024 – Lisbon

A special Executive Council meeting was held in Lisbon during the main WED 2024 event. The Secretariat coordinated meetings, on-site activities, and virtual sessions. The professionalism and support from the host organization contributed to a well-executed event.

Executive Meetings – Paris 2025

In early 2025, WFEO held a series of Executive Board and Council meetings alongside WED flagship activities at UNESCO and elsewhere in Paris. The Secretariat organized all logistics and ensured smooth delivery of both in-person and hybrid components.

World Engineering Day (WED) Activities

Partnership with St James's House

In collaboration with a new communications partner, the Secretariat co-managed the WED 2025 campaign. Key responsibilities included the launch of the new WED website, oversight of sponsor engagement, and review of promotional (films) content.

The Secretariat also led the organization of the flagship WED 2025 event at UNESCO. This involved complex coordination with partners, sponsors, and WFEO members. The high-level conference was well attended by representatives of Member States and key professional institutions, contributing to the success of the campaign.



Prof. Tshilidzi Marwala, the Rector of the United Nations University, with Jacques de Méreuil

United Nations University (UNU)

Since 2024, the United Nations University (UNU) has settled its Secretariat in offices next to WFEO's at UNESCO. I met with Prof. Tshilidzi Marwala, the Rector of the United Nations University, Under-Secretary-General of the United Nations, in May 2024. Another visit occurred in October 2024, and Prof. Marwala was invited to speak through a video at the WED 2025 event organised at UNESCO HQ on 4 March 2025.

The Secretariat and UNU are preparing a MoU between both organizations, to be signed before the end of 2025.

The role of the Secretariat is crucial in helping the Federation in acquiring new members, developing relations between engineers through the activity of Committees and specific projects, and showing the role of engineers in reaching the Sustainable Development Goals.

It will have to find new resources to acquire a reasonable strike force, under the leadership of our new Executive Director Moez Chakchouk.

WFEO Executive Council

Executive Board Members

Mustafa B. Shehu President
Ashok Basa Executive Vice President
François Lureau Treasurer

Seng Chuan Tan President-Elect
Ania Lopez Executive Vice President

José Vieira Past President
Jacques de Méreuil Executive Director

Standing Technical Committee Chairs

José Macharé Disaster Risk Management
Martin Manuhwa Engineering Capacity Building
Wael Abdulmajeed Information & Communication

Zaw Min Aung Education in Engineering
GENG Yong (a.i.) Engineering & the Environment
Ignacio Gonzalez-Castelao Water

Marie-Line Vaiani Energy
Norlida Bunyamin Eng. for Innovative Technologies

Policy Implementation Committee Chairs

Kamel Ayadi Anti-corruption

Enyonam Kpekpena Women in Engineering
--

Firas Bou Diab Young Engineers / Future Leaders
--

National Members

Nahla Al Qassimi United Arab Emirates
Joel Krüger Brazil
Nathaniel Matalanga Kenya
Kenichi Tsukahara Japan

Richard Coackley United Kingdom
HE Jing China
Gustave Nzeng Democratic Republic of the Congo
Navinchandra Vasoya India

Alexandre Kounitzky Switzerland
Miguel Fierro Uruguay
Oscar Sanchez Costa Rica

International Members

Dawn Bonfield Commonwealth Engineers Council (CEC)
Refilwe Buthelezi Federation of African Engineering Organizations (FAEO)
Jorge Abramian World Council of Civil Engineers (WCCE)

Adil Al Hadithi Federation of Arab Engineers (FAE)
Aung Kyaw Myat Federation of Engineering Institutions of Asia and the Pacific (FEIAP)
Shankar Krishnan International Federation of Medical and Biological Engineering (IFMBE)

Ralph Appel Engineers European (Ex-FEANI)
Ari Herrera Pan American Federation of Engineering Societies (UPADI)

Non voting Members

Alain Jouanjus Auditor
Abdul Majeed Al Qassab Chair of the Governance Committee

K. N. Gunalan Chair of WFEO-UN Relations Committee
GONG Ke Chair of TF Engg Capacity Building for Africa

Davide Stronati Chair of Working Group on Climate Change



World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

WFEO Values and Operating Principles

Approved 1 March 2023

As the peak global organisation for engineering, representing more than 100 professional engineering institutions and more than 30 million engineers, the World Federation of Engineering Organisations (WFEO), leads by example in its day-to-day operations, and with the expectations it places on its members, affiliates and associates and their representatives, and the organisation's partners and supporters.

Excellence in Leadership and Independence underpin all our work and we strive to ensure that it is recognised internationally.

Integrity Honesty and Transparency are part of our endeavours to deliver our purpose. We are guided in all our activities by the highest standards of ethics, honesty and integrity. When acting on behalf of WFEO we demonstrate excellence in engineering. We represent WFEO and make statements on behalf of WFEO only with explicit prior approval of the WFEO President and Executive Board.

Collaboration is important for our work and we welcome the support and contribution from around the world from WFEO and its members, affiliates and associates, as this is critical to our success.

Sustainability is essential for our future and we strive to promote public awareness and understanding of the role, impact and benefits of engineering to advance the UN Sustainable Development Goals through engineering and in all our engagements with the United Nations and its agencies, such as UNESCO, and other international organisations.

Diversity, Equity and Inclusion are fundamental human rights, and we treat all our members and their representatives equally, regardless of age, nationality, gender, religion, culture, or political affiliation. We believe this commitment delivers the best outcomes for WFEO and for the enhancement of engineering around the world.

Professionalism, Courtesy and Pride are integral to all our actions and activities at all times. We do not engage in any form of discrimination, harassment, bullying or professional misconduct, or make false accusations as this reduces the quality, integrity and pace of our work and prevents the healthy exchange of ideas and opinions.

We respect each other and the general public and value and support the efforts of all representatives nominated to WFEO at all times. We encourage the work of our colleagues and celebrate their achievements. We respect the privacy and confidentiality of information that is shared as part of the work of WFEO.

World Engineering Day 2024 and 2025



In 2018, WFEO initiated and led the proposal to declare 4 March, The founding day of the Federation, as World Engineering Day for Sustainable Development (WED). The UNESCO General Assembly approved this declaration in November 2019. The first World Engineering Day was celebrated on 4 March 2020. The Day is an opportunity to inform the community on the importance of engineering for sustainable development and to engage with government and industry to address the need for engineering capacity and for the quality of engineers around the world.

The 2024 World Engineering Day celebrations reached nearly 70 million via social media channels, which, to our knowledge, have never been achieved before for an engineering event. The theme of World Engineering Day 2024 was "Engineering Solutions for a Sustainable World". The celebrations in 2024 included a live global stream and an in-person event in Madrid. The event was supported by WFEO members, associates and affiliates of WFEO that provided videos and messages that were played during the global live stream event. The event was watched by more than 30,000 people, making it the largest international engineering event ever held. More than 80 percent of the views were by young people below the age of 35 and one-third of viewers were women. The celebrations also included the World Engineering Day Hackathon.



The 2025 World Engineering Day celebrations, themed "Shaping a sustainable future through engineering" featured an in-person event at UNESCO headquarters in Paris, and a global live stream supported by numerous companies committed to sustainable development. Hundreds of celebratory events were also held worldwide, with social media posts highlighting the engagement of diverse stakeholders in promoting the vital role of engineers in sustainable development. The global live stream included the announcement of the 2025 World Engineering Day hackathon results, launched especially for the celebrations.

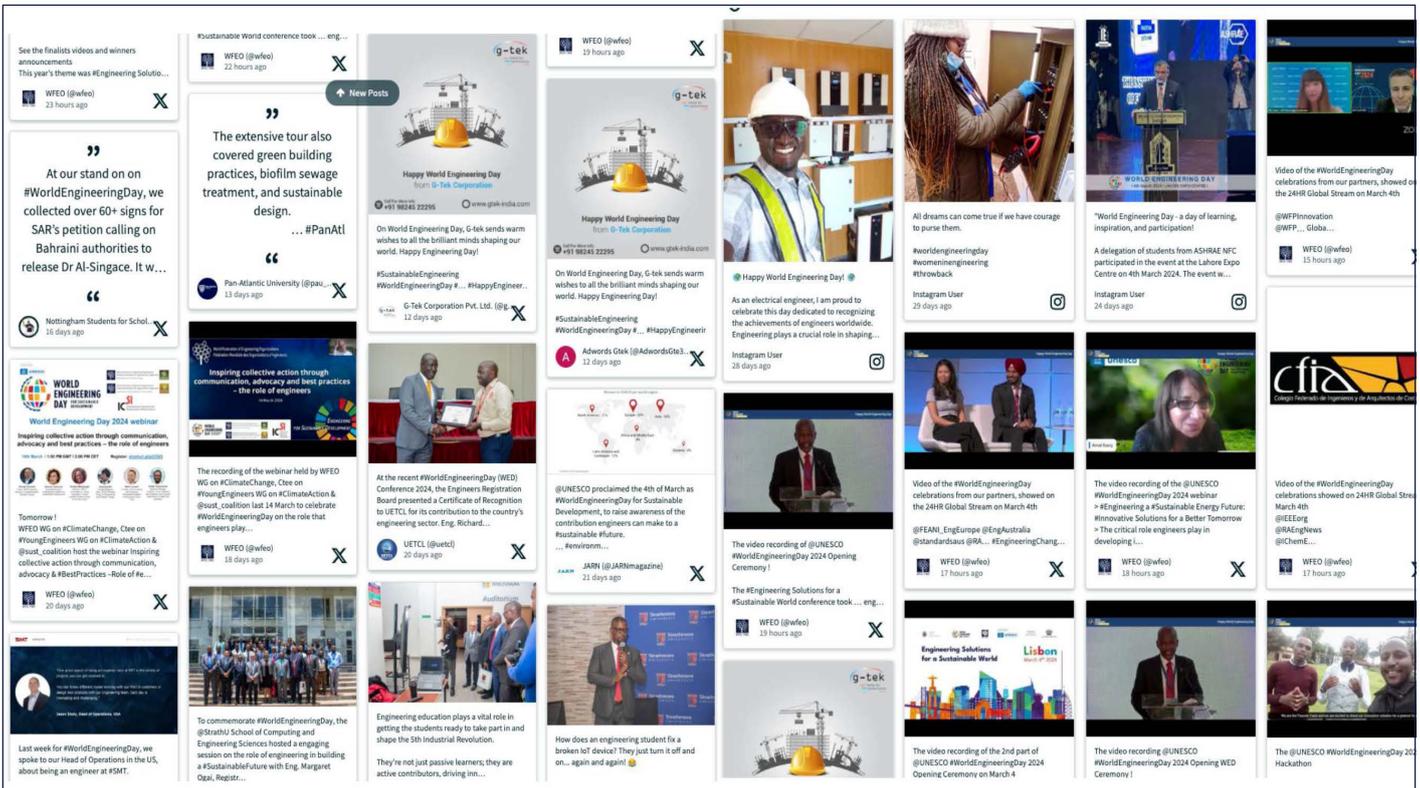
Information on the history of WED and celebration since 2020 is available at www.worldengineeringday.net



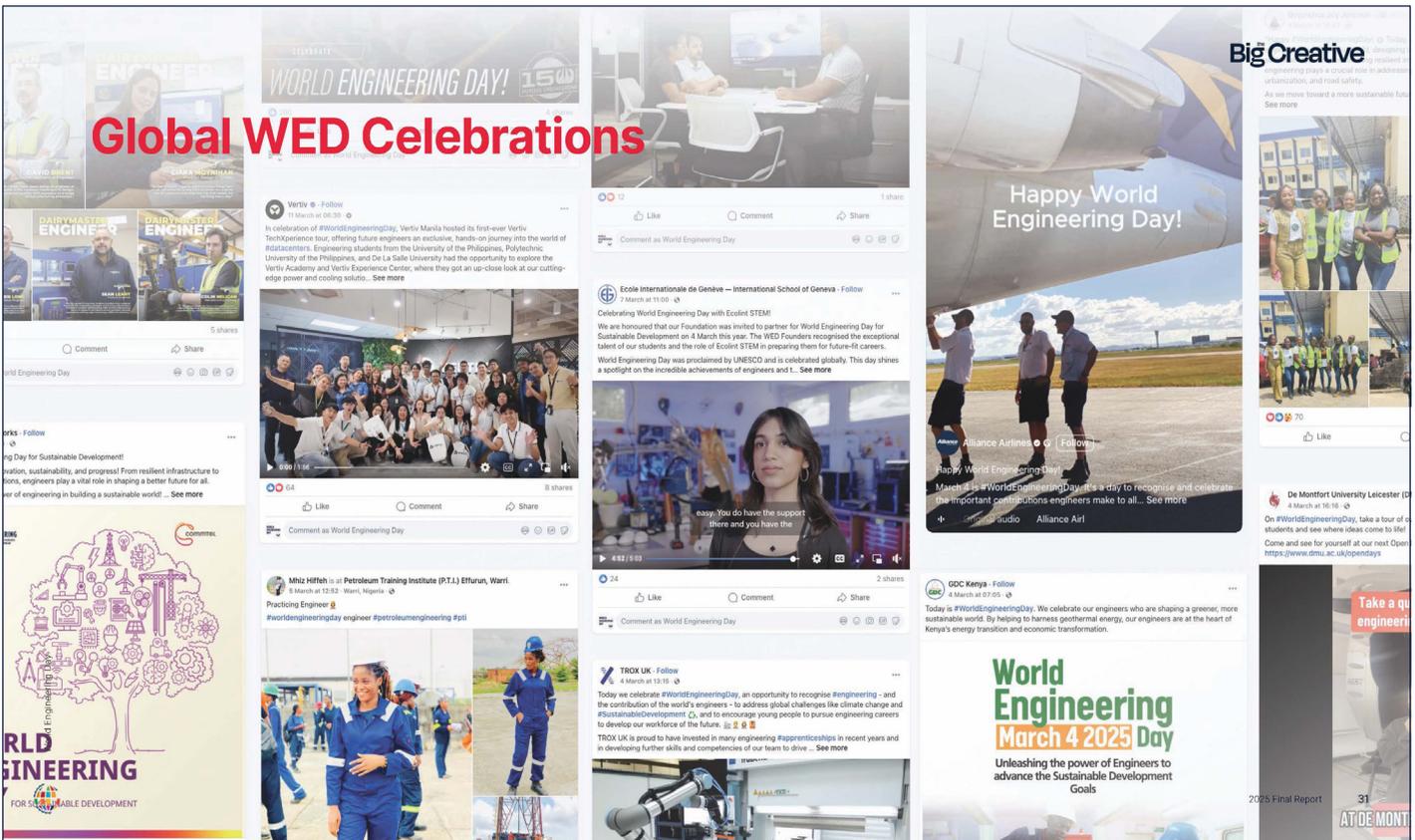
The WED 2024 main event in Lisbon and the 24 hr Global Stream



The WED 2025 main event in UNESCO HQ in Paris, 4 March 2025



Some WED 2024 celebrations on social media



Some WED 2025 celebrations on social media

World Engineering Day Hackathon 2024 and 2025



The World Engineering Day (WED) celebrations have a focus on young engineers and engineering students. An important part of the celebrations is the WED Hackathon, that engages young engineers and engineering students from every continent around the world. This amazing international event has been growing in popularity since its creation in 2020.

The WED Hackathon encourages teams of engineering students to develop solutions to challenges that are set each year. Each solution needs to align with the theme of WED and also addresses how engineering advances nominated UN Sustainable Development Goals (SDGs). It is an opportunity for students to showcase their innovative ideas and engineering skills in a tight-time frame. The judging criteria are based on the International Engineering Alliance Graduate Attributes and Professional Competencies (GAPC) and enables participating young engineers and engineering students to demonstrate their abilities to produce sustainable solutions and outcomes in alignment with these Attributes.

The challenges for the WED Hackathon in 2024 and 2025 were developed by Dr Marlene Kanga, former WFEO president (2017-2019) and Ms Katie Creswell-Maynard, Executive Director Engineers Without Borders International.

A preliminary judging panel comprising approximately 30 judges volunteer to assess all the projects that are received from around the world. The highest scoring submissions are then judged by the finalist judges consisting of representatives of WFEO international partners and UNESCO. In 2024, the prizes were: 1st place - €4,000; 2nd place €2,000 and 3rd place €1,000. In 2025, an additional People Choice Award of €1000 was added.

All participants also receive a certificate of participation from WFEO. The WED Hackathon is a truly international partnership project.



Announcement of the WED Hackathon 2025 results by WFEO Past President Dr Marlene Kanga, UNESCO HQ, Paris, 4 March 2025



The WED Hackathon showcases the benefits of quality engineering education and the role of engineering in advancing every one of the UN SDGs.

Over 2500 participants and more than 200 innovative submissions from 28 countries, were received in 2024 and 3000 participants from 90 countries in 2025.

2024 World Engineering Day Hackathon

In 2024, the focus was on UN SDG 13 – Climate Action with focus also on SDG2 - Zero Hunger, SDG 3 - Good Health and Wellbeing and SDG 11 – Sustainable Cities and Communities.

Hackathon teams had to choose one of three challenges to develop an innovative solution:

- *Challenge 1 – SDG 2:* Feeding 10 billion people in a changing climate, sustainably.
- *Challenge 2 – SDG 11:* Promoting climate action through sustainable cities and communities
- *Challenge 3 – SDG 3:* Improving improve city design and infrastructure, by rethinking new technologies

The winner of the 2024 WED Hackathon was Team SOMIANT, from Yachay Tech University, Ecuador. This solution addressed Challenge 2 and SDG 13 Climate Action and SDG 11 Sustainable Communities.

SOMIANT (Satellite-Oriented Monitoring of Integrated Analysis of El Niño Tracking) is a climate intelligence network tool which shows the areas that are most susceptible to damage due to the El Niño phenomenon in the coastal area of Ecuador. The tool is specially designed to be accessible to everyone. It uses data from multiple sources to predict weather and provide warnings to the general population.



The Team SOMIANT, from Yachay Tech University, Ecuador. has been selected as the WED Hackathon 2024 Winner

Key achievements

The World Engineering Day Hackathon has grown in importance each year and is the most significant international engineering competition in the world, with a focus on young engineers and engineering students. More than 3000 submissions were received in 2025 from every continent. It is a competition that emphasizes equity and diversity with students from developing and developed countries competing together and teams comprising male and female participants.

Challenge Development

For this year's Hackathon, all of the challenges were centered around UN **SDG 1 - Ending Poverty in All its Forms**. The challenges were developed by the WED working Group, in collaboration with **Engineers Without Borders**.

CHALLENGE 1

Improving the climate resilience of subsistence farming

CHALLENGE 2

Addressing informal housing and infrastructure challenges in urban areas

CHALLENGE 3

Empowering women to overcome poverty through digital technologies



WED Hackathon 2025 Challenges



The project ManufacturingBox, from the University of Twente, Netherlands, has been selected as the WED Hackathon 2025 Winner

Comments from students from the Hackathon survey

Participating in this competition addressing climate action solutions was a tremendous honor, providing a platform to contribute meaningful ideas toward environmental challenges. The experience allowed for engagement with like-minded individuals and underscored the significance of collective efforts in combating climate change. Being part of a community dedicated to fostering innovative solutions for a sustainable and greener future was a privilege.

Thank you very much for providing us with this opportunity. Through it I have gained confidence in express my ideas especially in combating climate change.

I would like to commend the people behind such a exceptional event like this for us, students, to showcase to the world a new and better way of living with the aid of engineering.

HACKATHON 2024

Our hackathon highlights the extreme climate challenges faced by today's engineers



2025 World Engineering Day Hackathon

In 2025 the focus was on UN SDG 1 – No Poverty with focus also on SDG2 - Zero Hunger, SDG11 – Sustainable Cities and Communities and SDG 9 Innovation – for gender equality SDG5.

Hackathon teams had to choose one of these challenges and develop an innovative engineering solution:

- *Challenge 1 – SDG 2:* Improving the climate resilience of subsistence farming
- *Challenge – SDG 11:* Addressing informal housing and infrastructure challenges in urban areas
- *Challenge – SDG 9:* Empowering women to overcome poverty through digital technologies

The winner of the WED Hackathon 2025 was The Manufacturing Box, from the University of Twente in the Netherlands. This team tackled Challenge 2—addressing informal housing and infrastructure challenges in urban areas.

The Manufacturing Box is a self-sustaining solar-powered micro-factory which creates a local waste management system, producing plastic bricks for housing or washrooms from plastic waste. The solution creates employment throughout the value chain, supporting poor communities to develop economically.

Finite Element Analysis was used to examine the strength of the plastic bricks and designing interlocking bricks for faster installation and the brick making machine was designed to reduce the time and cost to produce the bricks.

WFEO Academy



Homepage of the WFEO Academy website

WFEO Academy fulfills a key mandate for WFEO, to facilitate engineering education and development around the world especially where it is needed most. Supported by UNESCO and WFEO's partners, it demonstrates the UNESCO Open Science Principles in action, to transfer knowledge and expertise, for engineers with the right skills, in Asia, Africa and Latin America.

The main Themes covered in the past two years were:

- Training for engineering educators, accreditation bodies and professional engineering institutions.
- Collaborating with WFEO members and partners, including the International Engineering Alliance (IEA), the International Federation of Engineering Education Societies (IFEES) and the Global Engineering Deans Council (GEDC), for world class training content.

Since it was formed more than 50 years ago, a key objective of WFEO has been the education and training of engineers around the world. This continues to be a priority as raising and harmonizing engineering education standards is essential to advance the UN Sustainable Development Goals.

WFEO proudly launched the WFEO Academy training portal on World Engineering Day, on 4 March 2022, with UNESCO and its partners, IEA, IFEES, GEDC and WFEO members and affiliates. The WFEO Academy training portal delivers on the WFEO priority for engineering education and training.

The project is led by Dr Marlene Kanga, former WFEO President (2017- 2019), under the auspices of the WFEO Committee on Education in Engineering. This website provides training and builds capacity for accreditation bodies and professional engineering institutions, enabling them to achieve international standards and the requirements of signatory status of IEA.

WFEO Academy also provides training for engineering educators to develop the curriculum and pedagogies for outcomes-based education that are a key requirement to achieve the international benchmarks for engineering education.

A third component is training for qualified engineers, technologists and technicians for essential skills in areas such as safety, disaster and risk management, project management, ethics and leadership, that are required across all disciplines and are essential for competent and responsible practice.



The WFEO Academy supports the professional development of engineers, technologists and technicians around the world, providing essential knowledge and skills transfer, at no cost, especially to regions that need support in developing their engineering capacity.



The WFEO Academy supports the development of engineering education accreditation organizations by providing training on the process of attaining signatory status on the International Engineering Alliance (IEA) and training and professional development for engineering educators and assessors of engineering education programs to develop engineering programs that meet the requirements of the IEA Graduate Attributes and Professional Competencies (GAPC 2021) Framework.



The WFEO Academy works in partnership with WFEO National Members and the WFEO Standing Technical Committees and Policy Implementation Committees to share content developed by these committees to a wider audience. The WFEO Academy has courses from the WFEO Committee for Disaster Risk Management and Committee for Anti-Corruption and plans to upload content from the future Working Group on Systems Engineering.

These skills are essential in the application of technical expertise to engineering works to advance sustainable development.

The WFEO Academy is a beacon of international cooperation with UNESCO, WFEO members, WFEO National and International Members, and WFEO partners, including IEA.



The WFEO Academy uses advanced technology and innovation to deliver essential professional development in a cost effective and efficient manner to WFEO members around the world. It activates the UNESCO principles on Open Science to facilitate knowledge transfer to regions where capacity development in engineering is most urgently needed.

As at June 2025, webinars were provided by IEA, IFEES, the Institution of Engineers Mauritius, the Myanmar Engineering Council, the Accreditation Board for Engineering and Technology (ABET), the Institution of Engineers Singapore, the Institution of Chemical Engineers (UK), the WFEO Committee for Disaster Risk Management and the WFEO Committee for Anti-Corruption.

The webinars have been taken up by hundreds of engineers from around the world. WFEO will continue to grow the reach of the WFEO Academy as knowledge and expertise is shared across the engineering community internationally.

UNESCO has recognized the importance of the WFEO Academy, as it progresses key recommendations of the Second UNESCO Engineering Report, in particular to train more engineers with the right skills.

The WFEO Academy also activates the UNESCO Open Science Principles, by providing knowledge transfer to countries that

Key achievements

The WFEO Academy is a flagship project with important outcomes in engineering education and professional development. The WFEO Academy was launched in March 2022 and continues to expand with more than 60 courses uploaded in December 2024, covering topics such as the processes to achieve signatory status of the International Engineering Alliance, engineering education curriculum development and pedagogy, safety, ethics in engineering, leadership, and application of sustainability principles in engineering.

The website can be automatically translated into more than 100 languages. The course assessment is automated with completion certificates released automatically to participants and digital badges issued on completion of certain course numbers, to encourage course participation and completion. The Academy has been accessed by hundreds of engineers from around the world.

need to train engineering educators and engineering education accreditation organizations for quality engineering education.

The training content on the WFEO Academy is available to individuals that are members of WFEO members, associates and affiliates at no cost. Individuals need to register to access the courses indicating their membership and will automatically receive a certificate of completion after attending the course and successfully completing a short quiz.

The certificates can be used to support the requirements for Continuous Professional Development (CPD) to maintain registration status. Digital badges (Bronze/Silver/Gold) are issued on completion of 10, 20 or 30 courses. The instructions to register are at: www.wfeoacademy.com



The World Federation of Engineering Organizations (WFEO) has developed the **WFEO Academy** that provides training and builds capacity for accreditation bodies and professional engineering institutions, enabling them to achieve international standards and the requirements of signatory status of the International Engineering Alliance.

It also provides training for engineering educators to develop the curriculum and pedagogies for outcomes based education that are also a key requirement to achieve these international benchmarks.

WFEO and UN Relations

The WFEO-UN Relations Committee (WURC) activities at the UN Headquarters in New York emphasize the important role that WFEO and the global engineering community plays in not only advocating for sustainable development and the SDGs but in accelerating achievement of the Agenda 2030 on the ground. A key message is the ability of WFEO to mobilize over 30 million engineers in over 100 countries to raise awareness; share knowledge and best practices; identify gaps, bridge them and build capacity where it is needed and solve problems on the ground.

WFEO is a co-organizer with the International Science Council (ISC) of the Scientific and Technological Community UN Major Group (STC MG) one of the nine original major groups established at Rio in 1992. WFEO partners with ISC in many of the activities it organizes at the UN headquarters in New York.

More broadly, WFEO looks for opportunities to partner (SDG 17) with the UN and its various agencies including UNESCO, UNFCCC, Food and Agriculture Organization (FAO), UN Environment Programme (UNEP), UN Water, the World Bank, the Asian Development Bank, the Coalition for Disaster Resilient Infrastructure (CDRI), and others.

WFEO is also forging partnerships with other entities such as the "Friends of Africa Coalition"; the "Group of Friends on Science for Action" at the UN (India, Belgium, South Africa) through ISC as a partner.

WFEO has the resources, and its various STC's and Working Groups have the expertise and capacity to assist UN DESA and United Nations Office for South-South Cooperation develop policies on topics such as Renewable Energy and Artificial Intelligence, that can then be used by various UN member states with appropriate modifications to fit their specific needs. In the process, WFEO and the appropriate technical committee or working group will become the go-to consultant to modify and interpret the policies.

Much of the WURC activity is organized around the annual SDG cycle starting with the Partnership Forum early in the year followed by the STI Forum in May followed by the High-Level Political Forum in July. In 2023, there was also the 2nd SDG Summit and in 2024 the Summit of the Future that WURC also contributed to. As part of its role as co organizer of the STC MG, WFEO worked with FAO and UNEP to organize the Partnership Forum Action Segments on SDG 2: Zero Hunger in 2024 and SDG 14: Life Below Water in 2025.



Panelists of the WFEO and ISC side event "Better leveraging Science, Technology, Innovation and Engineering for accelerating progress on the SDGs" during the STI Forum in UN HQ, 9 May 2024



Associate Status, collaborates on engineering issues including education, diversity, water, natural disasters, capacity building



ECOSOC

Member of UN Major Group for Scientific and Technological Community. Recognised as an ECOSOC accredited body



United Nations Framework Convention on Climate Change

Admitted NGO. Involvement in the UNFCCC Conference of the Parties (COP) events to address climate change



UNEP

Accredited organization with contribution to various programs



UNIDO

Consultative status, contribution on engineering capacity building for social and economic development



UNISDR

Observer status and contribution to natural disaster risk mitigation through engineering



IAEA

Observer status and contribution on energy and technology matters



ISO

Liaison organization. In consultative status on several ISO technical committees



FAO

WFEO and FAO jointly prepare projects in agriculture, food and engineering



ITU

Member of the International Telecommunication Union



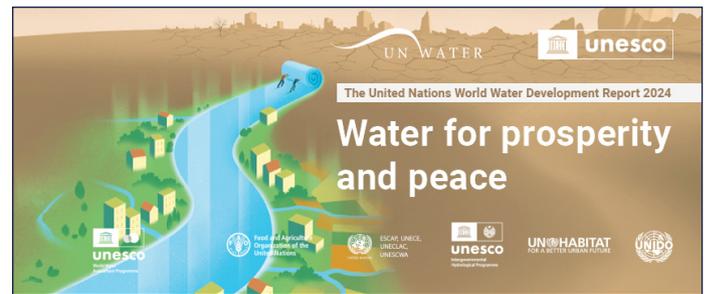
Partner status



Eng. Dr. Martin Manuhwa, Chair of the WFEO Committee on Engineering Capacity Building (WFEO-CECB); Mustafa Shehu, WFEO President; Dr. Lidia Brito, UNESCO Assistant Director-General for Natural Sciences and Dr. K. N. Gunalan, Chair of the WFEO-UN Relations Committee (WURC) at the 2025 UN STI Forum, UN HQ, New York, 8 May 2025



Davide Stronati, Chair of the WFEO Working Group on Engineering and Climate Change; Cheryl Senhouse, Finance Innovation Director of the Caribbean Climate Smart Accelerator; Saifur Rahman and Marie-Line Vaiani, Chair of the WFEO Committee on Energy, following their presentations at the side-event "Accelerating Clean Tech for Energy and Agriculture in Small Island Developing States (SIDS): Enabling action for a Just Transition", during the 2024 UNFCCC Conference of Parties – COP 29, in Baku, Azerbaijan, 11 November 2024



The WFEO Committee on Water wrote a chapter in the United Nations World Water Development Report, entitled: "Water for Prosperity and Peace", launched on the World Water Day, at the UNESCO HQ in Paris, 22 March 2024



Mustafa Shehu and Dr. Nahla Al Qassimi, Vice President of The Society of Engineers-UAE and WFEO Executive Council Member, at the 53rd session of the Industrial Development Board of UNIDO, in Vienna, Austria, 30 June 2025



Dr. Ligia Noronha, Head of the UNEP Office and the UN Assistant Secretary-General and WFEO President Mustafa Shehu

WFEO and UNESCO

WFEO has been recognized by UNESCO since 1968 as an important non-governmental organization with associate status to provide advice in relation to engineering and for the implementation of UNESCO programs.

Engineering has always served as a means to advance UNESCO's priorities and has become increasingly important in driving progress toward the UN Sustainable Development Goals.

WFEO and UNESCO work together on key UNESCO priorities including the 2030 Agenda, Africa, Renewable Energy, Gender equality in engineering, Climate Change Education, Small Island Developing States (SIDS), and the International Decade of Sciences for Sustainable Development.

The International Decade of Sciences for Sustainable Development 2024-2033 (IDSSD)

IDSSD originates from a resolution adopted in August 2023 by the United Nations General Assembly (UNGA).

This resolution offers a distinctive opportunity for humankind to advance and leverage science in the pursuit of sustainable development and cultivate a new science culture—to engage everyone to advance science further and equally benefit from it.

Entrusted as the lead agency by the UNGA, UNESCO is diligently formulating and disseminating a clear vision and dedicated mission for the Sciences Decade through extensive consultation with Member States, partners from other UN agencies, international scientific unions, science academies, private sectors, and NGOs.

The Executive Committee serves as the principal responsible for providing strategic direction and oversight for the Sciences Decade's implementation. It ensures that the strategic plan for the implementation of the Decade aligns with the objectives outlined in the United Nations General Assembly Resolution and oversees the development, implementation and evaluation of



First Meeting of the Executive Committee for the Implementation of the International Decade of Sciences for Sustainable Development (IDSSD)

2:00 pm - 4:00 pm, 4 September 2024
UNESCO, Headquarters, Paris



WFEO, represented by its President Mustafa Shehu and Executive Director Jacques de Méreuil, at the 1st Meeting of the Executive Committee for the Implementation of the IDSSD

initiatives under the Decade.

WFEO was represented at the first meeting of the Executive Committee on 4 September 2024, by its President Mustafa Shehu and Executive Director Jacques de Méreuil.

The Executive Committee is chaired by the Assistant Director General for Natural Sciences at UNESCO, Engr. Dr. Lidia Brito.

Signing of the renewed Framework Agreement between WFEO and UNESCO



WFEO President Mustafa Shehu and UNESCO Assistant Director-General for Natural Sciences Dr. Lidia Brito signing the UNESCO Framework Agreement on 28 June 2024

WFEO President Mustafa Shehu was at the UNESCO Headquarters in Paris on 28 June 2024 to sign the Framework Agreement between WFEO and UNESCO after the expiration of the previous Agreement in May 2024.

The UNESCO Director for Natural Sciences Sector Division of Science Policy and Capacity Building Hu Shaofeng, Engr. Mukhtar Zakari, WFEO Executive Vice President Ms. Ania Lopez, Member of the Executive Council Dr. Nahla Al-Qassimi and Executive Director Mr. Jacques de Méreuil were present during the signing. The Agreement will expire in March 2032.

The aim of the Agreement is for the two parties to agree, through joint and concerted cooperation, to carry out a mutually benefitting program of activities to achieve their common strategic objectives.

Standing Technical Committees



Committee on Disaster Risk Management (CDRM)



Committee on Energy (CE)



Committee on Engineering Capacity Building (CECB)



Committee on Engineering and the Environment (CEE)



Committee on Education in Engineering (CEIE)



Committee on Engineering for Innovative Technologies (CEIT)



Committee on Information and Communication (CIC)



Committee on Water (CW)

Policy Implementation Committees



Committee on Anti Corruption (CAC)



Committee on Women in Engineering (WIE)



Committee on Young Engineers / Future Leaders (YEFL)

Working Groups



WFEO-UN Relations Committee (WURC)



Working Group on Systems Engineering (WGSE)



Working Group on Engineering and Climate Change (WGCC)



For the past 40 years, global programs intend to reduce damage and losses caused by natural and man-made hazards. However, major disasters still occur every year; therefore, more needs to be done. The CDRM is committed to contributing from the engineering perspective, promoting best practices, including the intensive use of AI tools.

José Macharé,
Chair of CDRM,
Peruvian Engineers Association

Over the past two years, the main focus has been on capacity building for urban resilience, disaster risk management, and cultural heritage protection through a series of international webinars.

These events have brought together experts, researchers, and key stakeholders in urban development and risk reduction, addressing emerging issues such as resilient infrastructure, protracted post-disaster displacement, risk governance and the vulnerability of the green economy to natural hazards.

These efforts have significantly contributed to highlighting international best practices, facilitating technical exchange, and promoting the incorporation of risk into urban planning, heritage protection, and public infrastructure.

The CDRM acknowledges and appreciates the selfless contribution of all the speakers, working teams and institutions that participated in these meetings.

Here is a glimpse of the topics covered:

Lessons learnt from past disasters to protect our historic buildings from fire

This seminar addressed fire protection in historic buildings and heritage conservation, highlighting the Blue Shield movement and the challenges of emergencies during conflicts and disasters. Strategies for improving fire response in these contexts were proposed.



SUSTAINABLE DEVELOPMENT GOALS



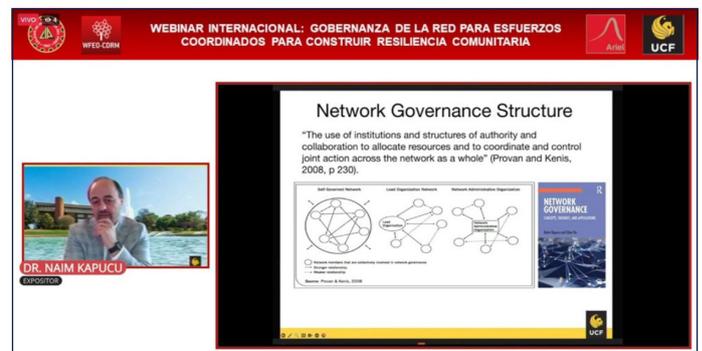
The construction of bridges using locally produced materials, with community labor and adaptive engineering input, has been a major achievement on innovative infrastructure, shared by the Committee. These bridges have achieved greater resilience and a particular symbolism of community unity through them.



The Tomorrow Cities concept is presented as a model from which each city can design its own development strategy. It proposes a robust decision-support environment as an adaptable and efficient engineering system, in which risk management plays a fundamental role, with a highly engaged population.

Network governance for coordinated efforts in building community resilience

This seminar examined how interdependent governance systems strengthen community resilience to disasters. It focused on developing organizational capacity and networks in urban contexts.



Resilient cultural heritage to build capacity and reduce disaster risks

This talk addressed the role of cultural heritage in disaster risk management, both as a vulnerable element and as a resource for resilience. Best practices, lessons learned, and methodologies for strengthening community capacity at the international level were presented.



Household displacement and return after disasters

This presentation addressed the protracted displacement of households following disasters, its negative impacts, and the lack of data on its duration. Recent research was presented that integrates key factors into risk models to improve understanding of return after events such as earthquakes or hurricanes.

Risk informed and participatory planning for resilient future cities: showcasing the Tomorrow's Cities Decision Support Environment (TCDSE) implementation in tomorrow's Rapti, Nepal

This presentation showcased how the TCDSE promotes resilient urban development through participatory and risk-informed planning. Its application in Nepal, integrating multi-hazard risks, climate change, and community participation will be highlighted.

Creating and implementing a decision support environment for risk-sensitive, pro-poor urban planning and development of tomorrow's cities

This talk presented the implementation of the TCDSE in Nablus, Palestine, highlighting its potential to reduce urban risks in contexts lacking formal planning. Its capacity to influence policies toward more resilient urban development will be discussed.



Building bridges: how resilient infrastructure empowers communities and drives economic growth

This session presented how Bridges to Prosperity's strategic partnerships with African governments are transforming infrastructure into a key tool for climate resilience and economic development. Through real-life case studies, the impact on rural connectivity, technological innovation, and contribution to the SDGs were highlighted, inviting new collaborations to close access gaps.

Frameworks for natural hazard fragility assessment

This session presented innovative approaches to assessing structural risks: from reinforced concrete structures exposed to granular flows to tunnel-like buildings in seismic zones and wind

Key achievements

- The dissemination of innovative approaches such as the Tomorrow's Cities Decision Support Environment, applied in contexts such as Palestine and Nepal.
- The presentation of cutting-edge research, such as the analysis of reinforced concrete structures against granular flows and the seismic vulnerability of tunnel buildings in Turkey.
- The strengthening of strategic partnerships, such as those developed by Bridges to Prosperity in Africa, showcasing the transformative role of infrastructure in climate resilience and economic empowerment.
- The integration of cultural heritage into risk management, with methodological contributions that link traditional knowledge with community action.

turbines exposed to natural disasters. Advanced methodologies, numerical analyses, and challenges in resilience and infrastructure were discussed.

Disaster risk reduction in Switzerland – strategy and management

The presentation outlined the Swiss natural risk management strategy, highlighting the use of its management matrix to reduce risks. It was illustrated with concrete examples applied in different project phases. A few weeks following this seminar, the system was successfully tested: early warning and subsequent preventive evacuation saved the lives of more than 300 inhabitants of the Swiss village of Blatten, which was buried by an avalanche on 28 May 2025.

From scenario selection to vulnerability and recovery models of coastal infrastructure systems

This seminar covered a series of studies aimed at performing quantitative analyses spanning the entire catastrophe modeling and resilience assessment spectrum, including scenario selection, vulnerability, and functional recovery, at multiple scales of analysis. The focus will be on the particular case of power transmission systems subjected to hurricanes. However, the application of the discussed techniques to other hazards (e.g., earthquake, storm surge) and other types of assets (e.g., residential, transportation) was briefly discussed as well.

Unveiling the 2024 Noto province, Japan earthquake – insights from seismology, engineering, and insurance

This talk presented the results of the preliminary survey following the 1st January earthquake in Noto-Hanto, Japan, which left 240 dead. The structural damage observed, especially in reinforced concrete buildings, was analyzed, and solutions were proposed.



“ As energy engineers and scientists, we are responsible for identifying and implementing the most effective technologies for sustainable development. The strength of an international organization like WFEO lies in its global reach, providing access to a rich network of concrete experiences and innovations from around the world.

As Chair of the Committee on Energy of WFEO, I strongly believe that international cooperation and knowledge sharing—including best practices, effective energy policies, and technological innovations—are essential to achieving SDG 7 and SDG 13. This principle guides all our work within the Committee on Energy.

Marie-Line Vaiani,
Chair of CE,
Ingénieurs et Scientifiques de France

Main Themes covered in the past two years:

- Strengthening international cooperation on energy transition
- Relaunch of Task Groups on different energy thematic
- High-level participation in global conferences and forums (UNFCCC COP, World Energy Congress, UNIDO, Global Engineering Conference, World Engineering Day, EAGE)
- Launch of international webinar series on energy transition to increase knowledge sharing and outreach
- Promoting women's participation and engaging young in energy initiatives

1. Relaunch of Task Groups

- The Committee relaunched thematic Task Groups to reinforce expertise and structure contributions:
- Electrification Task Group, chaired by Prof. Abubakar Sambo (Nigeria)
- Solar Task Group, chaired by Dr. Carsten Ahrens (Germany)
- Energy Efficiency Task Group, chaired by Dr. Ruomei Li (China)
- Hydrogen Task Group, chaired by Prof. Massimiliano Cappelazzi (Switzerland)
- Storage Task Group, chaired by Eng. Philipp Pascal (United-Kingdom)

These Task Groups now provide a structured framework for advancing the Committee's mission.



Participation at the UN Council of Engineers for the Energy Transition meetings during the COP 29 in Baku, 15 November 2024

SUSTAINABLE DEVELOPMENT GOALS



Best engineering solutions for universal access and system resilience, advanced through Task Groups, webinars, participation in World Energy Council, GECCO, World Engineering Day.



Participation at COP28 and COP29 with the WFEO Climate Change Committee, and contributions to the UNIDO Global Green Industrialization Dialogue.

2. Key international high level events and partnerships

The Committee participated in major international gatherings:

- UNFCCC COP
COP28 (Dubai, UAE) and COP29 (Baku, Azerbaijan, 2024): WFEO Energy, together with the WFEO Climate Change Committee, co-organized an official UNFCCC side event with international partners including ICE (UK), IEEE (USA), and EIC (Canada). The events highlighted engineering solutions for sustainable energy and climate action
World Energy Congress 2024 (Rotterdam, The Netherlands): WFEO was invited to participate in this flagship event of the World Energy Council, strengthening its presence in global energy dialogues.
- World Engineering Day
- In 2024 (Lisbon), the Chair of the Committee Marie-Line Vaiani delivered a keynote titled "The Reinforcement of the Energy Interconnections and the Optimization of the Energy Markets in Europe".
- In 2025 (UNESCO Headquarters, Paris), Marie-Line Vaiani participated in a high-level panel on "Energy, Infrastructure and Effective Solutions to Implement Sustainable Development", alongside IEEE (USA), the China Institute of Building Standard Design and Research, and the Oyo Center of Excellence for Renewable Energy (Congo).
- UNIDO forums (Vienna, 2024 and 2025)
Chair Marie-Line Vaiani represented WFEO at the UNIDO Industrial Development Board in 2024. In 2025, she was also invited to participate to the Global Green Industrialization Dialogue, supporting the Global Green Industrialization Pact structured around finance, innovation, people, and clean technology supply chains.



Participation of Marie-Line Vaiani at the 52nd UNIDO Board meeting, Vienna, 25 November 2024

- Global Engineering Conference 2024 (Kigali, Rwanda)
Marie-Line Vaiani represented WFEO Committee on Energy and participated in a roundtable on SDG 7, during this global forum on engineering innovations for sustainability.
- EAGE Annual Conference 2025 (Toulouse, France)
Marie-Line Vaiani participated in this international forum of the European Association of Geoscientists and Engineers, contributing to discussions on energy transition, geosciences, and engineering synergies.



Marie-Line Vaiani speaking at the World Engineering Day main event in Paris, 4 March 2025

3. Connecting International expertise and sharing knowledge through webinar series

- "Electricity Access Gaps and Policy Recommendations"
With Prof. Abubakar Sambo (Nigeria), President of the Nigerian Academy of Science and Chair of the Electrification Task Group.
- "Why Nuclear Power is Making a Comeback"
With Dr. Henri Paillere (France), Head of Planning and Economic Studies at the International Atomic Energy Agency (IAEA).
- "PV Module Recycling as a Necessity for Future PV Development"

Featuring experts from academia, industry, and public services, including Dr. Carsten Ahrens (Germany), Prof. Yogi Goswami (USA), Adrian Piani (Australia), and Ismail Jefferies (South Africa).

These webinars were widely open to members of the World Energy Council, the UN-Council of Engineers for the Energy Transition (CEET), UN agencies, and the WFEO community, fostering broad international participation.

Key achievements

The Committee on Energy relaunched thematic Task Groups and organized international webinars, strengthening global cooperation through active participation in high-level international events such as COP, World Energy Congress, UNIDO forums, World Engineering Day, Global Engineering Conference and EAGE 2025. The Committee also promoted gender equality by increasing the participation of women within it.

<p>« Electricity Access Gaps and Policy Recommendations »</p> <p>27 January 2025 2 to 3 PM CET</p> <p>Moderator: Marie-Line Vaiani Speaker: Abubakar Sambo</p> <p>Marie-Line Vaiani Chair of the Committee on Energy, WFEO Secretary General of the World Energy Council France</p> <p>Abubakar Sambo Professor Emeritus, Vice-Chair for Africa, Chair of the Electrification Task Group, WFEO</p>	<p>« Why is nuclear power making a comeback »</p> <p>24 April 2025 1 to 2 PM CET</p> <p>Moderator: Marie-Line Vaiani Speaker: Henri Paillere</p> <p>Marie-Line Vaiani Chair of the Committee on Energy, WFEO Secretary General of the World Energy Council France</p> <p>Henri Paillere Head, Planning and Economic Studies Section International Atomic Energy Agency (IAEA)</p>
--	---

In addition, members of the WFEO Energy Committee were also invited to participate in the webinar series organized by UN-CEET, reinforcing collaboration and knowledge sharing.

4. Promotion of women in science and engineering

In February 2024, Chair Marie-Line Vaiani participated in UNESCO's Call to Action for Women in Science, which was then relayed to Energy Committee members to raise awareness and encourage engagement.

The Committee also advanced gender equality by collaborating with WFEO Women in Engineering Committee to increase the participation of women in the Energy Committee's Task Groups. These actions are in line with WFEO's commitment to promote women's role in science and engineering (SDG 5).

5. Engagement with Young Professionals and Students

The Energy Committee has strengthened its engagement with young people, who play a pivotal role in advancing the energy transition:

- The Chair of the Energy Committee and the Executive Director of WFEO welcomed a delegation of young student interns from GIZ. The delegation received a presentation on WFEO, followed by an exchange on the challenges of the energy transition. The meeting concluded with a convivial session and informal discussions with young professionals from the World Energy Council network.

- The Energy Committee also received a presentation of an exemplary initiative led by young members of IESF :: the Student Scientific Convention on Hydrogen. This initiative gathered around fifty young participants over several weeks to produce a collective, high-quality analysis. It highlighted the importance of science and collaborative scientific dialogue as essential tools for informed decision-making.

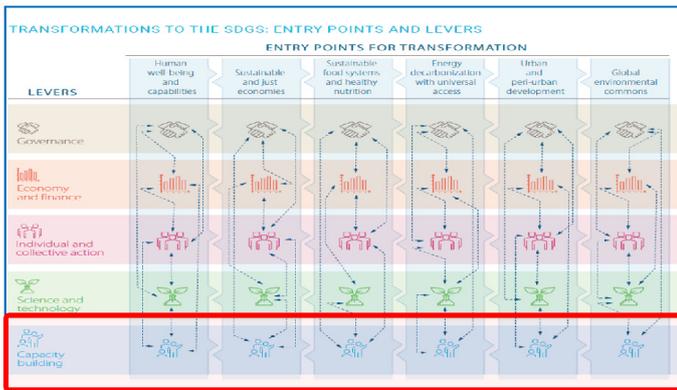
“ Engineering capacity building is the cornerstone of sustainable progress. Through lifelong learning, technology transfer, and partnerships—especially in AI and digital innovation—we are not only training engineering practitioners but also empowering nations to transform their economies and achieve the Sustainable Development Goals.

Engineers are architects of hope and the providers of quality life for all. Through capacity building, we unlock innovation, resilience, and a better future for all.

**Martin Manuhwa,
Chair of CECB,
Engineering Council of Zimbabwe**

It is a fact that all economies require capacity building to support decisive and transformative action through any entry point.

As shown in the below image, Capacity building must be applied cohesively with and in support of other levers, including governance, business and finance, individual and collective action, and science and technology.



Capacity Building is Entry Points and Levers for Transformations to the SDGs Photo: 2023 Source: p2, Global Sustainable Development Report (GSDR) 2023 Key Message

CECB plays a pivotal role in ensuring global engineering standards and strengthening North-South partnerships. The committee collaborates with other committees on enhancing engineering education, accreditation, and CPD. Strengthening engineering policies, governance, and technology transfer for sustainable development is our key mandate.

The following are the themes, outcomes and deliverables the STC on Capacity Building worked on for 2023-2025 period:

- Engineering Capacity Building Publications (webinars, newsletters, magazines);
- Engineering Capacity Building Awareness, Training and Development of Systems, events (Africa Engineering Week, Congresses, and Workshops).

SUSTAINABLE DEVELOPMENT GOALS



CECB aims to promote SDG 17 through strong institutions to strengthen North-South cooperation, South-South and triangular cooperation, while considering different national circumstances to build capacity for and improve access to science, technology and innovation and to increase resources for the implementation of technical and scientific initiatives such as the International Decade of Sciences for Sustainable Development (IDSSD).

CECB has created Partnerships, Global Alliances, and Networking Initiatives to achieve the Sustainable Development Goals (SDGs).

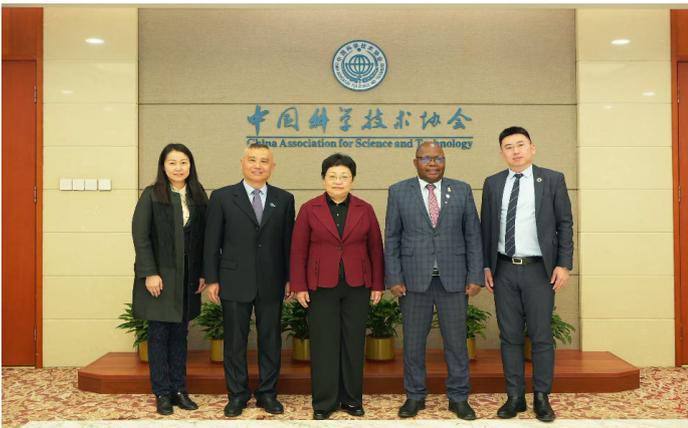
Enhancement of international cooperation and capacity-building efforts to bridge the digital divide and ensure that all can safely and securely reap the benefits of digital technologies, through digital capacity development in developing countries and support for local content development.

- Engineering Capacity Building Projects and co-operative initiatives. (Compendium, Digital Platform for CPDs, MOOC, e-Books for CECB in conjunction with Sibho the Engineer);



The WFEO CECB CHAIR, Dr. Eng Marin Manuhwa, on the sidelines of the 2025 UN STI Forum, UN HQ, New York, May 2025

Engineering Capacity Building is a journey toward a prosperous and empowered humanity through continuous improvement and a relentless pursuit of solutions that enhance the quality of life.



From left to right: Ms. Zhang Zhen, Secretary-General, Preparatory Committee of the International Federation of Engineering Societies for the Belt and Road; Mr. Zhou Daya, Director-General, Center for Professional Training and Services of CAST, Executive Deputy Secretary-General, CSE; Ms. Luo Hui, Director-General, CAST's Department of International Cooperation and CSE's Vice President and Co-Secretary-General; Eng. Dr. Martin Manuhwa and Mr. WANG Guanyi, Head of ECBAP Programme at CAST HQ



Prof Gong Ke, the Task force Chair for the WFEO Engineering Capacity Building for Africa Programme (ECBAP); Prof Dawn Bonfield, Commonwealth Engineering Council (CEC) President; Dr. Eng. Martin Manuhwa WFEO CECB, and Dr. Seng Chuan Tan the WFEO President-Elect, at the BRST Conference in Chengdu, China

The Southern African Development Community (SADC) Secretariat convened a three-day high-level retreat for Member States' Trade in Services (TiS) Focal Points (FPs) on 25-27 March 2024 in Irene, Pretoria, South Africa. WFEO CECB was represented by Dr Martin Manuhwa.

The retreat aimed to develop a shared understanding of the developments, strategies/approaches, opportunities, and challenges in negotiating and implementing regional TiS commitments, to inform the preparation of a SADC Trade in Services Strategy and Action Plan.

Key achievements

The CECB Chair attended the BRST Conference and presented a paper on "Development of Engineering Capacity through International Accords and Global South Collaboration" in Chengdu, China. The Commonwealth Engineering Council (CEC), CECB, United Nations Industrial Development Organization (UNIDO) and the UN University were invited to panel discussion on the Belt and Road Forum on Engineering Capacity Building. This event was held in Chengdu, Sichuan Province, from 10 to 12 June 2025. Building on the success of the first conference, the second BRST is themed on "Together for Innovation, Development for All".

Last 9 and 10 April 2025, Eng. Dr. Martin Manuhwa, CECB Chair, met in Beijing with Ms. Luo Hui, Director-General of the China Association for Science and Technology (CAST) Department of International Cooperation, and Vice President and Co-Secretary-General of the Chinese Society of Engineers (CSE). The meeting with CAST emphasized the need for collaboration and cooperation with WFEO. South-South as well as North-South collaboration makes the world a better place.

CECB partnered with the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) and the Pan American Federation of Engineering Societies (UPADI) in the Africa, Asia and the Pacific Accord.

The Engineering Capacity Building for Africa Programme (ECBAP) is the WFEO Committee's signature project.

CECB is the host for SIBO the Engineer Project that supports the uptake of engineering at a young age.

The retreat also considered the findings and recommendations of the study on "How to Improve SADC Services Sector Competitiveness to Take Advantage of African Continental Free Trade Agreement (AfCFTA) Market Access Opportunities" and the development of the SADC TiS Strategy and Action Plan. Mutual Recognition Agreements for professionals were discussed.



Members of the Panel on Mutual Recognition Agreements pause for a picture after the Industrialisation Week Meeting in Harare on 27 July 2024. CECB represented SAFEQ and FAEO



As an engineering community, we can make a fundamental contribution to achieve the SDGs, and we have a great responsibility for action. The work of the CEE is aimed at enabling WFE0 and the global engineering profession to support the achievement of these goals, addressing in particular SDG11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production).

GENG Yong,
Chair of CEE,
China Association for Science and Technology

During the two years, the CEE has continued to advance its mission of promoting environmentally responsible engineering practices in alignment with the UN SDGs. In this period, the Committee has strategically prioritized SDG 11 and SDG 12, while actively supporting broader efforts under SDG 13, SDG 14, and SDG 15. Through a combination of institutional innovation, global outreach, and technical engagement, CEE has reinforced the role of the engineering profession in driving sustainable development and environmental stewardship.

One of the CEE's core areas of focus has been advancing *carbon-neutral urban development*. In October 2024, CEE co-organized the International Conference on Urban and Community Carbon Neutrality in Shenyang, China, in partnership with Shenyang Jianzhu University. The conference convened leading experts, scholars, and also WFE0 Executive Vice President Ania Lopez to exchange views on low-carbon technologies, urban resilience, and integrated planning approaches. This event reaffirmed the CEE's commitment to fostering sustainable cities and inclusive communities in accordance with SDG 11.

Moreover, CEE has placed significant emphasis on promoting *green transformation in key industrial and manufacturing sectors*. In November 2024, during the COP29 Climate Conference in Baku, Azerbaijan, CEE co-hosted a high-level side event at the China Pavilion with Shanghai Jiao Tong University (SJTU), National Center of Technology Innovation for Green and Low-Carbon Building (NCTI-GB) and Rocky Mountain Institute (RMI), titled "Green Low-Carbon Industry and Architecture in the Vision of Carbon Neutrality: Technological Breakthroughs and Policy Dialogue on the 3060 Path."



CEE Chair Prof. Yong Geng and CEE SDG Engineers at COP29 Side Event in Baku, Azerbaijan, November 2024



CEE supports the development of low-carbon, resilient cities through engineering innovations. The committee promotes sustainable urban planning, green infrastructure, and community-scale carbon neutrality, aiming to build inclusive, safe, and climate-adaptive living environments for current and future generations.



CEE advocates for circular economy solutions and sustainable industrial practices. By fostering green technologies and waste reduction strategies, the committee contributes to more efficient resource use and promotes responsible production systems across sectors such as manufacturing, construction, and materials recycling.

The event highlighted best practices and innovations in energy-efficient infrastructure, sustainable materials, and circular economy solutions, demonstrating how engineering-led approaches can reduce industrial carbon footprints and foster responsible consumption and production systems.

CEE has also continued to advance *environmental education and knowledge dissemination*. In April 2024, Carbon Footprints was designated as the official flagship journal of CEE, offering an international forum for publishing high-impact research on environmental engineering and sustainability. In July 2024, in collaboration with Shanghai Jiao Tong University, the Committee launched the inaugural SDG International Graduate Students Summer Bootcamp, providing multidisciplinary training on climate action, sustainable technologies, and global development pathways for emerging leaders from around the world.

In April 2024, the CEE hosted a webinar analyzing the outcomes of the sixth session of the United Nations Environment Assembly (UNEA-6), inviting the guest speakers Nathaniel Matalanga, President of the World Council of Civil Engineers (WCCE) and Lylian Coelho, Chair of Water for All, AgroParis-Tech SUEZ. The webinar mainly focuses on global environmental governance and post-UNEA collaboration mechanisms. These efforts contribute to CEE's continued engagement with international processes under SDGs 13–15, particularly through promoting engineering solutions for climate resilience, biodiversity conservation, and sustainable resource management.

Key achievements

- Event hosted in Shenyang, China, in partnership with Shenyang Architectural University, titled "Zero Carbon China" International Conference.
- Co-organize the side event at COP 29 in Azerbaijan with Shanghai Jiao Tong University (SJTU), National Center of Technology Innovation for Green and Low-Carbon Building (NCTI-GB) and Rocky Mountain Institute (RMI).
- Launch the CEE Flagship Journal "Carbon Footprints" in 2024.
- Established 5 targeted subcommittees to promote environmental sustainability.

To further strengthen its thematic engagement and deliver more targeted contributions to environmental sustainability, CEE formally established *five expert subcommittees* in May 2025. These include the:

- Subcommittee on Green Paper-Making and Resource Recycling
- Subcommittee on Green Metallurgy
- Subcommittee on Green Textile
- Subcommittee on Urban Mining and Pollution Control
- Subcommittee on Plastic Regeneration

These thematic bodies are currently in the process of finalizing their membership structures and work plans.

Starting in the second half of 2025, they are expected to serve as dedicated platforms for technical exchange, policy advocacy, and project development in their respective domains, thereby enhancing CEE's capacity to address complex sustainability challenges in a sector-specific manner.



World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs
 Committee on Engineering and the Environment

Sixth session of the United Nations Environment Assembly (UNEA-6)

Insights and Experiences from UNEA-6 | A Virtual Sharing Session |

Time
 April 2, 2024
 18:00-19:00 PM (GMT+8) / 10:00-11:00 AM (GMT)

Place
 Online

Register
<https://shorturl.at/efjFL>



Nathaniel Matalanga
 Vice Chair, WFEO Ctee on Engineering and the Environment



Lylian Coelho
 Member, WFEO Ctee on Engineering and the Environment

Webinar on Insights and Experiences from The sixth session of the United Nations Environment Assembly (UNEA-6), Online, April 2024



2024 SDG International Graduate Students Summer Bootcamp Program, Shanghai, China, July 2024



Official Photo of participants including Deans, University Professors, Politicians, and local Chinese business leaders at the International "Zero Carbon China" Conference on Urban and Community Carbon Neutrality, Shenyang, China, October 2024



CEIE focuses on the sharing best practices in engineering education through its annual conference and the IDEAS Journal and supporting the professional development of educators, and professional engineers through training provided by the WFEO Academy.

**Zaw Min Aung,
Chair of CEIE,
Myanmar Engineering Council**

The Committee on Education in Engineering (CEIE) is hosted by the Myanmar Engineering Council (MEngC).

The ICEEA Conferences

MEngC hosted the Annual International Conference on Engineering Education Accreditation (ICEEA) on 23 and 24 July 2024 and ICEEA 2025 on 30 and 31 July 2025. The theme of ICEEA 2024 was "Engineering Education for Better Engineering Solutions towards a Sustainable World".

The theme for ICEEA 2025 was "Shaping Our Sustainable Future Through Engineering". The conferences are well-supported by the leaders of Myanmar Engineering Council including Prof. Dr. Aung Kyaw Myat, President of MEngC, and Prof. Dr Zaw Min Aung, Chair of CEIE.

The conferences are a catalyst for international academics to share their experiences and exchange their insights from their engineering education and accreditation practice perspectives. Over 600 delegates attended the conference in 2024, which was held in hybrid format. The speakers included: international and Myanmar engineering and education and practice leaders and engineering professionals from:

- World Federation of Engineering Organizations (WFEO),
- International Engineering Alliance (IEA),
- Institution of Engineering Education Taiwan (IET),
- Engineers Australia (EA),
- Federation of Engineering Institutions of Asia and the Pacific (FEIAP),
- China Association for Science and Technology (CAST),
- Pakistan Engineering Council (PEC),
- Board of Engineers Malaysia (BEM),
- Institute of Engineers Malaysia (IEM),
- ASEAN Federation of Engineering Organizations (AFEO),
- National Board of Accreditation India,
- Institution of Engineers Mauritius (IEM)
- Philippines Technology Council (PTC)

The conference was promoted on the WFEO website and a report on the event was also published.

All recordings from ICEEA2021, ICEEA 2022, ICEEA 2023 and ICEEA 2024 are available online, on the WFEO website.



SUSTAINABLE DEVELOPMENT GOALS



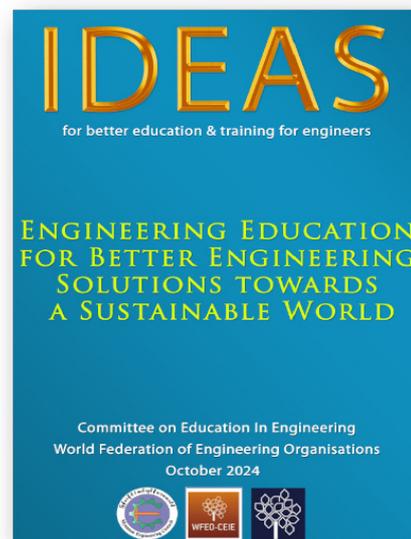
The Committee focus is on SDG 4 – Education through mentoring institutions, organising conferences and publishing journals to improve the quality of engineering education around the world. The Committee emphasizes Quality Education and recognizes that teachers and educators are the keys to achieve all of the SDG targets.



CEIE has been working in partnership with many organizations around the world for organising ICEEA conferences, publishing IDEAS journals and developing the WFEO Academy website in partnership with national members and the sponsorship support of the China Association for Science and technology (CAST)

The IDEAS Journal

As an immediate follow up of ICEEA, CEIE published the series of IDEAS Journals (issues no. 21 and 22).



Concerning collaboration between committees, Professor Ir. Dr Norlida Buniyamin, the chair of the CEIT and a member of the Executive Council of WFEO, is now the IDEAS Journal Articles Review Sub-committee Chair of CEIE. The two chairs have been working together towards Quality Engineering Education and would continue to be so for coming years.

Key achievements

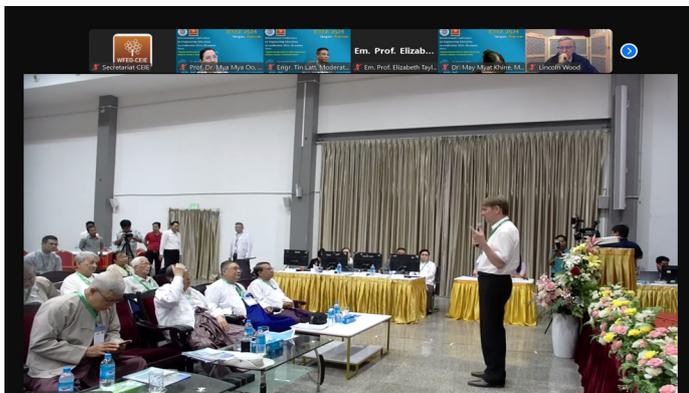
- Organized International Conference on Engineering Education & Accreditation (ICEEA) 2024 and 2025
- Published IDEAS Journal 21 and 22
- Continued development of the WFEO Academy Website



CEIE Chair Prof. Dr. Zaw Min Aung at ICEEA 2024



Dr. Marlene Kanga at ICEEA 2024



Prof. Jürgen Kretschmann at ICEEA 2024

WFEO Academy: Engineering Education Training

WFEO Academy Sub Committee has the following members: members from CAST (China, also Platinum sponsor), Singapore (IES), Pakistan (PEC), International Federation of Engineering Education Societies (IFEES) representatives and the Chair of the Committee on Young Engineers / Future Leaders (YE/FL). The Sub Committee Chair is Dr Marlene Kanga.

Dr Zaw Min Aung attends all meetings as the CEIE Chair. The Committee has continued to develop the courses that are provided and is progressing the development of a structured training program for accreditation bodies, and engineering educators and for professional development to support registration for qualified engineers, technologists and technicians. The professional development is in non-discipline specific topics such as leadership, project management, safety and risk management – which further develops professional skills and supports career development.

The course content is provided by WFEO national members and by WFEO Standing Technical Committee like the Committee on Disaster Risk Management. Future topics can draw on the expertise of the Committee on Engineering and the Environment and the Working Group on Systems Engineering.

Approximately two new courses are added each month from webinars delivered by WFEO members and partners around the world relating to the specific focus areas of WFEO Academy. There are currently 60 courses available on the WFEO Academy website: www.wfeoacademy.com

Digital badges: Bronze, Silver and Gold, are awarded automatically to registered participants who complete 10, 20 and 30 courses respectively. These can be displayed on the email signature panel, LinkedIn profile and other social media. Registered participants will be inspired to take more courses and take advantage of this opportunity to show employers and peers what they have achieved in their professional development journey. More information is available on page 18.

About WFEO Academy

This training platform has been developed in collaboration with UNESCO, the International Engineering Alliance, the International Federation of Engineering Education Societies, the Global Engineering Deans Council and WFEO members to provide an education training platform in the spirit of Open Science Principles and as part of the WFEO Engineering 2030 Plan to enable more countries to have more engineers with the right skills for sustainable development.



In 2023, the Committee on Engineering for Innovative Technology (CEIT) is hosted by the Institution of Engineers Malaysia. CEIT undertakes to Leave no one behind (LNOB) by promoting the use of innovative and emerging technologies to enable the achievement of the UN 2030 Agenda for Sustainable Development.

It will be the goal of CEIT to enable development projects to be undertaken using innovative technologies at a minimal cost to eradicate poverty while sustaining the environment. The use of AI and innovative technology knowledge sharing will be promoted, and it is hope that technology and digital gap in the world will be reduce by working together and sharing of knowledge that will ensure no countries are left behind in the technology gap. Leave no country behind.

**Norlida Buniyamin,
Chair of CEIT,
Institution of Engineers, Malaysia**



SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY
4 QUALITY EDUCATION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

CEIT promotes the use of engineering innovative technology in infrastructure via education and projects with the goal to reduce poverty world wide.

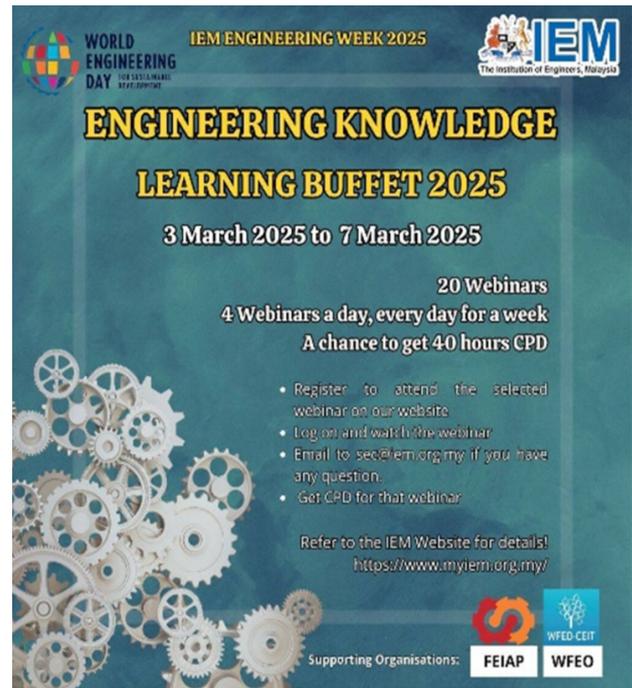
For the World Engineering Day celebration (WED), in March 2025, CEIT together with IEM organised a Knowledge Buffet week.

In the past two years CEIT has met online several times , held several and participated in events that promoted the use of innovative technologies by hosting and supporting events such as STEM events for indigenous school children, conferences etc. CEIT in 2024 released the Safety and Global Governance of Generative AI report. Examples of events are:

In April 2024, Institution of Engineers, Malaysia (IEM) and CEIT hosted primary school children from Malaysian schools for indigenous children under the STEM awareness program. The program was divided into two sections where the children enjoyed the science experiments aimed at generating interest in science projects and the teachers participated in the workshop "How to make learning science and Mathematics Fun".



STEM awareness program where IEM and CEIT hosted Indigenous children from primary Indigenous schools. Students were exposed to the fun and joy of science and mathematics



WORLD ENGINEERING DAY | **IEM ENGINEERING WEEK 2025** | **IEM**
The Institution of Engineers, Malaysia

**ENGINEERING KNOWLEDGE
LEARNING BUFFET 2025**

3 March 2025 to 7 March 2025

20 Webinars
4 Webinars a day, every day for a week
A chance to get 40 hours CPD

- Register to attend the selected webinar on our website
- Log on and watch the webinar
- Email to see@iem.org.my if you have any question.
- Get CPD for that webinar

Refer to the IEM Website for details!
<https://www.myiem.org.my/>

Supporting Organisations: **FEIAP** | **WFE0-CEIT**

Poster for the WED celebration Engineering Knowledge Learning Buffet

An Engineering Education Conference supported by CEIT- International conference on Engineering Education (ICEED 2024) with the theme "Dissemination and Advancement of Engineering Education Using Artificial Intelligence" was held on 19 and 20 November 2024, in Kanazawa, Japan.

CEIT Chair Prof Norlida was invited as a panellist at the Global Civilization Dialogue Ministerial meeting, 5th Forum with the theme "Opportunities and Challenges for Human Civilization in the Age of Artificial Intelligence" on 10 and 11 July 2025 in Beijing, China.



She was also a speaker at the 7th World Forum on Development and Governance for Science and Technology Societies on 2 and 3 July 2024 in Nanning, China.



World Tunnel Congress - Round Table Discussion on Tunnels and underground space towards Sustainable Development, 19 - 25 April 2024, Shenzhen, China

Key achievements

The CEIT has shared and promoted knowledge on innovative technologies and will further promote these activities by holding conferences especially in AI and undertake projects to encourage the use of Engineering Innovative Technology with the goal to achieve the realisation of the UN SDGs.

In January 2024, the WFEO-CEIT, in collaboration with the Shenzhen Association of Science and Technology, released the "Safety and Global Governance of Generative AI" report.

This report compiles 29 in-depth commentaries from over 40 global experts across different continents in policymaking, entrepreneurship, scholarship, and engineering.

These contributions cover various critical topics concerning the safety and global governance of generative AI, offering valuable insights and recommendations.



Prof. Ir. Dr. Norlida Buniyamin and President of Institution of Engineers Malaysia, visited the China Association for Science and Technology and talked about cooperation in innovative technologies especially AI, in December 2023

“

The committee is committed to equipping engineers with the tools and ethical framework necessary to lead the digital transformation of infrastructure. Through innovation, education, and global collaboration, CIC strengthens engineering's contribution to building resilient, connected, and inclusive societies in line with WFEO and UN values.

**Wael Abdulmajeed,
Chair of CIC,
Iraqi Engineers' Union**

CIC, officially hosted by the Iraqi Engineers Union since 2024, has revitalized its mandate to promote innovation and sustainability in the engineering application of Information and Communication Technologies (ICT). The committee's work during this biennium has been dedicated to building digital resilience, smart infrastructure, and ethical practices in support of the UN Sustainable Development Goals.

In August 2024, CIC relaunched its activities with the online lecture "Aruba Wireless Network", delivered by Dr. Laith Al-Mayyahi from Algonquin College and Carleton University. The event, organized in cooperation with the Iraqi Engineers' Union, focused on advanced wireless technologies and their applications in modern engineering systems and smart city connectivity.

The CIC also took part in the 3rd Salalah Engineering Forum (1–2 September 2024, Oman), where CIC Chair Dr. Wael R. Abdulmajeed delivered a keynote presentation on the role of engineers in advancing digital infrastructure for sustainable urban development.



SUSTAINABLE DEVELOPMENT GOALS



The CIC promoted smart infrastructure and digital engineering innovation through international webinars and participation in planning for the 2025 Global Engineering Conference. The committee also engaged with the International Center of Big Data for Sustainable Development Goals (CBAS) to explore data-driven solutions for sustainable infrastructure and ICT applications.



The CIC supported wireless connectivity, AI governance, and cybersecurity initiatives aimed at enhancing digital resilience in urban environments. Its activities and forums emphasized ethical ICT practices and inclusive approaches to technology for safer, more sustainable cities.

The CIC also contributed to the World Engineering Day 2025 by participating in engineering innovation themes and supporting WFEO-wide engagement in promoting digital transformation for sustainability.

CIC actively participated in two key strategic coordination meetings that strengthened its alignment with WFEO's global initiatives.

The first was the WFEO–CBAS Virtual Planning Meeting, held on 7 February 2025, co-chaired by WFEO President Mustafa Shehu and CBAS Special Advisor Professor Gretchen Kalonji.

The meeting brought together WFEO leaders and representatives of the International Research Center of Big Data for the Sustainable Development Goals (CBAS) to explore joint activities. CIC contributed to discussions on digital transformation, particularly the role of engineers in applying ICT solutions for sustainable development in Africa.

The committee emphasized the need for ethical AI, smart infrastructure, and data-driven engineering practices in post-conflict and underserved regions.

Key achievements

The CIC launched its first activity with the Aruba Wireless Network webinar. It presented at the 3rd Salah Engineering Forum, contributed to World Engineering Day 2025, and participated in WFEO-CBAS and WFEO-CAST coordination meetings.

CIC is co-organizing the Artificial Intelligence and Information & Communication Forums at the upcoming GEC in Oct. at Shanghai in partnership with the China Institute of Communications, where its members will present technical papers.

The second major engagement was the WFEO-CAST GEC Parallel Forums Chairs Coordination Meeting, held on 20 May 2025. Chaired by WFEO Past President Gong Ke and organized by the China Association for Science and Technology (CAST), this meeting focused on the detailed planning of the WFEO General Assembly and the Global Engineering Conference (GEC), which will take place from 12 to 17 October in Shanghai, China.

The CIC participated in shaping the agenda for the GEC parallel technical forums. CIC proposed the inclusion of smart infrastructure, cybersecurity, and data ethics as key engineering themes. The committee also expressed its readiness to support the technical content and speaker recruitment for the Shanghai conference.



Dr. Wael Abdulmajeed and Fuad Al Kindi, Chairman of the Oman Society of Engineers, at the 3rd Salah Engineering Forum, Oman, 1 September 2024



Dr. Wael Abdulmajeed at the 2024 International Engineering Congress, Taizhou, China, 8 to 9 November 2024



“ Water is a universal good indispensable for life that affects many sectors, giving this resource a social, environmental, and economic dimension. It is a good that knows no borders and, also, conveys many of the impacts of climate change to society.

The WFEO Water Committee brings together all engineering disciplines to have a stronger voice on the water scene, to become more relevant in global water decisions and to remind society and politicians of the importance of engineering contribution to achieving the goals and targets of SDG 6, which is interlinked with the entire UN’s Agenda 2030.

Ignacio González-Castelao Martínez-Peñuela,
Chair of CW,
Instituto de la Ingeniería de España

Once the activities of the Working Group on Water were concluded, the WFEO General Assembly, held in Costa Rica in March 2022, approved the transformation of this Working Group into a Standing Technical Committee on Water (CW), also at the proposal of the “Instituto de la Ingeniería de España” (Spain) and the “Ordem dos Engenheiros of Portugal” (Ode).

The CW has currently 35 members (had 14 members in 2022): 20 from WFEO national member organizations, 3 WFEO international members, 1 WFEO associate and 2 WFEO committee representatives. Also, there are 5 delegates appointed by the CW to serve on WFEO Standing Technical Committees.

Since its foundation, the CW has organized and/or participated in different forums highlighting the role of engineering in achieving the Sustainable Development Goals, especially SDG-6 “Clean water and sanitation”, which is interlinked with the entire 2030 Agenda.



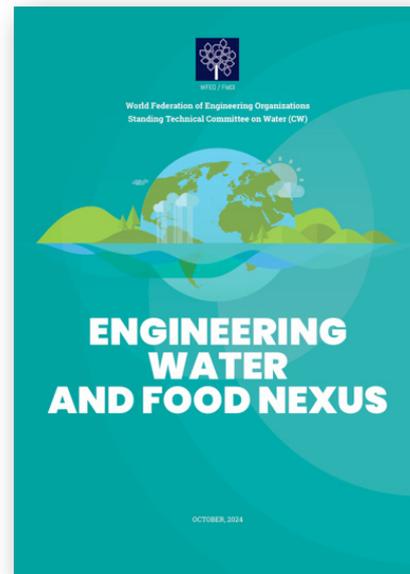
Participation of Ignacio González-Castelao, Chair of WFEO Water Committee, at the 39th UN-Water Meeting, Rome, March 2024

SUSTAINABLE DEVELOPMENT GOALS



The role of engineers is key to achieving the Agenda 2030, but maybe more visible in SDG-6 and SDG-13. To address the goals and targets of these SDGs, Engineers have expanded their thinking beyond strictly technical solutions, focusing more on environmental and social aspects, such as gender-sensitive planning, human-rights-based approach, “do no significant harm” principle, and leaving-no-one-behind, among others. We must not forget that we, engineers, work with and for society.

Facing present and future water-related challenges (those related to the current development model and climate change, mainly), engineers’ capacity today goes far beyond traditional solutions providing the best response (green, blue or/and grey) to each specific case. With particular attention to sustainability, circularity, carbon neutrality and resilience of water sources. Thus, contributing to a sustainable, intelligent, and inclusive development.



Cover of the CW report “Engineering, Water and Food Nexus” released in December 2024

The following are the main activities carried out or participated in by the CW:

- WFEO virtual side event at UN 2023 STI Forum: "Engineering solutions for water adaptation". 4 May 2023
- WFEO Water Committee session on "SDG Goals: Water Challenges" at the 7th World Engineers Convention WEC 2023. 11-13 October 2023. Prague (Czech Republic)
- 39th UN-Water Meeting. 12-13 March 2024. Rome (Italy)
- 10th World Water Forum. 18-25 May 2024. Bali (Indonesia)
- UN - SDG 6 and Water Action Agenda Special Event. 16 July 2024. New York (U.S.A.)
- International Water Association World Water Congress & Exhibition. 11-18 August 2024. Toronto (Canada)
- 3rd Asia International Water Week (member of the International Steering Committee). 23-28 September 2024. Beijing (China)
- International Summit on Water Efficiency, 2 October 2024. Lisboa (Portugal)
- 40th UN-Water Meeting. 4-5 November 2024. New York (U.S.A.)
- Global Water Summit 2025. 12-14 May 2025. Paris (France)



Participation of Prof. Armando Silva Afonso, Vice-Chair of WFEO Water Committee, at the "International Summit on Water Efficiency", Lisbon, 2 October 2024

WFEO achieved the status of "partner" of UN-Water in August 2023. Since then, CW is participating in UN-Water meetings in order to be engaged with the global movement supporting SDG 6. The main issues are now the SDG 6 Accelerating Framework and the "Water Action Agenda".

It is very relevant for the CW to be present in UN-Water initiatives, therefore, CW members are appointed to the different UN-Water Expert Groups and Task Forces. Currently, CW aims to contribute to one of UN-Water's Priority Collaborative Actions (PCA) of the Collaborative Implementation Plan (CIP).

Key achievements

In August 2023, WFEO acquired the status of "partner" of UN-Water. Since then, the WFEO Water Committee (CW) has been participating in UN-Water meetings, and in its Expert Groups and Task Forces in order to be engaged with the global movement to accelerate progress on water and sanitation-related goals and targets.

The CW publishes annually a document to give more visibility to engineering in different water related topics. In December 2024 the CW released the document "Engineering, Water and Food Nexus".

CW has also made its voluntary contribution to:

- "Chapter 7: Transboundary Cooperation" of the United Nations World Water Development Report (UNWWDR) 2024 "Leveraging Water for Peace and Prosperity".
- Journal Water (MDPI) - "Nexus water-energy-nutrients in urban environments". March 2024.
- The book "Water", published in December 2024.

Since 2023, the CW has released the following documents:

- "Engineering, Groundwater, and Integrated Water Resources Management". October 2023.
- "Engineering, Water and Food Nexus". December 2024.



CW participation in the UN-Water Meeting, Rome, March 2024

WFEO Committee on Water World Federation of Engineering Organizations

World Water Forum
Case studies from France and USA

17th July at 5 pm CEST (Paris) / 11 am EDT (New-York)

During the 10th World Water Forum in Bali
WFEO participants shared challenges and perspectives from the Water and Sanitation sector
During this webinar we will bring our contribution and an overview from the Ministerial Declaration

Lylían COELHO
Environmental Expert -
WFEO France & Brazil

Dale JACOBSON
Environmental
Consultant - WFEO USA

Register here: <https://shorturl.at/P9Lvc>

Banner of the CW webinar "World Water Forum Case studies from France and USA", 17 July 2024

“ The WFEO Committee on Anti-Corruption, with its strong focus on capacity building, remained highly active despite infrequent formal meetings, effectively convening every two weeks. Over a period of nine months, members engaged in regular Training of Trainers (TOT) workshops that addressed key anti-corruption challenges. Led by six experts, this comprehensive program equipped members with practical tools and techniques, empowering them to train their affiliates and replicate the training on a broader scale.

Kamel Ayadi,
Chair of CAC,
Tunisian Engineers Order

Anti-Corruption Train-the-Trainer Programme

A successful international Anti-Corruption Train-the-Trainer Programme was held between October 2024 and May 2025. The programme was organised and led by a partnership between the WFEO-CAC, the Global Infrastructure Anti-Corruption Centre (GIACC) and the Globethics MENA Centre.

The initiative was promoted to the WFEO's member organizations, as well as to personnel from governments, law enforcement bodies, public and private sector organizations, and professional institutions. It was a free, certified, comprehensive series of four training programs spread over 16 online train-the-trainer workshops, which were held for two hours each at approximately two-week intervals.

As far as we are aware, this is the most wide-ranging and ambitious anti-corruption train-the-trainer initiative ever to be launched internationally in the construction sector.

The Programme explored the complexities of corruption and conflicts of interest, their prevention and detection, approaches to measure their impact, and the role of Artificial Intelligence and ethics in prevention strategies. The intention of the workshops was not only to provide training, but also to discuss among participants how the workshop content can be improved, and how it can be adapted and localised. Certified trainers have the opportunity to use the training materials to provide training in their home country, with the condition that the workshops are held under the auspices of the relevant national professional institution.




SUSTAINABLE DEVELOPMENT GOALS

This anti-corruption train-the-trainer programme helps the achievement of UN Sustainable Development Goal 16.5 which is to “substantially reduce corruption and bribery in all their forms”.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

TARGET 16-1 TARGET 16-2 TARGET 16-3 TARGET 16-4
 TARGET 16-5 TARGET 16-6 TARGET 16-7 TARGET 16-8
 TARGET 16-9 TARGET 16-10 TARGET 16-A TARGET 16-B

The organized workshops were co-ordinated and introduced by Susan Ackah of Globethics.

70 participants were registered for the training programme, and approximately 60 attended each session, with others watching the recorded sessions at a later date.

Participants who attended at least 75% of the training sessions (12 out of 16 workshops) received certification of attendance, and were also entitled to apply to be certified as a trainer.

The workshop trainers comprised:

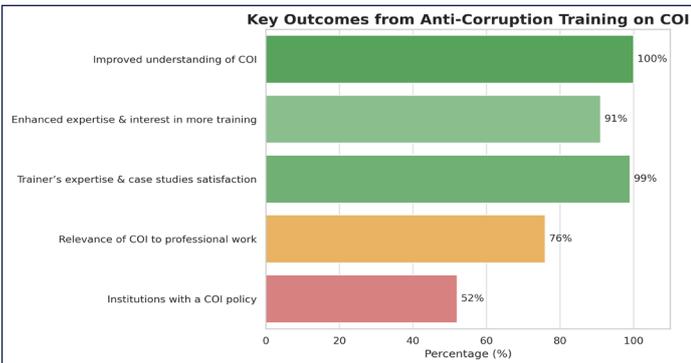
	Kamel Ayadi (WFEO-CAC), presenting three workshops on conflicts of interest and measuring corruption and Co-presenting a workshop on Ethics and Integrity”		Neill Stansbury (GIACC), presenting eight workshops on identifying, preventing and investigating corruption in the procurement and construction phases of infrastructure projects.
	Christoph Stückelberger (Globethics), presenting one workshop on ethics.		Olivier Guillo (Smart Global Governance) and Joshua George (Woxsen University), presenting one workshop on the potential impact of Artificial Intelligence.
	Mike Kramer (IACRC-USA), presenting two workshops on investigating corruption.		Paul Heywood (the Global Integrity Anti-Corruption Evidence (GI-ACE)), presenting part of a workshop on sector-based action against corruption.

Key achievements

The Anti-Corruption Train-the-Trainer Programme was successfully delivered, leading to the development of comprehensive and adaptable training materials for 16 workshops. Participants responded very positively to the programme's relevance, content and practical value, and the certification process for trainers is currently ongoing.

A pilot survey evaluating the session on Understanding and Managing Conflict of Interest (COI) - attended by senior public servants from 30 institutions - confirmed its strong impact:

- 100% of participants agreed the training improved their understanding of COI.
- 91% reported enhanced expertise and expressed interest in further training.
- 99% were satisfied with the trainer's expertise and practical case studies.
- 76% considered COI highly relevant to their work.
- 52% indicated their institutions have an existing COI policy.



These outcomes highlight the programme's effectiveness and the importance of sustained investment in anti-corruption capacity building.

About GIACC

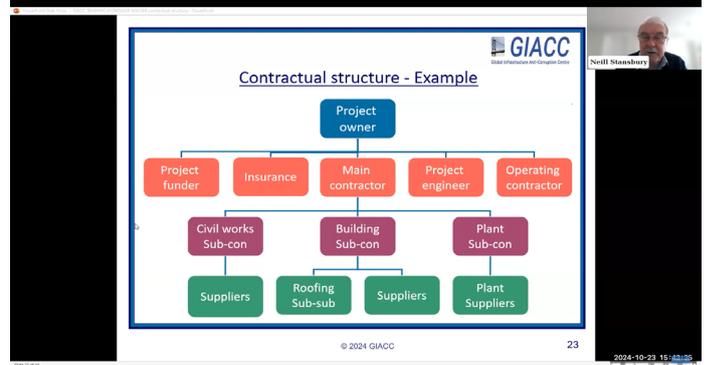
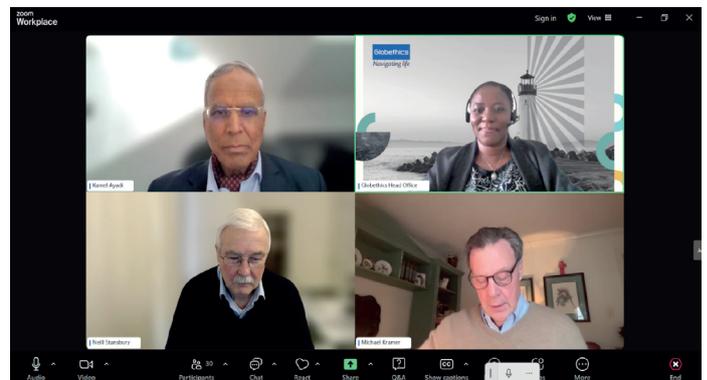


The Global Infrastructure Anti-Corruption Centre (GIACC), a long time partner of WFEO, is an international network of independent, not-for-profit organizations which develops and promotes anti-corruption measures for the infrastructure sector.

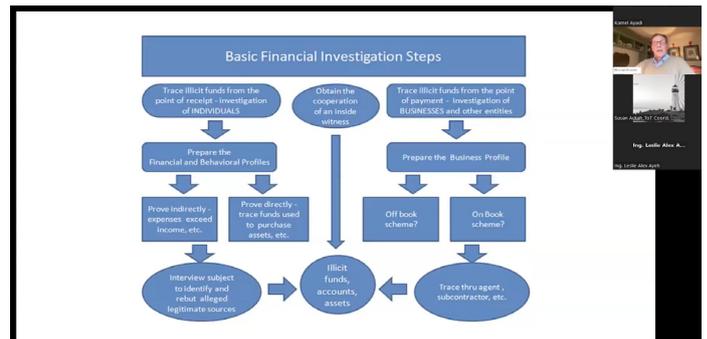
About Globethics



Globethics is a Geneva-based international NGO founded in 2004 to promote ethical leadership through higher education and global engagement. It supports individuals and institutions in ethical decision-making by integrating applied ethics into academics and policy. Emphasizing inclusivity, it draws on diverse ethical traditions to bridge global perspectives.



Screen copy of workshop #2 "Contractual structure rights and obligations on infrastructure projects" held on 23 October 2024



Screen copy of workshop #4 "How to investigate corruption in construction projects" held on 21 November 2024



The WIE Committee is dedicated to fostering diversity and inclusion in engineering. It collaborates with WFEO members to empower women and under-represented groups through innovation and technology, supporting sustainable development and ensuring equitable participation across the profession, with a focus on leaving no one behind.

Enyonam Kpekpena,
Chair of WIE,
Ghana Institution of Engineering

The WFEO Committee on Women in Engineering (WIE) is a Policy Implementation Committee committed to advancing gender equality, diversity, and inclusion within the global engineering profession.

Between 2023 and 2025, the Committee has made significant strides through four strategic themes:

- *Engineering Workforce Capacity Building -Theme 1-* Aims to boost diversity and inclusion in the engineering talent pipeline.
- *Engineering Workforce Capacity Building -Theme 2-* Focuses on the retention and leadership advancement of female engineers.
- *Collection of Engineering Strategic Indicators -Theme 3-* Supports the collection and analysis of gender-disaggregated data to inform policies.
- *Partnerships for Sustainable Development Goals -Theme 4-* Emphasizes collaboration, particularly around SDG 5 (Gender Equality) and its connections with other SDGs.

Key achievements under these themes include the official establishment of the WFEO-WIE Secretariat in Ghana in January 2024, enhancing the Committee's coordination capacity. Eight strategic meetings have been held to guide implementation efforts, and new theme leads were appointed in March 2024.



Key members of the Women in Engineering Committee participated in the 2025 World Engineering Day main event in Paris



The WIE Committee supports SDG 5 through gender-focused initiatives and plans for a data system to track women in engineering.



For SDG 13, it championed gender-inclusive climate declarations, highlighting women's vulnerability, their vital role in climate action, and the need for greater female representation in technology and innovation.

The Committee has actively engaged stakeholders across the continent and globally. Notable collaborative engagements include participation in the 6th Annual Society of Women Engineers Liberia Conference and the Global Engineering Conference in Rwanda.

In February 2025, WIE hosted a joint webinar with the Zambia Women Engineers Society to mark the International Day for Women and Girls in Science, while in May 2025, WIE Malaysia co-organized the Global AI Symposium.

WIE maintained a strong public presence through webinars and events. Two Open Forum Webinars were hosted in May 2024 and May 2025, celebrating the 10th anniversary of International Women in Engineering Day (INWED). WIE delivered a plenary during the 2024 International Conference on Engineering and Technologies for Sustainable Development. The Committee also participated in the 2024 and 2025 UNESCO World Engineering Day (WED) celebrations and joined the WFEO delegation participating in the 10th UN STI Forum in New York, in May 2025.

The Committee took part in the 7th African Women Engineers Forum, supported the 4th FAEO-WIE Virtual STEAM Art Competition, and joined the GECO-WIE Committee Meeting. Eleven national institutions submitted country reports, and three newsletters (June 2024, December 2024 and May 2025) were published to share progress and strategies.

As of 2025, membership has grown from 72 to 82, representing all WFEO regions. Plans are in motion to engage the remaining 50 unrepresented WFEO member countries.

Key achievements

Between 2024 and 2025, the WFEO Women in Engineering (WIE) Committee developed comprehensive work plans, hosted two Open Forum and two INWED webinars, and published three newsletters.

The WIE Chair featured in high-level engagements during UNESCO's WED 2024 and 2025. In partnership with FAEO-WIE, the Committee organized the 4th Virtual STEAM Art Competition and the 7th African Women Engineers Forum, advancing regional collaboration and gender inclusion in engineering.

Going forward, WIE will:

- Finalize and publish a white paper on harmonizing engineering data collection;
- Implement its 2025 strategic plan and activities;
- Strengthen representation on all WFEO Committees and STCs;
- Partner with engineering institutions to deliver joint webinars and activities;
- Continue hosting strategic theme webinars and regional committee meetings.

The Committee's work is well aligned with the Sustainable Development Goals and demonstrates a sustained commitment to empowering women in engineering globally through collaboration, data-driven advocacy, and inclusive leadership.



Screencopy of the virtual WIE webinar – Open Forum, 22 May 2024

WIE The Committee on Women in Engineering

CEC Commonwealth Engineers' Council

MAIN HOST AND FOUNDER INWED

Dawn Bonfield, UK

INWED Founder, Commonwealth Engineers Council President, Royal Society Entrepreneur in Residence, King's College London, WFEO roles.

WFEO WIE WEBINAR TO CELEBRATE INTERNATIONAL WOMEN IN ENGINEERING DAY (INWED)

CO-HOST

Ing. Dr Enyomam Kpepena, Ghana

Chair, Women in Engineering Committee (WIE) & President, Women in Engineering (WinE, Ghana), Manager/ ICT Project Delivery, Electricity Company of Ghana.

SPEAKER

Janet Zehnder, Peru

Chemical Engineer, MBA, Operations Manager, Tin Refinery. Pioneering Women's Empowerment in Engineering.

SPEAKER

Ir. Heng Lee Sun, Malaysia

Director, I&S Pro Construction Sdn. Bhd, Malaysia Empowering Women through Engineering Leadership and Advocacy.

SPEAKER

Ken Dunn, UK

Founder & Chairperson of Africa's Gift (charity), and Founder & Managing Director of Eternal Flame Worldwide Limited.

SPEAKER

Samukhele Mwase, Zambia

Clean Energy and Sustainability Specialist & Consultant Frankline Engineer LTD, Lusaka Zambia

Title:

The Lives of Women: Enhanced by Engineering

Friday. 21st June 2024

11:00AM - 12:15PM GMT

7:00AM - 8:15AM EST

Online (zoom)

Join our webinar to explore how diverse and inclusive engineering can enhance the lives of women and all people, featuring speakers dedicated to making a positive impact through technology and engineering.

Don't miss out on this important discussion! Click below to join

<https://shorturl.at/HK96C>

Banner of the virtual WIE webinar to celebrate 2024 International Women in Engineering Day (INWED) – "The Lives of Women: Enhanced by Engineering", 21 June 2024



The 7th Africa Women Engineers Forum took place during the 10th Africa Engineering Week in Luanda, Angola, September 2024



The WFE0 Young Engineers/Future Leaders (YEFL) Committee is a dedicated global network of early-career engineers committed to positioning YEFL as the leading authority representing young professionals in engineering. By highlighting the role of young engineers in achieving the United Nations Sustainable Development Goals (SDGs), YEFL promotes recognition, capacity-building, and impactful engagement worldwide.

Firas N Bou Diab,
Chair of YEFL,
Federation of Lebanese Engineers

PROMOTING SUSTAINABILITY AND CLIMATE ACTION

COP28 Engagement – Dubai, December 2023

- *Resilience Hub Leadership:* Co-led the Infrastructure, Energy & Mobility theme, shaping content and convening over 10,000 participants.
- *Collaboration with the Global Renewables Alliance (GRA):* Provided strategic input to the GRA's 3xRenewables campaign.
- *Youth & Policy Engagement:* Hosted *Youth & Practitioners: Catalysts for Behavior Change in Science-Based Policy* with FIDIC, CEMR, and Engineers Without Borders International.
- *Systems Thinking for Climate Action:* Delivered a side event on cross-sector, nature-driven solutions aligned with the Global Stocktake.



Young engineers are harnessing innovation to improve access to essential services, strengthen livelihoods, and build resilience.



Championing equitable urban development, accessibility, and resilient infrastructure to create vibrant, inclusive cities.



Designing low-carbon systems, influencing policy, and delivering a sustainable, climate-resilient future.

JOIN US AT COP28

YOUTH & PRACTITIONERS: CATALYSTS FOR IMPLEMENTATION OF SCIENCE-BASED POLICY



DR. BERTRAND PICCARD
KEYNOTE SPEAKER



ANUSHA SHAH
ICE PRESIDENT



ROBERT SPENCER
AECOM, FIDIC



MICHELLE MEACLEM
MODERATOR
WFE0 YE/FL SDG13



KIRILS HOLSTOV
WFE0 YE/FL SDG13



CHRISTIAN ACHELNIK
YOUNG ELECTED OFFICIAL,
COLOGNE

DECEMBER 6 | 11:30 - 13:00 GST | SE ROOM 2 & ONLINE |
[HTTPS://EVENTS.FIDIC.ORG/COP28SIDEVENT/4651053](https://events.fidic.org/cop28sideevent/4651053)








#EngineeringChange Campaign

Launched with the International Coalition for Sustainable Infrastructure (ICSI) to empower young engineers, drive systemic change, and overcome barriers. Key activities: global survey with recommendations, launch of a Nature-based Solutions pathway (London Climate Week 2025), and creation of a free resource library for sustainable development skills.

New York Climate Week – September 2024

YEFL (WG on SDG13) joined the "Scaling up Adaptation Finance" roundtable (Sept 2024), focusing on mobilizing funding for sustainable and resilient infrastructure with engineers and investors.

Buildings and Climate Global Forum – Paris, March 2024

YEFL (WG on SDG13) attended the inaugural Buildings and Climate Global Forum organized by the Government of France and UN EP in Paris in March 2024, which brought together ministers and some of the key actors of the buildings and construction sector from around the world to focus efforts in decarbonizing the sector.

ADVANCING DIGITAL INNOVATION AND INCLUSION

SDG Digital GameChangers Awards – UN Headquarters, New York, September 2024

YEFL Chair served as a judge recognizing ICT innovations advancing digital inclusion, education, and gender equity. Organized by OSET, ITU, and UNDP as part of the Summit of the Future Action Days, the awards recognized innovative projects using technology to build a safer, more inclusive digital future.

Entries in the People – Empowering Lives and Communities category, which spotlighted ICT initiatives advancing digital inclusion, education, employment, and gender equality for marginalized groups were evaluated.

The experience underscored the transformative role of digital solutions in reducing inequalities, fighting poverty, and driving inclusive growth.

YEFL & Project Catalyst Webinar – August 2024

Hosted Engineering Insights, creating opportunities for emerging engineers through mentorship and collaboration with Project Catalyst.

CELEBRATING WORLD ENGINEERING DAY

World Engineering Day 2024

Co-hosted "Inspiring Collective Action Through Communication, Advocacy, and Best Practices" with the WFEO Working Group on Climate Change and ICSI.

World Engineering Day 2025

Hosted "From Space to Impact: Leveraging Satellite Data to Address Poverty" with Dr. Catherine Nakalembe (NASA Harvest), highlighting how satellite data supports poverty reduction, agriculture, and disaster response, and drives inclusive solutions for vulnerable communities.

LIVE WEBINAR

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs
Committee on Young Engineers / Future Leaders

ALIGNED WITH THE
WORLD ENGINEERING DAY HACKATHON 2025

LEVERAGING SATELLITE DATA TO ADDRESS POVERTY INNOVATIONS AND IMPACTS

Catherine Nakalembe
Assist. Professor, Dept of Geographical Sciences at the University of Maryland and Director, Africa Program under NASA Harvest

Mustafa B. Shehu
President, WFEO

Firas Bou Diab
Chair, WFEO Committee on Young Engineers / Future Leaders

4:00 PM CET / 10:00 AM EST
November 20, 2024

Learn more about the transformative potential of satellite data and advanced technologies in addressing poverty, achieving Sustainable Development Goal 1 (No Poverty), and fostering global innovation

1 NO POVERTY

WORLD ENGINEERING DAY FOR SUSTAINABLE DEVELOPMENT

wfeo.org @WFEO @WFEO.FMOI

Key achievements

Climate Declaration – COP26 Joint Statement
Co-authored the COP26 Joint Statement of International Youth Organizations alongside MGCY, YOUNGO, and others, committing to urgent climate action.

Singapore Sea Level Rise Design Competition
YEFL (WG on SDG13) achieved victory in the design competition organized by the Water Science Policy and the Institute for Environment and Sustainability at the Lee Kuan Yew School of Public Policy.

YEFL Contributions to the Global Impact of the WED Hackathon

Members of the YEFL Committee play a central role in the success of the World Engineering Day (WED) Hackathons. They serve as preliminary judges during Stage 1 of the competition, applying international standards to evaluate entries and ensure a transparent, rigorous selection process.

Additionally, YEFL members actively promote awareness of the Hackathon by organizing and delivering introductory sessions for engineering students across various regions worldwide. These sessions highlight the significance of student participation in addressing global challenges through innovative, sustainable engineering solutions, aligned with the UN Sustainable Development Goals.

SUPPORTING JUST ENERGY TRANSITION

C40 Cities Seminar – 2024

YEFL (WG on SDG13) co-organized a seminar with C40 Cities on "Just Energy Transition Strategies" exploring global examples, policies, and incentives for advancing sustainable and cleaner energy practices.

COP29 ENGAGEMENT AND PREPARATIONS FOR COP30

COP29 – November 2024

- Co-organized "Building Capacity & Capability to Transition to a Sustainable, Resilient and Just Built Environment" with FIDIC, ICSI, IEMA, and World Green Building Council.
- Hosted "Accelerating Clean Tech for Energy and Agriculture in SIDS", examining scaling of clean technology in Small Island Developing States.

Preparations for COP30

Coordinating a COP30 policy statement and dedicated side event on financing sustainable infrastructure. Regional webinars will showcase local priorities and challenges.

“ In addition to the engagement with the UN, WURC with the support of Atlas Initiative submitted a policy paper during the 2024 G20 meeting in New Delhi, India; submitted a letter to the President of the World Bank which provided an opportunity to engage with and organize a meeting with the WB Infrastructure Group; organized a meeting with the Science Advisor to US State Department and a seat at the International Monetary Fund round table.

K. N. Gunalan,
Chair of WURC,
American Society of Civil Engineers

- The primary theme emphasized by WURC at the UN Headquarters at various venues is recognition of the contributions of WFEO and the engineering community in not only promoting the SDGs as our primary focus but to accelerate achieving the SDGs by 2030.
- Ability of WFEO to access and reach through its over thirty million engineers in over 100 countries to raise awareness; share knowledge and best practices; identify gaps, bridge them and build capacity where it is needed.
- Partnerships are needed especially with institutions such as the United Nations and its various agencies including Food and Agriculture Organization (FAO), the World Bank, Asian Development Bank, and the Coalition for Disaster Resilient Infrastructure (CDRI).
- Forging alliances with other entities such as “Friends of Africa Coalition”, “Group of Friends on Science for Action” at the UN (India, Belgium, South Africa) through our partners at International Science Council (ISC).



Dr. K. N. Gunalan delivering his statement at the 2025 UN STI Forum thematic session 1: “Making Artificial Intelligence accessible, inclusive and beneficial for all”, UN HQ, New York, 7 May 2025



SUSTAINABLE DEVELOPMENT GOALS

2 ZERO HUNGER

The event “SDG Action Segment for Goal 2” co-organized with FAO, ISC and Children and Youth Major Group (CYMG) at the ECOSOC Partnership Forum on 30 January 2024 at UN HQ

14 LIFE BELOW WATER

The event “SDG Action Segment for Goal 14” co-organized with UN Environment Programme, UNESCO Intergovernmental Oceanographic Commission, ISC, CYMG and Indigenous Peoples Major Group at the ECOSOC Partnership Forum on 5 February 2025 at UN HQ

- WFEO has the resources, and its various STCs and Working Groups as a pathway to assist UN DESA and United Nations Office for South-South Cooperation (UNOSSC) to develop policy frameworks on topics such as Renewable Energy and Artificial Intelligence, that can then be used by the various member states with appropriate modifications to fit their specific needs. In the process, WFEO and its appropriate committee or working group will become the “go to” consultant to modify and interpret the policies.



10th Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals

Wed 07 May 2025, 10.00 am – Thu 08 May 2025, 6.00 pm

ECOSOC Chamber, UN HQs, New York, USA
 DESA and UN IATT

Banner of the 10th UN Science, Technology and Innovation (STI) Forum, UN HQ, New York, 7 - 8 May 2025

Key achievements

- Successfully hosted sessions at STI Forum including side events and a special event;
- served as discussant during Thematic Sessions during the STI Forum;
- supported the Major Group & Other Stakeholders with the Advocacy Task group;
- provided both written and oral interventions during both STI Forum and High-Level Political Forum (HLPF);
- had a Critical Infrastructure Resolution signed during the 2025 STI Forum;
- collaborated with the ISC on sectoral papers for HLPF;
- supported Action segments at Partnership Forums.



Dr. K. N. Gunalan and Mustafa Shehu with members of the World Bank Department of Infrastructure in New-York, 21 October 2024



Dr. K. N. Gunalan, Mustafa Shehu and Amit Prothi, Director General of the Coalition for Disaster Resilient Infrastructure (CDRI), at the Roundtable Discussions of CDRI, World Bank HQ, Washington DC, 23 October 2024



Dr. K. N. Gunalan moderating the side event "Better leveraging Science, Technology, Innovation and Engineering for accelerating progress on the Sustainable Development Goals" organized by the Science and Technological Community Major Group co-chaired by WFE0 and the International Science Council, during the 9th STI Forum, UN HQ, New York, 9 May 2024



The side Event "Leveraging AI to Accelerate Sustainable Development and the SDGs" organized by WFE0 during the 9th UN STI Forum, at the UN HQ, New York, 6 May 2025



Michael Sanio, founder of the Atlas Initiative for Climate Resilient Infrastructure; Mustafa Shehu; Dr. Patricia Gruber, Chief Advisor to the Secretary of the Department of State and Dr. K.N. Gunalan at the Department of State HQ, Washington DC, 22 October 2024



The challenge is not just technical or environmental but deeply socio-technical, involving cultural, behavioral, economic, and ecological factors.

Garima Bhatia,
Chair of WGSE,

International Council on Systems Engineering (INCOSE), USA

The objective of the Working Group on Systems Engineering (WGSE), established through the collaboration of INCOSE (International Council Of Systems Engineering) and WFEO, is to be an enabler for the greater engineering community by promoting and developing the adoption of systems engineering and systems thinking to the community's most intractable problems.

WGSE focuses on advancing systems engineering as a transdisciplinary and integrative discipline, enabling the conceptualization, realization, use, and retirement of engineered systems, whether technical or social, through scientific, technological, and management methods.

Systems Engineering is distinguished from traditional engineering branches by its holistic approach. Rather than focusing on isolated technical components – or issues - systems engineering considers the entire system, its environment, stakeholders, and the interactions among its elements.

This perspective is crucial for addressing complex, multifaceted challenges such as sustainability, energy transition, and climate change, where technical, social, and economic factors must be balanced. Systems Engineering integrates knowledge from various fields, ensuring robust solutions that are well-rounded and comprehensive.



Garima Bhatia, WGSE Chair and Ralf Hartmann, INCOSE President, at the Global Engineering Congress, Shanghai, 14 October 2025



17 PARTNERSHIPS FOR THE GOALS



The WGSE's initiatives, such as cross-sector collaboration, surveying, and webinars, directly support SDG 17 by fostering partnerships, knowledge exchange, and collective action among engineering institutes and committees to address complex global challenges.

Systems Engineering is distinguished from traditional engineering branches by its holistic approach. Rather than focusing on isolated technical components – or issues - systems engineering considers the entire system, its environment, stakeholders, and the interactions among its elements. This perspective is crucial for addressing complex, multifaceted challenges such as sustainability, energy transition, and climate change, where technical, social, and economic factors must be balanced.

Systems Engineering integrates knowledge from various fields, ensuring robust solutions that are well-rounded and comprehensive.

The main themes covered since the WGSE's inception early 2025 include:

- **Holistic Thinking:** WGSE encourage engineers to broaden their perspectives, ensuring that all relevant elements and their interactions between one another are considered. This helps the engineer to see the totality of the problem, therefore providing the pre-conditions to its comprehensive solution.
- **Interdisciplinary Collaboration:** WGSE aims to foster collaboration across engineering disciplines, regions and problem domains, integrating diverse expertise to tackle global challenges.
- **Lifecycle Considerations:** WGSE places an emphasis on considering the full life cycle of engineered systems, including design, manufacturing, maintenance, scalability, and end-of-life factors.
- **Promoting Global Standards:** WGSE supports the development and dissemination of guidelines, standards, and best practices to ensure consistency and quality in engineered projects worldwide.
- **Bridging Knowledge and Practice:** WGSE provides resources for knowledge exchange and professional development, helping engineers across disciplines benefit from systems-based approaches.

Key achievements

- Establish WGSE governance. [DONE]
- Curate, develop and produce Systems Engineering 101 webinar series for distribution on WFEO Academy. [WORK IN PROGRESS]
- Explore collaboration opportunities with WFEO Members, Committees and Working Groups. [WORK IN PROGRESS]
- Launch internal survey to gage the awareness of systems engineering within WFEO community. [TODO]
- Produce white paper or primer on the role of Systems Engineering in various problem domains. [TODO]

Systems engineering principles are applied to a range of domains, including energy distribution, water treatment, transportation, sustainability, and healthcare.

WGSE also supports initiatives in smart cities and artificial intelligence, aiming to develop reference architectures, methodologies, and management plans that illustrate the value of systems thinking in addressing complex societal challenges.



WFEO Delegates at the All Committees' Chairs Committee Meeting, Shanghai, 15 October 2025



Terry Fitzgerald, WGSE Secretary; Steve Records, INCOSE Executive Director; Garima Bhatia, WGSE Chair and Ralf Hartmann, INCOSE President, at the Global Engineering Congress, Shanghai, 14 October 2025



Ralf Hartmann, INCOSE President; Seng Chuan Tan (newly WFEO Elected President for the period 2025-2027) and Garima Bhatia, WGSE Chair, at the WFEO General Assembly, Shanghai, 17 October 2025

“ The climate is changing and the engineering community must work together to advance engineering solutions and partnerships that contribute to climate change mitigation, adaptation and resilience.

The Working Group supports the advancement of guidance tools and standards for decarbonisation, climate adaptation and resilience, so that engineers can contribute to sustainable development, globally.

Davide Stronati,
Chair of WGCC,
Institution of Civil Engineers UK



SUSTAINABLE DEVELOPMENT GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION

PAS 2080 offers practical actions and examples to accelerate the decarbonisation of buildings and infrastructure.

The Working Group (WG) on Engineering and Climate Change provides a focus of activities relating to the issue of Climate Change and in particular to advance the UN Sustainable Development Goal No. 13 on Climate Action. The WG's role is designed as a transverse one, coordinating and helping to harmonise all the work being done by various WFEO STCs and WGs in relation to climate change.

It advances awareness of best practice in climate mitigation and adaptation, showcasing decarbonisation and/or resilience efforts of engineering projects. It assists in the advancement of guidance tools and standards for decarbonisation, adaptation and resilience, through global expert advice to existing projects. It raises awareness of WFEO's work on and commitment to climate change and leads WFEO side events, with other international partners, at the UNFCCC events.

The WG has roughly 30 members since the WG's inception in 2023. It meets quarterly with the objective to showcase global best-practice case studies and initiatives that have the potential to deliver the change needed at scale and at pace, signposting to replicable solutions. Case studies have been showcased through events, webinars, short reports, articles and blogs, hosted by the WFEO and Institution of Civil Engineers UK (ICE) websites.

Since 2023, members of the WG attended the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) and Subsidiary Bodies meetings in Bonn to promote the role of engineers in combating climatic uncertainty.

COP 28 (2023), in Dubai, United Arab Emirates, featured the first-ever Global stock-take, the Paris Agreement's process to assess progress every five years and mobilize stronger climate action. COP 28 set the direction for the next round of national climate commitments (NDCs) due in 2025. At this conference, Davide Stronati headed the WFEO-led side event in the Blue Zone, in collaboration with Conservation International, the Engineering Institute of Canada and Resilience First.

On 5 December 2023, the event *Systems thinking for holistic climate action: nature-driven engineering, policy and finance solutions* discussed nature-driven engineering, policy and finance solutions, and then focused on global implementation. With the ICE, WFEO was also able to promote PAS 2080, the globally applicable building standard on carbon management in infrastructure, and the WFEO Working Group on Engineering and Climate Change, offering practical actions and examples to accelerate the decarbonisation of buildings and infrastructure.



Audience at the COP 28 side event "Systems thinking for holistic climate action: nature-driven engineering, policy and finance solutions", Dubai, United Arab Emirates, 5 December 2023



Micheala Chan, Member of the WFEO YE/FL SDG 13 WG; Sue Brown, CEO at Sustainability and Corporate Affairs at Worley; Laleh Behjat, Prof. at University of Calgary and Davide Stronati presenting the COP 28 side event, 5 December 2023

Key achievements

- UNFCCC COP28 side event Systems thinking for holistic climate action – 5 December 2023
- UNFCCC COP29 side event Accelerating Clean Tech for Energy and Agriculture in SIDS – 11 November 2024
- The 3 editions of the webinar “Principles for climate change adaptation and future resilience for engineers” presented by David Lapp on 19 December 2024, 14 May and 4 June 2025, attracted more than 300 attendees (see next page)
- “The Climate Change Mitigation Best Practice project” will be presented at the GA and GEC in Shanghai (October 2025)
- “The WFEO Model Code of Practice: Principles of Climate Adaptation for Engineers” will be presented at the 2025 GA and GEC in Shanghai (October 2025)

At COP 29 (2024), in Baku, Azerbaijan, WFEO partnered with the Canadian Institute of Engineers (CIE), Institute of Electrical and Electronics Engineers (IEEE) and ICE to develop a joint submission.

The side event *Accelerating Clean Tech for Energy and Agriculture in Small Island Developing States (SIDS): Enabling action for a Just Transition* discussed accelerating the deployment of clean tech solutions that enable equitable access to energy and support agricultural processes in small island states. It then focused on enabling action by harvesting knowledge of communities and expanding skills through capacity building to support a just transition.



Davide Stronati, Chair of the WFEO WG on Engineering and Climate Change; Saifur Rahman, Past IEEE President and Marie-Line Vaiani, Chair of the WFEO Committee on Energy presenting the COP 29 side event in Baku, Azerbaijan, 11 November 2024

Also in 2024, the WG Chair, Davide Stronati, and WG member Darrel Danyluk attended the UNFCCC inter-sessional Subsidiary Bodies (SB60) meetings in Bonn, Germany. Although a side event submission was not selected, one of the key takeaways from the congress was the lack of focus on engineering by UNFCCC. Through WFEO discussion with the IEEE, action has been endorsed and taken for a proposal to have an Engineering Day at COP 30 in Belem, Brazil 2025. The WG will devise another side event for COP 30 on this theme.



Delegates Davide Stronati and Darrel Danyluk outside the UNFCCC building, Bonn, Germany, 3 June 2024



WFEO Executive Council Member Dr. Jing He, Davide Stronati and Marie-Line Vaiani, Chair of the WFEO Committee on Energy; at the Blue Zone at COP 29, Baku, Azerbaijan, 11 November 2024

The WFE0 Code of Practice: Principles of Climate Change Adaptation and Resilience for Engineers

Professional Judgment	Integrating Climate Information	Practice Guidance
<p>Model Code Principle # 1: Integrate Adaptation into Practice</p> <p>Model Code Principle # 2: Review Adequacy of Current Standards</p> <p>Model Code Principle # 3: Exercise Professional Judgement</p>	<p>Model Code Principle # 4: Interpret Climate Information</p> <p>Model Code Principle # 5: Work with Specialists and Stakeholders</p> <p>Model Code Principle # 6: Use Effective Language</p>	<p>Model Code Principle # 7: Plan for Service Life</p> <p>Model Code Principle # 8: Use Risk Assessment for Uncertainty</p> <p>Model Code Principle # 9: Monitor Legal Liabilities</p>

The current nine guiding principles of the Model Code of Practice

On 19 December 2024, 14 May and 4 June 2025, David Lapp, a member of the WFE0 Working Group on Climate Change (see previous page) and Associate, Climate Risk Institute (Canada), presented three webinars on the "WFE0 Model Code of Practice: Principles of Climate Change Adaptation for Engineers", that attracted more than 300 attendees.

The WFE0 Code of Practice: Principles of Climate Change Adaptation and Resilience for Engineers

3rd edition

4 June 2025
10 AM CEST / 4 PM Singapore
Register at <https://shorturl.at/u2bAI>



<p>Moderator</p>  <p>Seng Chuan Tan WFE0 President Elect</p>	<p>Presenter</p>  <p>David Lapp Member, WFE0 Working Group on Climate Change & Associate, Climate Risk Institute</p>
--	--

These presentations introduced and explained the nine principles contained in the Model Code of Practice and introduced new principles under consideration related to climate resilience and the integration of nature-based solutions.

Background

The climate is changing. Historical climatic design data has become less representative of the future climate. Many future climate risks may be significantly under-estimated. Engineers cannot assume that the future will be similar to the past. Historical climate trends cannot be simply projected into the future as a basis for engineering planning, design, operations and maintenance of infrastructure.





The Model Code of Practice and the efforts underway on an updated version to include climate resilience is an important contribution of engineering and WFE0 efforts towards the achievement of UN SDG 13 - Climate Action.

This goal calls for urgent international action to combat climate change and its impacts including strengthening national resilience to climate-related hazards as well as natural disasters. It aims to limit global temperature rise and protect communities, livelihoods and ecosystems from the escalating effects of changing climate as defined in the 2015 Paris Agreement.

In addition to its provisions to mitigate reversals in development gains, protecting vulnerable populations, homes and infrastructure, SDG 13 is intrinsically linked to all other SDGs as climate change significantly impacts poverty, food security, health and economic progress.

Civil infrastructure and buildings provide essential services that alleviate poverty, improve health and food security and contribute to economic progress providing quality of life. Their resilience to changing climate is essential.

The Model Code of Practice provides guidance to engineers to reduce escalating climate impacts on civil infrastructure and buildings now and in future making a significant contribution to achieving SDG 13 and the positive impacts on all the other SDGs.

Adapting current and future infrastructure to be resilient to extreme weather events and long term climate changes over their long service life has become a societal imperative. Engineers need to understand and play a key role in achieving this goal as an integral part of their practice. They must keep themselves informed about the changing climate, and consider its potential impacts on their work.

The WFE0 Code of Ethics strongly guides engineers towards a sustainable and resilient future rather than leaving room to simply maintain the status quo. The paramount duty of engineers is to hold paramount public health, safety and welfare which are an integral part of the desired outcomes of the UN SDGs. The Engineers' duty is an affirmative obligation, not a neutral one.

The WFEO and its national and international members are committed to raising awareness among engineers about the potential impacts of the changing climate and how these relate to engineering of existing and future civil infrastructure and buildings. As such, the WFEO Model Code of Practice was developed and published in December 2015 to provide practice guidance to engineers to consider the implications of climate change in their professional practice and create a clear record of the outcomes of those considerations.

The Model Code of Practice on Principles of Climate Change Adaptation for Engineers was prepared by the WFEO Standing Technical Committee on Engineering and the Environment hosted at that time by Engineers Canada, with Chair Darrel Danyluk and Secretary David Lapp. It was subsequently distributed to national and international members with a recommendation to adopt as policy and practice guidance for their own engineers. It was also placed on the WFEO website.

Since 2023, the WFEO Working Group on Climate Change, the group now chaired by WFEO to engage in climate and engineering issues, is updating the document to include principles of climate resilience and the application of nature-based solutions as well as other practices that have been developed and applied in the 10 years since the Model Code was originally published in 2015.

Screenshot of the presentation during the webinars

Since the publication of the Model Code of Practice in 2015, climate consideration has become an essential component of engineering practice across most disciplines especially as it relates to civil infrastructure and buildings and all of their components (mechanical, electrical etc).

A key marker of progress is the increasing integration of climate change into engineering practice through consideration of climate risk and vulnerabilities currently and for the future life cycle. While not yet universally practiced, Climate Risk and Vulnerability Assessment (CVRA) is growing as an accepted contributor to planning, design and construction.

Furthermore, demand for climate consideration and resilience by infrastructure owners, particularly governments at all levels and International Financial Institutions (IFI) as well as the private sector is increasing. This trend demands that engineers become more proficient in climate adaptation and resilience practices and innovative solutions that incorporate climate consideration.

Also encouraging is the increased availability and quality of climate services, climate data, climate projections, practice guidance, tools and climate design standards (international and national and local).

Screenshot of the presentation during the webinars

Engineers need to know what resources are available to support their local practice and how to obtain them. Progress is uneven however, and engineers need to engage in advocating and support for improvements that meet their local practice needs. The Model Code of Practice reminds engineers of their need to engage in the development, improvement and availability of tools and data.

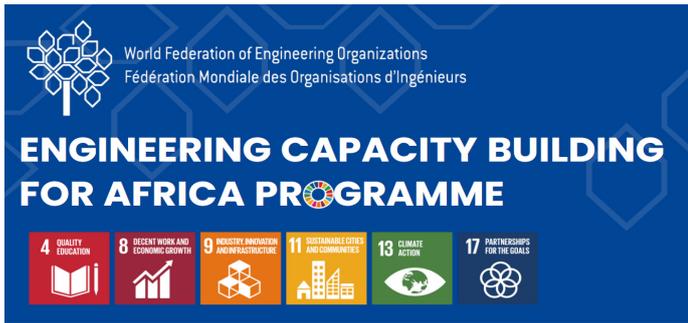
The Model Code of Practice reminds and encourages engineers to improve their knowledge and skills through capacity development and training to equip them to deal with the rapidly changing and evolving needs of all nations to adapt to and improve resilience to our changing climate. By focussing on SDG 13 - Climate Action engineers can make an enormous contribution to all SDGs. The WFEO Model Code of Practice and its upcoming update will help turn words into action.

The upcoming 2025 Model Code of Climate Adaptation and Resilience provides rationale and guidance to engineers to consider climate in their day-to-day practice and fulfill their ethical obligation. It expands the current nine guiding principles to include climate resilience as well as innovative, progressive and equitable solutions (such as nature-based ones) that consider long term environment, social and economic impacts, not just public health and safety.

It emphasizes the importance of responsible and documented decision-making based on engineering judgment. It encourages engineers to engage in lifelong learning and ongoing engagement to stay current with evolving climate science, and climate resilient technologies and methods. Adapting these principles and practices to the extent possible within project constraints will help assure the engineer fulfills their professional, ethical and technical responsibilities.

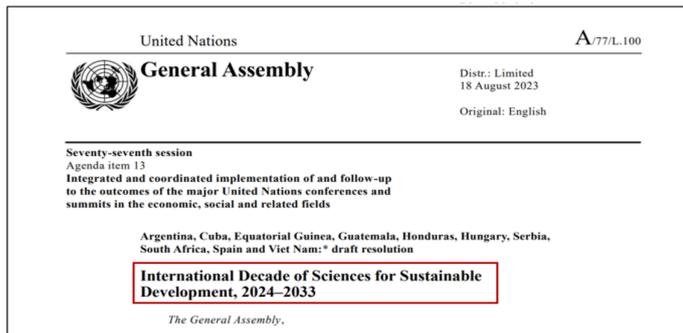
The WFEO WG on Climate Change strongly encourages national and international members of WFEO to publish a Code of Practice on Climate Adaptation and Resilience for their engineers. Furthermore, delivering continuing education courses on the Model Code and its application to everyday practice will enhance the ability of their engineers to integrate climate adaptation and resilience considerations within their scope of practice thus contributing significantly towards achieving the UN SDGs at local, regional and national levels.

WFE0 Engineering Capacity Building for Africa Programme (ECBAP)



Background

Africa faces significant challenges in achieving the Sustainable Development Goals (SDGs), with less than 6% of measurable targets on track as of 2023. The United Nations General Assembly (UNGA) declared 2024–2033 as the International Decade of Sciences for Sustainable Development (IDSSD), emphasizing the importance of capacity-building in bridging global development gaps, with a priority attention to Africa.



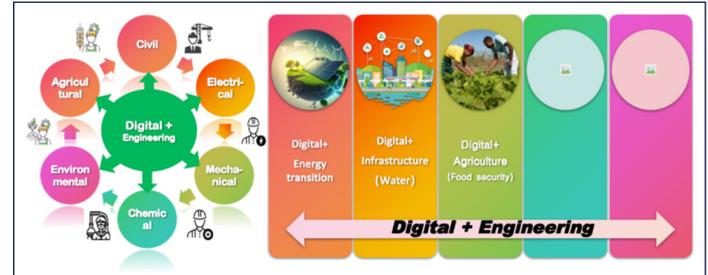
In 2024, further UNGA resolutions highlighted the role of artificial intelligence (AI) in sustainable development and called for enhanced international cooperation in AI capacity-building. These priorities are also reflected in the Pact for the Future and the Global Digital Compact, reaffirming the global commitment to digital inclusion and technological empowerment.

Establishment of ECBAP

WFE0 recognized that building engineering capacity is critical for Africa to achieve both the African Union's Agenda 2063 and the United Nations' 2030 Agenda for Sustainable Development. In response, under the leadership of the President, Eng. Mustafa Shehu, and supported by the Chair of WFE0 Capacity Building Committee (WFE0 CECB), Eng. Martin Manuhwa, led by Professor Gong Ke, Chair of the Special Task Force for Engineering Capacity Building for Africa Programme, WFE0 proposed the **Engineering Capacity Building for Africa Programme (ECBAP)**, designed as a 10-year initiative to strengthen the continent's engineering ecosystem, specifically to enhance capacity in engineering education, continuous professional development and technology transfer.

The programme was then developed based on a feasibility study that referenced over 50 UN documents and best practices from international engineering organizations.

It adopts a strategic model of "Digital + Engineering", with three thematic entry points: energy transition, infrastructure (focusing on water), and agriculture (with an emphasis on food security).



ECBAP focusing on "Digital + Engineering"

Governance and Steering Committee

On 5 March 2025, the first ECBAP Steering Committee meeting was held at UNESCO Headquarters in Paris, on the occasion of World Engineering Day for Sustainable Development. Representatives from WFE0, UNESCO, CAST, UNIDO, UNDESA, AAS, FAEO, and national engineering institutions from Kenya, South Africa, Nigeria, Ethiopia, and Zambia participated. The Concept Note and Terms of Reference (ToR) were unanimously approved.



Pilot Training Programme

From 10 to 14 March 2025, ECBAP conducted its first pilot training in Nairobi, Kenya, in partnership with the Institution of Engineers Kenya (IEK). Themed "AI for Engineers," the 5-day intensive course welcomed 46 selected participants and was met with enthusiastic engagement.



Official Launch of the Programme

On 17 March 2025, ECBAP was officially launched in Nairobi through a joint effort by WFEO, CAST, IEK, and the Engineers Board of Kenya (EBK). The event brought together nearly 200 representatives from government, academia, industry, and international organizations. Engineering bodies from Somalia and the Democratic Republic of the Congo sent messages of support.

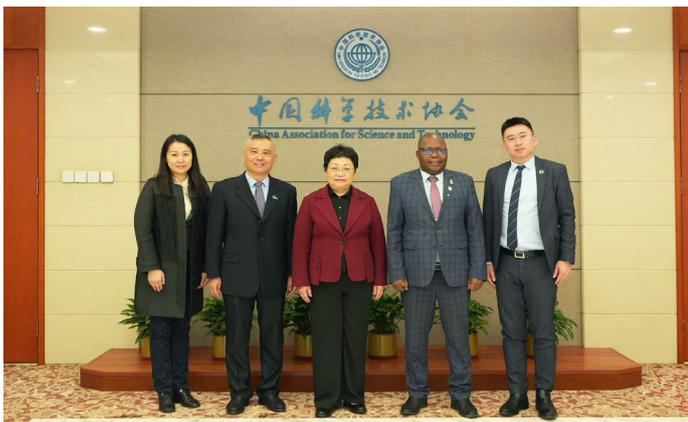


During the event, WFEO and CAST have formally signed a Memorandum of Intent on ECBAP. The initial funding for the programme will be provided by the China Association for Science and Technology (CAST) to support ECBAP International Programme Office (IPO) as a secretariat.



Follow-up on the Programme

On 9-10 April 2025, Eng. Dr. Martin Manuhwa, Chair of the WFEO CECB, officially visited CAST leadership in Beijing and met with ECBAP IPO staff in Tianjin, exploring enhanced cooperation in facilitating China-Africa engineer exchanges and CPD trainings for mutual benefits.



ECBAP Participation at the 2025 UN STI Forum

On 7-8 May 2025, ECBAP was presented at both the main session on STI capacity building and multiple side events of the 10th UN STI Forum in New York by President Eng. Mustafa Shehu, together with Eng. Dr. Martin Manuhwa and Prof. Gong Ke.



ECBAP also held discussions with UN bodies, China's Permanent Mission, FAO, IEEE, and others, reaching consensus on future collaboration. ECBAP was widely recognized at the forum as a practical model for digital capacity building and sustainable development.

Partnerships Building and Global Recognition

Strategic partnerships have been established with organizations including:

- UNESCO,
- UNDESA,
- UNIDO,
- UNU,
- UNEP,
- African Union (AU),
- African Academy of Sciences (AAS),
- Federation of African Engineering Organizations (FAEO), and
- Royal Academy of Engineering (RAEng).

A significant milestone was the recognition by UNESCO, which agreed to include ECBAP within the framework of the International Decade of Sciences for Sustainable Development.

ECBAP has also actively engaged with governments, academic institutions and industry partners on localization, joint training and engineer development, including engaging with H.E. Minister Paula Ingabire, Minister of ICT and Innovation, Republic of Rwanda and H.E. Minister Julius Mattai, Minister of Mines and Mineral Resources, Republic of Sierra Leone, International Research Center of Big Data For Sustainable Development Goals (CBAS) and Sany Group, participating in the 2025 World Economic Forum Annual meeting of New Champions, 2025 Belt and Road Conference on Science and Technology Exchange, 2025 China-Africa Economic and Trade Expo.

With training plans underway with the support of UN Agencies, governments, academic institutions, and industry partners, ECBAP reaffirms its commitment to supporting Africa's engineers and engineering institutions in becoming a driving force for innovation, infrastructure development, and inclusive growth.

Office of Climate Change Education ARRICE - WFEO Project



WFEO recognises that climate change is the one of the most important life threatening truly global challenges. It impacts everyone's life no matter where you live, whether you are poor or rich, whether you are a child, adult, male or female, whether you live in an island or on the continent. It will impact all ecosystems and human societies, albeit in different ways and to different degrees. Addressing climate change requires involvement and action at the local, regional and global level, and education plays a central role in understanding, mitigating and adapting to climate change

**Mr Raj Hemansing Prayag,
President Institution of Engineers Mauritius, speaking
on behalf of WFEO, at the launch of ARRICE**

As part of its commitment to advance knowledge on climate change, WFEO has an active Memorandum of Understanding with the Office of Climate Change Education (OCE), a UNESCO category II Centre based in Paris.

WFEO has been collaborating with OCE in climate change education since 2020, under a project initiated by Dr Marlene Kanga, former WFEO president (2017-2019).

The initial project resulted in a climate change workshop delivered in Mauritius in 2021 and 2022, leaving a significant legacy of capacity development in climate change education. The Institution of Engineers Mauritius, the WFEO national member for Mauritius and the Mauritius Institute of Education were key local collaborators in this project that resulted in world class teacher training in climate change education for primary and secondary school teachers in Mauritius.

The development of the current Africa Regional Resilience Initiative on Climate Education (ARRICE) project, launched in July 2025 in Mauritius, is a continuation of these efforts. This event is supported by WFEO and the Maritime Port Authority of Singapore that has generously provided some of the funding for the workshop.



Mr Raj Hemansing Prayag (center) speaks at the launch of the ARRICE Project in Mauritius, 3 July 2025



SUSTAINABLE DEVELOPMENT GOALS



The ARRICE project is focused on Climate Change Education especially in Africa and the Small Island Developing States (SIDS).



The ARRICE Project is focused on creating awareness about the causes of climate change and its impacts especially in Africa and the Small Island Developing States.



The launch of the ARRICE project is the result of partnership between a number of international and national NGOs and government organizations including UNESCO, the Office for Climate Education (OCE), a UNESCO Category II Centre, the Mauritius Institute of Education (MIE), the Reef Conservation in Mauritius, the Kenya Organization for Environmental Education (KOE), and ENDA Energie in Senegal and was also supported by the Maritime Port Authority Singapore, through WFEO.

ARRICE will be run across Africa and will have significant impact as it assists participating teachers to understand and address the impacts of global warming today, while encouraging positive changes in attitudes and behaviours that are needed to put our world on a more sustainable path in the future.

The ARRICE project aims to promote and improve climate change education for primary and secondary students in Mauritius, Kenya and Senegal over a four-year period. The project focuses on four key areas:

- Developing and adapting contextualized educational resources on climate change;

Key achievements

The collaboration of WFEO with the Office of Climate Change Education for the launch of the Africa Regional Resilience Initiative on Climate Education (ARRICE) and its ongoing delivery, demonstrates the commitment of WFEO to education and capacity building especially in climate change education and for addressing climate change awareness in the Small Island Developing States (SIDS) and in Africa.

- Enhancing teacher skills through active teaching methods;
- Engaging students and communities in hands-on projects; and
- Integrating climate change education sustainably into public education policies.

ARRICE is coordinated by the Office for Climate Education (OCE). The project will be implemented in collaboration with local partners: the Mauritius Institute of Education (MIE), the Reef Conservation in Mauritius, the Kenya Organization for Environmental Education (KOE), and ENDA Energie in Senegal.

A launch of the ARRICE project was held on 3 July 2025, hosted by the Mauritius Institute of Education, a national institution under the aegis of the Ministry of Education, responsible for curriculum development, educational research, and teacher education in Mauritius. The event brought together key stakeholders including relevant Ministries, national institutions, scientific organizations and civil society.

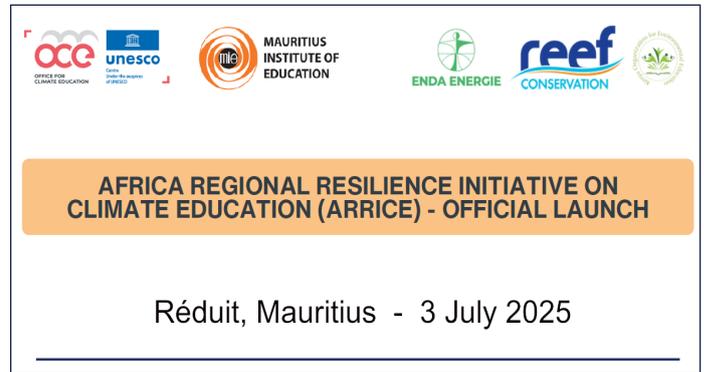
WFEO was represented by the President of the Institution of Engineers Mauritius (IEM) Mr Raj Hemansing Prayag. IEM is the National Member of WFEO from Mauritius.

The launch event was an opportunity to mark the official launch of ARRICE, share insights on the challenges and opportunities of climate change education in Africa, and emphasize the vital role of education in strengthening climate resilience. The kick of meeting also included a Train the Trainers Workshop which will provide ongoing benefits of teaching and education for Mauritius.

WFEO supported climate change education in an important Small Island Developing State (SIDS) which are particularly vulnerable to the impacts of climate change.



Climate Change Train The Trainer Workshop participants at the launch of ARRICE, Mauritius, 3 July 2025



Banner of the ARRICE Project launch event



Banners of the Climate Change Education Workshops delivered in Mauritius in 2021 and 2022

UNESCO-Africa Engineering Week

“

The UNESCO Africa Engineering Week (AEW) is not just an event; it is a story — a continental movement — that began in 2014 and continues to grow in strength and influence. I reaffirm our unwavering commitment to using engineering as a tool of transformation — not just for building bridges and roads, but for building hope, resilience, and prosperity.

Martin Manuhwa,
Chairman of the AEW Steering Committee,
Chair of WFEO Committee on Engineering
Capacity Building and Past President of FAEO

The theme was “*Leveraging Engineering Innovations and Technology to Accelerate Africa’s Socio-Economic Transformation*”.

This year’s gathering is more than a conference — it is a movement of minds and machines, a platform where tradition meets transformation, and where Africa boldly asserts its engineering voice in a rapidly changing global landscape.

10th UNESCO Africa Engineering Week and 8th Africa Engineering Conference / 9 - 13 September 2024

The 11th UNESCO Africa Engineering Week and the 9th Africa Engineering Conference / 14 and 20 September 2025

The Uganda Institution of Professional Engineers (UIPE), UNESCO, the Federation of African Engineering Organizations (FAEO) and WFEO, organized the 11th UNESCO Africa Engineering Week and the 9th Africa Engineering Conference, in Kampala, Uganda.



The UIPE President Eng. Bosco Lepi, the FAEO President Eng. Refilwe Buthelezi and the AEW Steering Committee Chair Dr. Eng. Martin Manuhwa after signing the 11th AEW Hosting Contract at the Kampala Media Centre in Uganda on 6 August 2025

The Order of Engineers of Angola (OEA), in collaboration with UNESCO, FAEO and WFEO, organized the 10th UNESCO Africa Engineering Week and the 8th Africa Engineering Conference in Luanda, the capital of the Republic of Angola.

The theme was “*Engineering the Future: Innovative Infrastructure Solutions for a Sustainable Africa and Swift AfCFTA Implementation*”.

The subthemes were Sustainability and Innovative Infrastructures; Engineering and Acceleration of AfCFTA implementation and Engineering Education and Capacity Building.

The event was a huge success with participation by representatives from the African Union – Scientific, Technical and Research Commission (AU-STRC), UNESCO, WFEO, FAEO and National Engineering Institutions.

The total number of participants was over 500 engineering practitioners and over 1000 online delegates from 26 countries from Africa and worldwide.

The 7th African Women Engineers Forum was organized, along with the Young Engineers Forum.

9th UNESCO Africa Engineering Week and 7th Africa Engineering Conference / 25 - 28 September 2023.



The Engineering Council of South Africa (ECSA), in collaboration with UNESCO, FAEO and WFEO, organized the 9th UNESCO Africa Engineering Week and the 7th Africa Engineering Conference in Pretoria, South Africa.

The theme was "Celebrating and growing Engineering Excellence in the African Region". The event was a huge success with participation by representatives from the Africa Union Commission, Association for the Development of Education in Africa and National Engineering Institutions from 20 countries from Africa and other parts of the world.

The total number of participants included over 700 engineering practitioners and other delegates from Africa and other parts of the world.

There were two parallel sessions for the technical papers, and papers were selected according to the themes: Power and Renewable energy; Policies, Accreditation, Harmonisation; Buildings and Places; Successful PPP Projects; ICT; Transport and Mining; Water; and Transport.

A Women in Engineering Conference and Young Engineering Professionals panel session also took place.

AEW: A Journey Across Africa

Since 2014, the event has grown into a vibrant platform, uniting engineers, governments, academia, youth, the private sector and development partners to align engineering with Africa's growth aspirations. Each AEW edition has focused on pressing developmental challenges as depicted below:

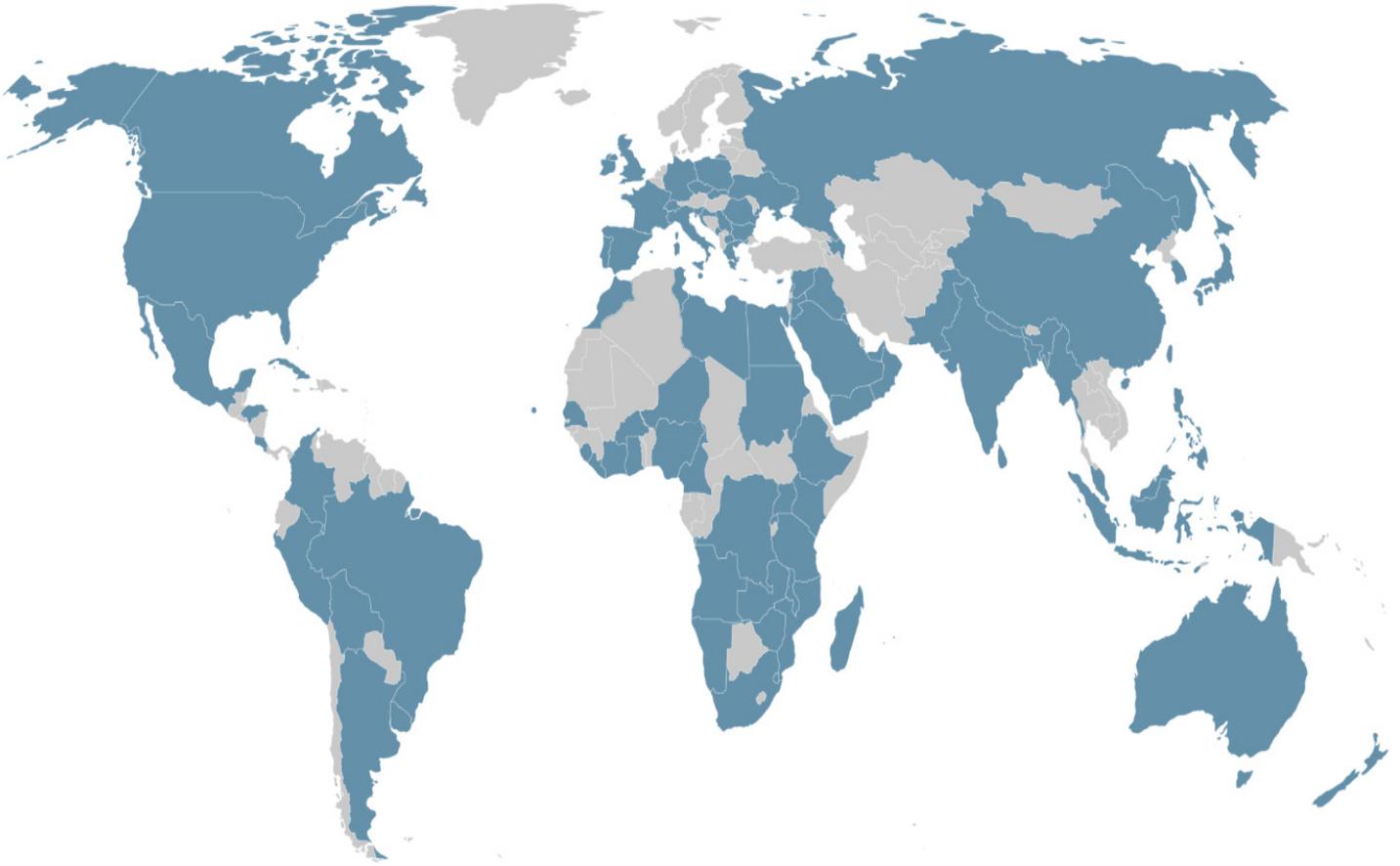
- **2014 – South Africa** (Johannesburg): Engineering is a Life Changer! — Hosted by the *Engineering Council of South Africa (ECSA)* (inaugural event)
- **2015 – Zimbabwe** (Victoria Falls): Engineering Innovation for Accelerated Infrastructure Development for Africa— Hosted by the *Engineering Council of Zimbabwe (ECZ)*
- **2016 – Nigeria** (Akwa Ibom, Uyo State): Adequate, Reliable and Sustainable Energy in Africa — Hosted by the *Nigerian Society of Engineers (NSE)*
- **2017 – Rwanda** (Kigali): Effective Waste Management in Africa — Hosted by the *Institution of Engineers Rwanda (IER)*

- **2018 – Kenya** (Mombasa): Harvesting Blue/Ocean Economy for Accelerated Economic Growth — Hosted by the *Institution of Engineers Kenya (IEK)*
- **2019 – Zambia**: Addressing the SDGs through Sustainable Engineering — Hosted by the *Engineering Institution of Zambia (EIZ)*
- **2021 – Ghana**: Engineering, Inter African Trade and the Sustainable Development Goals — Hosted by *Ghana Institution of Engineering (GHIE)*
- **2022 – Ethiopia** (Addis Ababa): Accelerating Sustainable Infrastructure Development in Africa Together — Hosted by the *Ethiopian Association of Civil Engineers (EACE)*
- **2023 – South Africa** (Pretoria): Celebrating & Growing Engineering Excellence in the African Region — Hosted by the *Engineering Council of South Africa (ECSA)*
- **2024 – Angola** (Luanda): Engineering the Future: Innovative Infrastructure Solutions for a Sustainable Africa and Swift AfCFTA Implementation — Hosted by the *Order of Engineers of Angola (OEA)*



WFEO Members

WFEO has some 130 members & associates from all regions of the world



National and Affiliated Members

Angola	Engineer Angolan Association
Argentina	Junta Central de los Consejos Profesionales de Agrimensura, Arquitectura e Ingeniería
Australia	Engineers Australia
Azerbaijan	Azerbaijan Engineering Academy
Bahrain	Bahrain Society of Engineers
Bangladesh	Institution of Engineers, Bangladesh
Bolivia	Sociedad de Ingenieros de Bolivia
Brazil	Conselho Federal de Engenharia e Agronomia (CONFEA)
Bulgaria	Federation of the Scientific – Engineering Unions in Bulgaria
Burkina Faso	Ordre des Ingénieurs en Génie Civil du Burkina Faso
Cabo Verde	Ordem dos Engenheiros de Cabo Verde
Cameroon	Association Professionnelle des Ingénieurs Conseils et Sociétés d'Ingénierie du Cameroun
Canada	Engineers Canada
China	China Association for Science and Technology
Chinese Taipei (Aff.)	Chinese Institute of Engineers
Colombia	Sociedad Colombiana de Ingenieros
Congo Democratic Rep.	Ordre National des Ingénieurs Civils
Costa Rica	Colegio Federado de Ingenieros y de Arquitectos de Costa Rica
Côte d'Ivoire	Fédération Nationale des Organisations d'Ing. Architectes Géomètres et Urbanistes de Côte d'Ivoire
Croatia	Croatian Chamber of Civil Engineers
Cuba	Unión nacional de arquitectos e ingenieros de la construcción de Cuba
Cyprus	Scientific Technical Chamber of Cyprus
Czech Republic	Czech Association of Scientific and Technical Societies
Egypt	Egyptian Engineers Syndicate
Eswatini	Architects, Engineers, Surveyors & Allied Professionals of Eswatini
Ethiopia	Ethiopian Association of Civil Engineers
Fiji	Fiji Institution of Engineers
France	Ingénieurs et Scientifiques de France

Ghana	Ghana Institution of Engineers
Greece	Technical Chamber of Greece
Honduras	Colegio de Ingenieros Civiles de Honduras
Hong Kong, SAR of China (Aff.)	Hong Kong Institution of Engineers
India	Institution of Engineers, India
Indonesia	Institution Engineers Indonesia
Iraq	Iraqi Engineers' Union
Ireland	Engineers Ireland
Italy	Consiglio Nazionale degli Ingegneri
Japan	Science Council of Japan
Jordan	Jordan Engineers' Association
Kenya	Institution of Engineers of Kenya
Kenya (Aff.)	Engineers Board of Kenya
Korea	Korean Federation of Eng. Organisations
Kuwait	Kuwait Society of Engineers
Lebanon	Ordre des Ing. et Architectes de Beyrouth
Liberia	Engineering Society of Liberia
Libya	Libyan Syndicate of Engineers
Macau, SAR of China (Aff.)	Macau Institute of Engineers
Madagascar	Ordre des Ingénieurs de Madagascar
Malawi	Malawi Institution of Engineers
Malaysia	Institution of Engineers, Malaysia
Malta	Chamber of Engineers, Malta
Mauritius	Institution of Engineers, Mauritius
Mexico	Union Mexicana de Asociaciones de Ing. A.C.
Montenegro	Engineers Chamber of Montenegro
Morocco	Union Nationale des Ingénieurs Marocains
Mozambique	Ordem dos Engenheiros de Moçambique
Myanmar	Myanmar Engineering Council
Myanmar (Aff.)	Fed. of Myanmar Engineering Societies
Namibia	Engineering Council of Namibia
Nepal	Nepal Engineers' Association
New Zealand	Engineering New Zealand
Niger	Order of Civil Engineers of Niger
Nigeria	Nigerian Society of Engineers
North Macedonia	Chamber of Certified Architects. and Eng.
Oman	Oman Society of Engineers
Pakistan	Institution of Engineers, Pakistan
Pakistan (Aff.)	Pakistan Engineering Council
Palestine	General Union of Palestinian Engineers
Peru	Peruvian Engineers Association
Poland	Polish Federation of Engineering Associations
Portugal	Ordem dos Engenheiros
Portugal (Aff.)	Ordem dos Engenheiros Tecnicos
Romania	General Association of Eng. in Romania
Rwanda	Institution of Engineers, Rwanda
Saudi Arabia	Saudi Council of Engineers
Senegal	Union Nationale des Ingénieurs du Sénégal
Serbia	Serbian Chamber of Engineers
Sierra Leone	Sierra Leone Institution of Engineers
Singapore	Institution of Engineers, Singapore
Slovakia	Association of Slovak Scientific & Tech. Societies
Slovenia	Slovenian Chamber of Engineers
South Africa	Engineering Council of South Africa
Spain	Instituto de la Ingenieria de España
Sri Lanka	Institution of Engineers, Sri Lanka
Sudan	Federation of Sudanese Engineers
Switzerland	Swiss National Committee for FEANI-WFEO
Syria	Order of Syrian Engineers and Architects
Tanzania	Institution of Engineers, Tanzania
The Philippines	Philippine Technological Council
Tunisia	Ordre des Ingénieurs Tunisiens
Uganda	Uganda Institution of Professional Engineers
Ukraine	Ukrainian Union Scientific and Eng. Associations
United Arab Emirates	Society of Engineers, UAE
United Kingdom	Institution of Civil Engineers, UK
United States, America (Aff.)	American Society of Civil Engineers
Uruguay	Asociacion de Ingenieros del Uruguay
Yemen	Syndicate of Yemeni Engineers
Zambia	Engineering Institution of Zambia
Zimbabwe	Engineering Council of Zimbabwe

International Members

Commonwealth Engineers Council (CEC)
Engineering Association of Mediterranean Countries (EAMC)
Engineers Europe (Ex-FEANI)
Federation of Arab Engineers (FAE)
Federation of African Engineering Organizations (FAEO)
Federation of Engineering Institutions of Asia and the Pacific (FEIAP)
Federation of Engineering Institutions of South and Central Asia (FEISCA)
International Council On Systems Engineering (INCOSE)
International Federation for Medical and Biological Engineering (IFMBE)
Union Panamericana de Asociaciones de Ingenieros (UPADI)
Union of Scientific and Engineering Associations (USEA, Russia)
World Council of Civil Engineers (WCCE)

Distinguished Fellows

Prof. Dr. Jürgen Kretschmann
Santiago Sotuyo Blanco

Corporate Associates

Archirodon NV
Consolidated Contractors Company (C.C.C)

Non-for-Profit Associates

DMT Society for Teaching and Education (DMT-LB)
European Council of Engineers Chambers (ECEC)
Institute of Electrical and Electronics Engineers (IEEE)
Fondation Université Numérique Ingénierie et Technologie (UNIT)
Global Chinese Power & Energy Society (GCPES)
International Association of Engineering and Architecture (IAEA)
Japan Federation of Engineering Societies (JFES)
Royal Academy of Engineering (RAEng)
South African Institution Of Civil Engineering (SAICE)

Sponsors

Thanks to our corporate and non-for-profit generous donors, WFEO has been able to achieve some key projects and activities, including World Engineering Day celebration, awards and engineering education projects. We are grateful for their support

Consolidated Contractors Company (C.C.C)
Gree Electric Appliances.

World Engineering Day Sponsor: St James's House

WFEO Awards 2023 and 2024

The purpose of WFEO Awards is to direct the world's attention to the role of engineering in sustainable development.



World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs



让世界爱上中国造

2024 WFEO GREE Women in Engineering Award

The WFEO GREE Women in Engineering Award is sponsored by GREE Electric Appliances, the world's largest manufacturer of white goods, based in China and founded by Madam Dong Ming Zhu. The award provides recognition and visibility to outstanding women engineers, having shown professional excellence in their work, and as role models and leaders.

WFEO GREE Women in Engineering Award Laureate



Prof. Syuhaida Binti Ismail from Malaysia.

Prof. Ismail is an Associate Professor at the University of Technology Malaysia in Kuala Lumpur and the Director of Research at the Maritime Institute of Malaysia.

Her remarkable contributions to engineering education and research make her a deserving recipient of this honor.

WFEO extends its heartfelt congratulations to Prof. Ismail on behalf of its national, regional, international, and associate member institutions.

Special Recognitions

In addition to the main award, two exceptional candidates have been awarded special recognition certificates.



Ms. Sylvia Yammine from Lebanon.

Ms. Yammine is the Chief Executive officer of the architectural firm SY-Architects. She has many years of experience in design, planning, residential, interior, consulting, and development including numerous years within varied healthcare settings and in urban planning.

She is a member of the order of Engineers and Architects' in Tripoli Lebanon. She studied architecture at the Lebanese University and urban planning at the "Academie Libanaise des beaux arts" (ALBA).



Ms. Dolores de la Concepción Lahaba Estrada from Cuba

Ms. Lahaba Estrada was the first female civil engineer specializing in railways in Cuba, a position she held for 18 years.

She has received other important awards throughout her extensive professional career, such as the National Lifetime Achievement Award granted by UNAICC and the World Engineers Convention (MJEC Brazil) and CONFEA-CREA Women's Forum, both in 2008.

Also, in 2016, she was recognized by the advisory committee and organizing committee of the XIII Ibero-American Congress of Women Engineers, Architects, and Surveyors as an Outstanding Professional Woman of Ibero-America.

On 13 October 2023 meeting in Prague, WFEO's Executive Council approved the Laureates for the following WFEO awards.

2023 WFEO GREE Women in Engineering Award



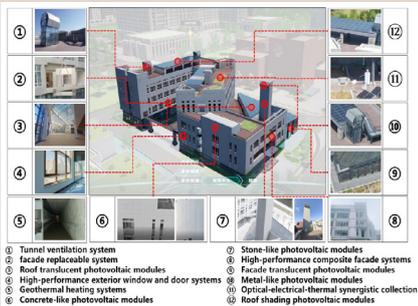
Prof. Yandan Lin from China

Prof. Yandan Lin is a professor at the School of Information, Science and Technology of Fudan University.

Prof. Yandan Lin received B.S. and Ph.D. degrees in the Department of Light Sources & Illuminating Engineering, Fudan University. She also received PhD education in Technical University of Darmstadt in Germany.

Her research interests include visual comfort, color vision, and human-centric lighting. She has been awarded more than 30 funding projects, including the National Natural Science Foundation of China, and the Special Projects for China Commercial Aircraft and Railway Vehicles. She is the Chair of The China International Automotive Lighting Forum (IFAL), and is active in the field of color vision and lighting.

2023 Hassib J. Sabbagh Award for Engineering Construction Excellence



The Prize was attributed to the project "Demonstration Building with Solar Photovoltaic-Electricity-Thermal Sequential Conversion (Building No. 7 of the iHarbour campus), Xi'an Jiaotong University, China" nominated by the China Association for Science and Technology.

To achieve future-oriented experimental research and talent training in the field of Zero-net carbon building design, the faculties and students from School of Human Settlements and Civil Engineering (HSCE), Xi'an Jiaotong University (XJTU), China jointly and independently designed the project of Building 7 of the iHarbour campus of XJTU. This project maximized the value of building performance through a variety of innovative designs.

- ① Tunnel ventilation system
- ② facade replaceable system
- ③ Roof translucent photovoltaic modules
- ④ High-performance exterior window and door systems
- ⑤ Geothermal heating systems
- ⑥ Concrete-like photovoltaic modules
- ⑦ Stone-like photovoltaic modules
- ⑧ High-performance composite facade systems
- ⑨ Facade translucent photovoltaic modules
- ⑩ Metal-like photovoltaic modules
- ⑪ Optical-electrical-thermal synergistic collection
- ⑫ Roof shading photovoltaic modules

2023 WFEO Medal for Excellence in Engineering Education



Prof. Sally Male from Australia

Prof. Male is an engineering teacher at Melbourne University, and was nominated by Engineers Australia.

Prof. Male has committed her career to providing engineering students of all backgrounds the best possible opportunity to develop capabilities and attributes to lead successful lives contributing to a well-functioning society. She has achieved this through industry-engaged teaching and research, and through leadership in engineering education research, especially on curriculum development, industry engagement and inclusion. Male has made wide-reaching contributions to enhancing engineering education across Australia and internationally.

World Engineering Day 2026



The official global celebration will be hosted by the Institution of Engineers Indonesia (PII) and will take place from March 3 to 5, 2026, at Balai Kartini Ball Room in Jakarta, Indonesia. The 2026 global celebration will be hosted by Indonesia under the theme: **“Smart Engineering for a Sustainable Future Through Innovation and Digitalization.”**

This theme reflects a growing global realization that sustainable development can no longer depend solely on vision statements, policy declarations, or high-level commitments. Over the last decade, the world has witnessed numerous global forums and events filled with opinions, analyses, and recommendations articulated by prominent speakers. While valuable, these discussions have too often resulted in limited tangible outcomes. The current global challenges—ranging from climate change and environmental degradation to supply-chain disruptions, energy insecurity, public health crises, and widening socio-economic inequalities—demand a fundamental shift from discourse to decisive action and implementation.

In this context, World Engineering Day 2026 emphasizes the emergence of engineering leadership as a critical force for change. It calls upon engineers to move beyond traditional, narrowly defined technical roles and to take responsibility for shaping, financing, and delivering real-world solutions at scale. This requires individuals with not only technical excellence, but also the capacity to integrate innovation, digital technologies, systems thinking, and leadership experience in order to translate ideas into operational projects that generate measurable economic, social, and environmental impact.

The Jakarta celebration will highlight how engineers—working in close partnership with governments, industry leaders, financial institutions, academia, and civil society—can drive this transformation. Particular attention will be given to the application of smart and digital engineering approaches in large-scale infrastructure, energy systems, sustainable industry, transport, urban development, and environmental management. The programme will also underscore the importance of cultivating a new generation of engineers who possess the vision, competence, and leadership track records required to guide complex projects from conception through implementation and long-term operation.

World Engineering Day 2026 will bring together leaders of the global engineering profession, senior policymakers, industry executives, academic leaders, and young engineers from all regions. Through keynote addresses, high-level dialogues, plenary and technical sessions, and exhibitions, participants will exchange best practices, showcase proven solutions, and strengthen international cooperation aimed at accelerating sustainable development outcomes.

Our Sponsors

WFEO Sponsors



Consolidated Contractors Company (CCC) is the largest construction company in the Middle East and ranks among the top 25 international contractors with a revenue of US\$5.3 billion in 2013 and 1.872 billion by 2020. CCC has offices and projects in over 40 countries, and in 2023 had a workforce of 36,000 employees.



Gree Electric Appliances Inc. of Zhuhai is the world's largest residential air-conditioner manufacturer. The Company distributes its products within China's domestic market and to overseas markets under the brand name of GREE.

World Engineering Day Sponsor



St James's House is a leading publishing, communications and events company that supports a range of public, private and third-sector organizations. St James's House boasts a bold visual identity; one that has earned them a reputation as one of the world's leading publishing and communications companies.

Editors

Jacques de Méreuil, Théo Belaud, Ivan Juiz and the WFEO contributors

Design

Ivan Juiz



World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs
Federación Mundial de Organizaciones de Ingeniería
Всемирной федерации инженерных организаций
الإتحاد العالمي للمنظمات الهندسية
世界工程组织联合会



**WORLD
ENGINEERING
DAY** FOR SUSTAINABLE
DEVELOPMENT

“Engineers, men and women, are constantly innovating to meet the contemporary challenges of our world“

Excerpt from the message of
Ms Audrey Azoulay, Director-General of UNESCO,
on 4 March 2025, to celebrate the
World Engineering Day for Sustainable Development

WFEO / FMOI
Maison de l'Unesco - 1 rue Miollis, 75015 Paris, France
Tel : +33 (0) 1 45 68 48 46
secretariat@wfeo.org www.wfeo.org @wfeo

