WFEO YOUNG ENGINEERS / FUTURE LEADERS COMMITTEE (YEFL)

The YEFL committee comprises a dedicated group of young engineers who willingly strive to establish YEFL as the foremost global authority representing the voices of young professionals in the engineering field. The YEFL's endeavors revolve around fostering a sustainable ecosystem, valuable resources, and an influential platform for young engineers within the WFEO community. By emphasizing the vital contribution of young engineers worldwide towards realizing the United Nations' Sustainable Development Goals, the YEFL aims to promote their recognition and success.



Firas N Bou Diab

Chair, WFEO-YEFL Committee

Federation of Lebanese Engineers (FLE)

MAIN THEMES COVERED IN THE PAST Two YEARS: (2021-2023)

"Engineering the Cities of the Future", Madrid

On March 2, 2023, the Chair of YEFL participated in a roundtable discussion titled "Mobility and Communications: Challenges of a Sustainable Urban Environment" at the "Engineering the Cities of the Future" conference in Madrid. During the event, the Chair also delivered a talk on "Roads Design Fundamentals for Traffic Safety". The round table discussion focused on the pressing challenges of creating sustainable urban environments, particularly in terms of mobility and communication. The Chair shared insights and the perspectives on topic. emphasizing the importance of integrating innovative engineering solutions to ensure a safe and efficient transportation system. presentation on roads design fundamentals provided valuable



insights on enhancing traffic safety in urban areas. The participation of the YEFL Chair contributed to the conference's goal of exploring ways to engineer the cities of the future with a focus on sustainability and urban development.

2023 Global Hackathon for Engineering Students

YEFL participated successfully in organizing a Global Hackathon for engineering students as part of the celebrations for WED 2023. The Hackathon focused on young engineers and students from around the world, allowing them to participate in the festivities. Over 1000 pre-event registrations were received, with 429 students forming 112 teams from 23 countries. The

competition revolved around three UN SDGS: **Zero Hunger, Good Health and Wellbeing, and Clean Water and Sanitation**. The winners of the Hackathon presented innovative solutions related to these challenges.



YEFL and Partners celebrated WED 2023

Aligned with 2023 theme: Engineering Innovation for a more Resilient World and as part of the WED Celebrations, YEFL committee organized a webinar on 24 Feb 2023 titled: Smart Sustainable Communities And Frontier Technologies, in collaboration with FIDIC, UITP and SPEED. Frontier technologies have enabled cities to reimagine the way they manage urban complexities and infrastructure, from enhancing cities' responsiveness, optimizing energy efficiency to improving access to public services. With proper guidance, frontier technologies can make cities smarter and more sustainable, and provide the opportunity for leapfrogging, accelerating the global progress towards the new urban agenda and the sustainable development goals.



WFEO-UNESCO Joint Meeting for Member States – The strategic role of engineering for accelerating the delivery of the 2030 Agenda

The Chair of the YEFL Committee actively took part in an event held at UNESCO Headquarters in Paris on **October 27, 2022**. The event showcased the collaborative efforts between UNESCO and WFEO in addressing the (SDGs) through engineering capacity building and education. By working together, the Sector for Natural Sciences and WFEO demonstrated how sectors, Member States, and NGOs in official relations can collaborate towards shared objectives for the greater good. The event underscored the importance of engineering in regional and national contexts, emphasizing its role in fostering inclusive and responsible communities. Firas Bou Diab's involvement in the event highlighted the YEFL Committee's dedication to involving young engineers in driving sustainable development. Under the moderation of WFEO President José Vieira, the YEFL Chair delivered a presentation titled "Young Engineers Initiatives on SDG13". This presentation shared valuable insights and initiatives aimed at mobilizing young engineers to contribute to the progress of this particular goal.



YEFL in the WED 2022 Hackathon

Embracing the 2022 theme of "Build Back Wiser – Engineering the Future", the WED Hackathon fostered teamwork among engineering students as they tackled a pressing global issue. This competition simulated a real-world project, challenging teams to collaborate and produce tangible results within a tight timeframe. Notable partners, including the International Engineering Alliance, the International Federation of Engineering Education Societies, the Global Engineering Deans Council, and Engineers Without Borders-International, supported the event. The Chair of YEFL and committee members took an active role in the Hackathon working group, participating in preparatory meetings. Additionally, committee members played a crucial role in the preliminary judging process, while the YEFL Chair served as one of the Finalist Judges for the Hackathon.



WFEO World Engineering Day 2022 Global Hackathon Winners: Team WONDERPETS, Reaner Jacqueline Bool, Ghia Luwalhati and Nicole Elizabeth Tan Batangas State University, the Philippines. Photo Source: Team members









YEFL and Partners celebrated World Engineering Day 2022

In line with the 2022 theme, "Build Back Wiser - Engineering the Future" and as part of the WED celebrations, a captivating panel titled "An Inspiring and Collective Young Engineering Vision". The panel consisted of distinguished leaders hailing from various geographical regions, who were nominated esteemed by organizations such of Federation International Consulting Associations (FIDIC) Young Leaders Council, European Young Engineers (EYE), and The Student Platform for Engineering Education Development (SPEED).



This diverse lineup of panelists aimed to present their perspectives and provide an inspiring, united vision of the crucial role young engineers play in shaping a sustainable future through engineering.

YEFL Webinar Series "Engineering the Future"

YEFL Webinar Series "Engineering the Future" holds immense significance in the current context, where engineering plays a vital role in designing resilient and sustainable societies. The webinar series aims to shed light on the crucial role of engineering design and systems-based approaches in identifying, mitigating, and reducing risks, as well as facilitating recovery. It serves as a platform to discuss key challenges that need to be addressed and explore opportunities for enhancing engineering systems across multiple sectors.

Moreover, the sessions will delve into the various levers that can drive the shift towards more sustainable social, economic, and environmental systems. These levers include technology, finance, governance, and collective action, which collectively

contribute to the transformation of our societies. By fostering dialogue and knowledge sharing, the YEFL Webinar Series "Engineering the Future" contributes to advancing the field of engineering, promoting sustainable development, and creating a platform for collaboration among professionals, experts, and stakeholders. The below flyers contain detailed information about each webinar, including the topics covered, guest speakers, and dates.

June 6, 2023



Oct 24, 2022



Sep 1, 2022





Chair of YEFL Support the 100th Anniversary Conference of the Geological Society of China

During the conference held on **November 29**, **2022**, to celebrate the Geological Society of China's (GSC) 100th anniversary, the Chair of YEFL Committee addressed the attendees. The speech emphasized GSC's significant global influence in Earth science communication, its role in providing impartial scientific information, and its support for policy-making. YEFL expressed enthusiasm and willingness to collaborate with GSC in cultivating an inclusive Earth science community. The speech highlighted the continued importance of supporting GSC and similar initiatives. The Chair expressed gratitude for the invitation and extended well wishes for a productive meeting. The remarkable milestone of GSC's centenary was duly acknowledged and celebrated.



Chair of YEFL Addresses The 2022 Global Roundtable For Young Scientist Scholar



YEFL Chair had the honor of delivering a keynote speech at the Global Roundtable for Young Scientist Scholars. The address focused on the Young Engineers Initiatives concerning SDG13 and highlighted the impactful journey of YEFL leading up to COP26. The keynote speech provided a platform for the Chair of YEFL to showcase the organization's commitment to addressing climate change and promoting sustainability through the lens of engineering. The Young Engineers Initiatives, spearheaded by YEFL, have consistently emphasized the critical role that young scientists and engineers play in shaping a sustainable future. The Chair's keynote speech was a call to action, encouraging young scientist scholars to actively engage in addressing SDG13 and contribute to sustainable development through engineering.

The address sparked discussions on the role of youth in advancing climate action, fostering collaboration, and harnessing technological innovations to create a more sustainable world.

UNDRR Risk Reduction Hub event "Accelerating Implementation of DRR and Resilience in Infrastructure."

The Risk Reduction Hub, coordinated by the UN Office for Disaster Risk Reduction (UNDRR), was held on 17 May 2023. The Hub served as a space for non-state actors and government representatives to discuss key themes for advancing risk reduction across sectors, regions, and contexts. YEFL contributed with a statement (available here) from youth on supporting governments to integrate resilience as a core value in infrastructure planning and implementation.



7th Annual Multi-stakeholder Forum on Science Technology and Innovation for the Sustainable Development Goals - Virtual Side Event









YEFL presented the side event on "Preparing the Future Engineering Workforce to Achieve the SDGs Through Multi-Stakeholder Engagement" at the UN STI Forum on May 6, 2022.

The event was split into two sections. The first section allowed organizations such as the **International Telecommunication Union (ITU)**, **WFEO-YEFL**, **Engineering for Change (E4C)**, and academic and industry partners, to share

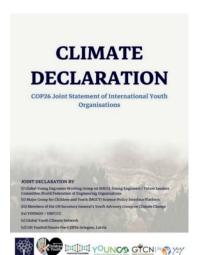
outcomes of programs that prepare rising engineers to apply their skills for sustainable development. The second half is an interactive discussion of best practices, opportunities for growth, and barriers that prevent young engineers from aligning their work with the SDGs. Pulkit Kanotra and Michaela Chan, discussed the YEFL role in Climate Action and how it pertains to SDG 13 and showcased the YEFL strategies to mitigate effects from climate change





COP 26

At COP26, the YEFL working group on SDG13 advocated for and shared the joint statement with key policymakers and advocates, including John Kerry, Nigel Topping, and Alok Sharma. The WG also contributed to the Oceans for Climate declaration. Members of the YEFL WG ONN SDG13 participated in and organized COP26 Blue Zone events that focused on business and entrepreneurship, and initiated interactions between young entrepreneurs and wellestablished international financial institutions. The WG also contributed to multiple media engagements, such as the Engineers Without Borders Australia podcast, Institution of Civil Engineers interviews, COP26 Resilience Hub article, and individuals' posts on LinkedIn.

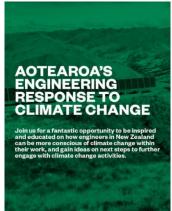




COP 26 Joint Statement of International Youth Organizations

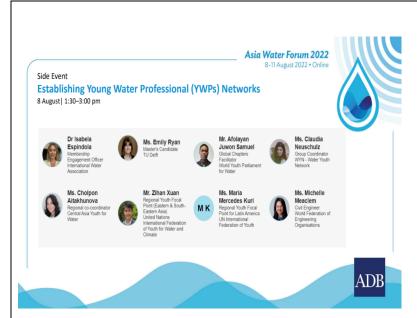
Capacity Building Webinars

The YEFL working group on SDG13 recognized that capacity building is key to meaningful inclusion of youth in climate action. As a result, the YEFL WG on SDG13 created several capacity building opportunities for young engineers and youth in general. Capacity building sessions included En-ROADS Climate Solutions Simulator (a global model that focuses on how changes in the energy, economic, and public policy systems could affect greenhouse gas emissions and climate outcomes) and a UNFCCC COP Simulator (a practical webinar discussion aimed at unwrapping the barriers, jargon and processes around the COP conferences and how youth can maximize impact at COP, especially if they have never attended before).

















COP27

The YEFL working group on SDG13 led the UNFCCC official side event at COP27 on Utilizing expertise of the youth to bridge

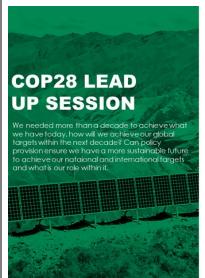


and improve access to finance. In the lead up to held this event, partnership with the International Federation of Consulting **Engineers** (FIDIC), the Association of Commonwealth Universities, Commonwealth Parliamentary Association, International Water Association, and Moravian University, stakeholder consultations were conducted to identify barriers and opportunities for youth engagement in policymaking. The WG also participated in and contributed to the Organisation of events at

the science-policy divide

the Capacity-building Hub, Children & Youth Pavilion, and Sustainable Development Goals Pavilion. During COP27, members of the YEFL working group on SDG13 also had the opportunity to facilitate bilateral meetings with parties and to advocate for capacity building, a clean energy transition, loss and damage, and climate finance.

COP28 LEAD UP SESSION





Key Questions

- o Achieving global targets: A journey from past to present.
- o Policy's role in sustainability and the Paris Agreement (2030 & 2050).
- Climate change's accelerating impact demands action.
- o Young engineers advocate for governmental change as COP28 approaches.

How can young people be leaders in the world of STEAM?

We've got answers for you - with a special focus on engineering! Join the Young Engineers / Futures Leaders (YEFL) Committee of the World Federation of Engineering Organizations (WFEO) to learn about their exciting experiences and opportunities, including building your capacity for future leadership roles.





















Collaboration in Action

E4C | Engineering for Change



FIDIC | International Federation of Consulting Engineers



KEY ACHIEVEMENTS, PUBLICATIONS, DECLARATIONS ETC.

CLIMATE DECLARATION - COP26 Joint Statement of International Youth Organisations, by

- o WFEO Young Engineers / Future Leaders Committee,
- Major Group for Children and Youth (MGCY)Science-Policy Interface Platform
- o Members of the UN Secretary General's Youth Advisory Group on Climate Change
- YOUNGO UNFCCC
- o Global Youth Climate Network
- o UN Youth4Climate Pre-COP26 delegate, Latvia

Singapore Sea Level Rise Design Competition

The YEFL entered and won the grand prize of the <u>Singapore Sea Level Rise Design Competition</u> run by Water Science Policy (WSP) and Institute for Environment and Sustainability (IES) at the Lee Kuan Yew School of Public Policy, National University of Singapore. The winning entry was published on the <u>WSP website</u>. The entry was a multi-faceted approach that aims to forefront the importance of nature-based solutions in mitigating and reducing the consequences of sea level rise. An inclusive and equitable approach is important, and we hope that this competition is only the first step in engaging young professionals in creating a sustainable planet for all.

ICPS Climate Policy Competition

The YEFL working group on SDG13 entered the Institute for Climate Policy Solutions' <u>Climate Policy Competition</u> with a proposal of a framework to establish equitable, long-lasting youth inclusion in climate policies. This policy implements a purpose-built, globally-relevant, locally-adaptable framework for the inclusion of young people in climate policy. Governments' representation of their people should be based on open communication and continuous collaboration, especially with historically underrepresented groups. This must be reflected through systemic processes and procedures, signaling the commitment to long-lasting partnership. As such, the implementation of the framework proposed will build and strengthen enduring relationships between youth and their representative governments, globally. This work will form the basis for the continued development of the framework following our initial engagement at COP27.

CALL TO ACTION

As Young Engineers, commit to embracing innovation, upholding ethics, promoting sustainability, collaborating widely, investing in learning, engaging globally, communicating effectively, celebrating diversity, and being adaptable problem solvers. Together, we will shape a brighter future through engineering excellence.

