

# **WFEO-UNESCO/SC**

## **Information Meeting for Member States**

**The Strategic Role of Engineering for accelerating the  
delivery of the 2030 Agenda**

**Young Engineers Initiatives on SDG13**

**Firas Bou Diab**

Oct 27, 2022

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## YOUNG ENGINEERS / FUTURE LEADERS (YE/FL)

### VISION and MISSION

- o YEFL is a motivated team of young engineers that work voluntarily to make YEFL acknowledged and celebrated as the global leader for the young voices of the Engineering profession.
- o The work of the YEFL is aimed at enabling a sustainable ecosystem that provides support, resources and a platform for young engineers in the WFEO community, highlighting the role of young engineers worldwide in achieving the UN Sustainable Development Goals.



Young Engineer Podcasts, World Engineering Day 2021





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



## Global Climate Strikes

September 2019: Over 7 million people in 185 countries

## Role of Youth Community in UN Policy and Engineering

- **YOUTH** are a critical stakeholder in reaching **SDG 13 targets**
- **Youth Engagement** in the **UN policies** is vital to establish initiatives to accelerate progress on SDG 13
- **Young Engineers** are essential in providing solutions to meet the targets
- Coordinated capacity between the community of young engineers and **UN Youth** has yet to be fully deployed.
- **AIMS** for an engineering community where a diverse and inclusive membership can work collaboratively towards innovative climate mitigation strategies, engaging **Women** and Young Engineers in particular to combat *Climate Change*.

# YOUNG ENGINEERS' CONTRIBUTION TO SDG 13

WG on SDG 13

## Aim

YEFL set-up a working group on SDG 13 to Establish the strategy, defining how Young Engineers can contribute to SDG 13 and WFEO Declaration on Climate Emergency 2019

## Objectives

- ✓ To collect and record best practices and challenges faced by Young engineers from Africa, Americas, ME, Asia / Pacific, Europe in Climate Action.
- ✓ Investigate the gaps and define the Climate Action strategy for Young Engineers.
- ✓ Assist with the analysis of the technical, economic and environmental feasibility of sustainable development proposals, and the implementation of Best Practices to achieve SDG 13

## Projected Results

The role of WFEO Young Engineers in SDG 13 is defined and deployed. WFEO YEFL Committee engage with Young Engineers representatives of all WFEO Members and collaborate with External Organizations, such as **UN-MGICY, YAG, YoU-CAN,...**

## Insights Gained

### ❖ Insight 1

**Work with other Youth Networks to provide a Unified Youth Voice**

### ❖ Insight 2

**Help Young Professionals and Youth make an Impact**

### ❖ Insight 3

**Partner with Specialists to bridge gaps**

## Insight 1

### Work with other Youth Networks to provide a Unified Youth Voice

#### YEFL JOURNEY TO COP26

- Collaboration between Key Youth Organizations
- Formal endorsements from NGOs such as International Secretariat for Water/Le Secrétariat international de l'eau (ISW) and Global Water Partnership (GWP)
- Shared widely with government delegations, media, NGOs, and the 2021 UNFCCC Climate Champions.
- Collaboration with Young Professionals and Youth Networks to organize intergenerational dialogues and events to amplify Youth Voices
- Although each network has its differences, working together enables amplified voices. Partner and learn from the diverse strengths and experiences of other networks/people.

# CLIMATE DECLARATION

COP26 Joint Statement of International Youth Organisations

## JOINT DECLARATION BY

- (i) Global Young Engineers Working Group on SDG13, Young Engineers / Future Leaders Committee, World Federation of Engineering Organizations
- (ii) Major Group for Children and Youth (MGY) Science-Policy Interface Platform
- (iii) Members of the UN Secretary General's Youth Advisory Group on Climate Change
- (iv) YOUNGO – UNFCCC
- (v) Global Youth Climate Network
- (vi) UN Youth4Climate Pre-COP26 delegate, Latvia



First published: 28 October 2021



#	Policy Recommendation	Outcome from COP26
1	Update and implement NDCs consistent with limiting the overall global warming to 1.5°C.	Reaffirmed long-term global goal (Intergovernmental Panel on Climate Change Sixth Assessment Report).
2	Stop/prohibit exploration and development of new fossil fuel projects on a timescale compatible with the 1.5°C pathway.	Recognized (Intergovernmental Panel on Climate Change Sixth Assessment Report). Invited Parties to consider further action - phase down (not phase out) unabated coal power.
3	Develop GHG/methane emissions mitigation strategies and commit to reducing human-caused methane emissions by a minimum of 30% of 2020 levels by 2030.	~80 Countries signed the Global Methane Pledge.
4	Ensure reasonably practicable protection of public health and livelihoods from the adverse effects of climate change, with a particular focus on groups and communities most vulnerable.	Welcomed recent pledges to increase climate finance by some developed country parties. Raised concern on provision of climate finance for adaptation - insufficient and unpredictable (Parties missed 2020 target, so urged parties to meet by 2025).
5	Deploy the necessary education capabilities to train more scientists and engineers, to implement the appropriate technologies for mitigation and adaptation.	Acknowledged progress made on capacity building - enhancing coherence and coordination of capacity building activities towards implementation of the Convention and the Paris Agreement. Recognized the need to continue supporting developing country parties.
6	Introduce built environment regulations that are compatible with the 1.5°C climate targets.	(Not discussed).
7	Ensure meaningful and inclusive participation of local communities in the creation of National Adaptation Plans on addressing climate risks and building resilience.	Welcomed the national adaptation plans submitted to date, which enhance the understanding and implementation of adaptation actions and priorities - to be presented in COP27.
8	Develop supplementary Adaptation Plans putting Integrated Water Resources Management (IWRM) at the centre of their strategy.	Recognized. (No Action).
9	Transparency of climate negotiations and greater meaningful involvement of young professionals at the national and international levels.	Recognized. Expressed appreciation for the outcome of the sixteenth conference of Youth organized by YOUNGO and the Youth4Climate2021: Driving Ambition event hosted by Italy in September 2021.
10	Clarity on the division of responsibilities in climate mitigation and adaptation action between national and local government, business and civil society and incorporate youth networks into the UNFCCC Climate Action Pathways.	Welcomed the action taken to unlock the potential sectoral action to contribute to fulfilling and implementing national targets. Recognized the important role of non-Party Stakeholders. Noted discussions on the governance of the Warsaw International Mechanism on Loss and Damage associated with Climate Change impacts did not produce an outcome.
11	Support science, technology, innovation (STI) that include engineering as critical components to informing, advising, implementing, and monitoring impact.	Recognized.
12	Support the creation of new green jobs and development of skills for youth by advancing their participation in global green jobs initiatives.	Recognized, Green Climate Fund.

## WORKING GROUP JOURNEY TO COP26



*The working group with COP26 President Alok Sharma*



*The working group with United States Special Presidential Envoy for Climate*



*The working group with a French COP26 delegate*



*The working group with the European Commission Vice President*



*The working group with the New Zealand lead negotiator*



*The working group with the UN Secretary General*



*The working group with Johan Rostrom*



*The working group participating in virtual event at Resilience Hub*



## Insight 2

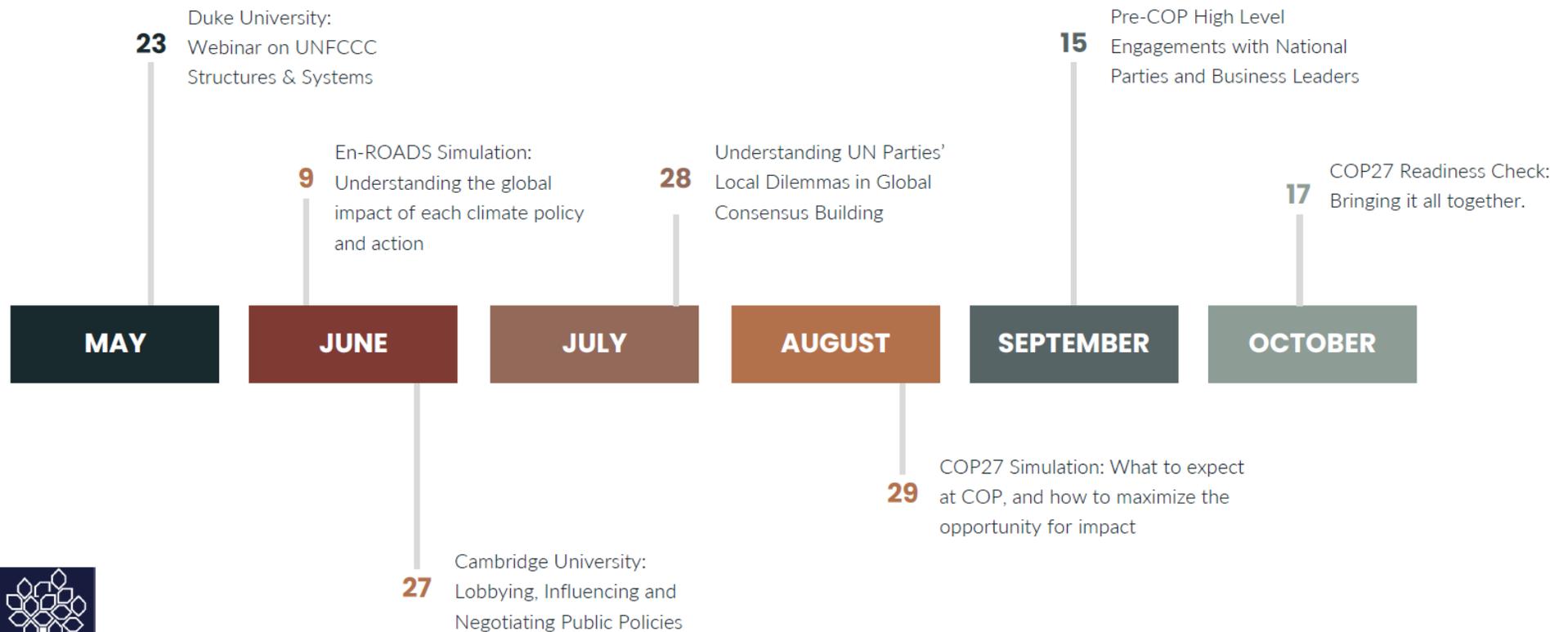
### Help other Youth & Young Professionals make an Impact

- There may be knowledge gaps which networks can help bridge.
- **A major observation:** the barrier many youth face is understanding the structures, systems and processes around negotiations and policy-making.
- **Response:** capacity-building/training sessions to help interested youth make an impact in discussions with policy-makers (including at the UNFCCC COPs).

## Insight 2

# Help other youth & young professionals make an impact

### Capacity Building Roadmap



# Capacity Building Webinars



**AOTEAROA'S ENGINEERING RESPONSE TO CLIMATE CHANGE**

Join us for a fantastic opportunity to be inspired and educated on how engineers in New Zealand can be more conscious of climate change within their work, and gain ideas on next steps to further engage with climate change activities.

**FREE ONLINE EVENT**  
 5.30-6.30PM, 20 OCTOBER



**TRACEY RYAN** **NICOLE ROSIE** **RICHARD** **EVANGELOS**

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Side Event  
**Establishing Young Water Professional (YWP) Network**  
 8 August | 1:30-3:00 pm



**Dr Isabela Espindola**  
 Membership Officer  
 International Water Association

**Ms. Emily Ryan**  
 Master's Candidate  
 TU Delft

**Mr. Afolayan Juwon Sam**  
 Global Chapters Facilitator  
 World Youth Parliament for Water

**Ms. Cholpon Aitakhunova**  
 Regional co-coordinator  
 Central Asia Youth for Water

**Mr. Zihan Xuan**  
 Regional Youth Focal Point (Eastern & South-Eastern Asia)  
 United Nations International Federation of Youth for Water and Climate

**Ms. Maria Mercedes Kt**  
 Regional Youth Focal Point for Latin America  
 UN International Federation of Youth for Water and Climate



**THE EN-ROADS CLIMATE WORKSHOP**

The En-ROADS Climate Workshop helps build support for strategies to address climate change via interactive testing of the cutting-edge simulation model En-ROADS, created by Climate Interactive and MIT Sloan.

- When & where:**
- 9th June at 17:00 BST
  - Online (Zoom): [bit.ly/en-roads-workshop](https://bit.ly/en-roads-workshop)

**Contacts:**

[woods.kilian@gmail.com](mailto:woods.kilian@gmail.com)  
[wfoeyef.climateaction@gmail.com](mailto:wfoeyef.climateaction@gmail.com)

In the workshop, participants propose climate solutions such as energy efficiency, carbon pricing, fossil fuel taxes, reducing deforestation, and carbon dioxide removal. The facilitator then tests these approaches using En-ROADS so that participants can see the impact on global temperature and other factors.

Join us to experience what it's like to create your own climate future using grounded conversations; the resulting experience is hopeful, science-based, action-oriented, and eye-opening.

Hosted by *Kilian Woods*

**Capacity-building webinar:**  
**COP27 SIMULATION: What and how to maximise your impact**

Panel discussion aiming to prepare young people for COP27; co-organised by young policy-makers, and UNFCCC



Moderated by:  
**Jodi-Ann Jue Xuan Wang**  
 Canadian G20 Youth Representative

**Omnia El Omrani**  
 COP27 Envoy on Youth

**Milda Pladaite**  
 Founder, WFEO YE/FL Working Group on Climate Action

**Alice Preston-Jones**  
 Senior Programme Manager, The Prince's Foundation

**Rianna Gonzales**  
 Water Resources Specialist, Youth Engagement, Global Water Partnership

**JOIN US ON ZOOM 14:00 – 15:30 BST, THURSDAY 8 SEPTEMBER**  
 via QR code or <https://bit.ly/3Q2NUTQ>





## Insight 3

### Partner with Specialists to bridge gaps

- **Specialists** to provide guidance and build understanding in knowledge gap areas.
- Our initial knowledge **gaps** were in the landscape of policy-making and presenting policies to policy-makers.
  - Hon. Charles Hendry
  - COP26 & Beyond
- **Policy advice**, for example:
  - World Green Building Council
  - ISW
  - United Nations Major Group for Children and Youth
  - Vladislav Kaim, UN Secretary General's Youth Advisor on Climate Change
- Importance of **pre-negotiation engagements** with negotiating blocks

## 2022-2023 Strategic Plan Themes

**THEME 1**  
Climate Policy  
Recommendations



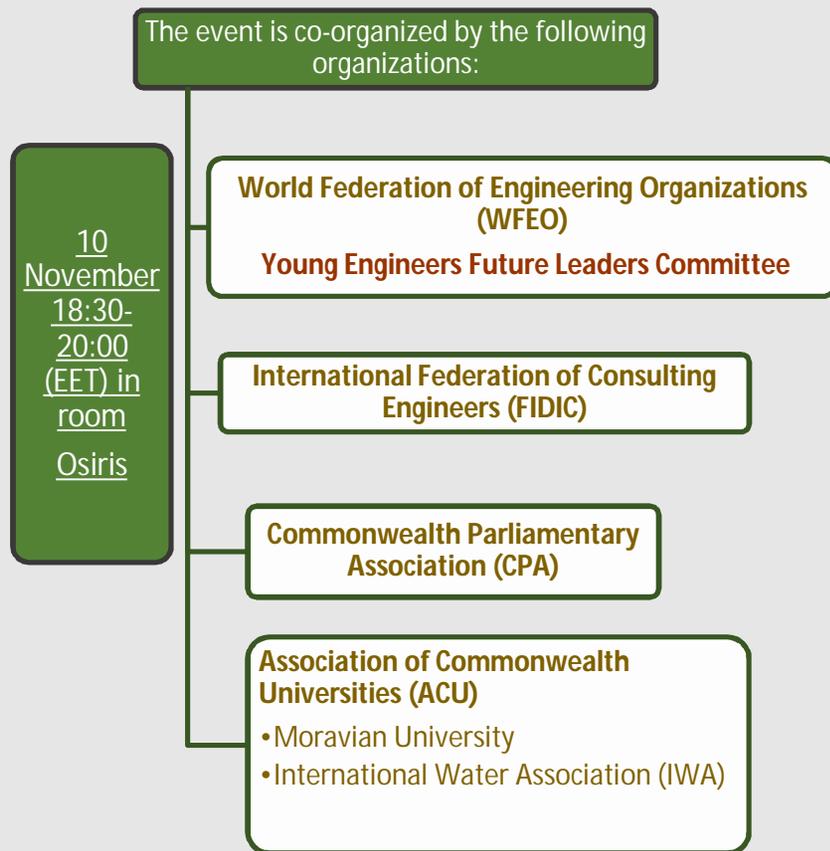
**THEME 2**  
Business Environment  
Climate Policy

**THEME 3**  
Capacity Building:  
Youths & Young  
Professionals

**THEME 4**  
Strategic Engagements

## COP27 Youth Side Event

### Utilizing expertise of the youth to bridge the science-policy divide and improve access to finance

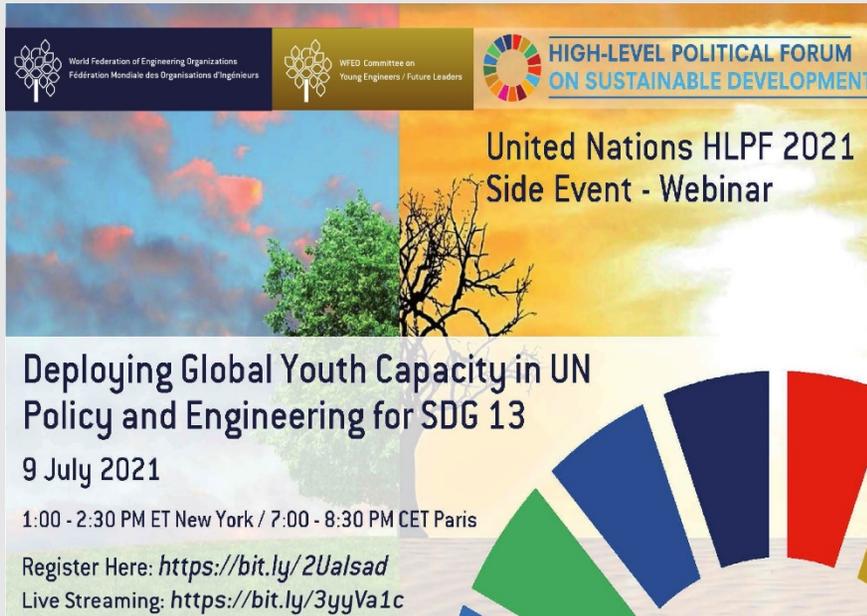


## EVENT GOALS

The event will feature an intergenerational dialogue between lawmakers and young leaders to address the topic, and will provide case studies from across the world to showcase perspectives from developed and developing countries, SIDS and LDCs).

The conversation will be solution-oriented and will be held in the context of bridging the science-policy divide and improving access to climate finance, with identification of barriers and opportunities. The event will also serve as a start for the conversation on a best-practice and widely applicable framework for youth engagement, which will be produced by the organizers and their partners during a pre-COP27 consultation process.

# HLPF 2021 SIDE EVENT



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

WFEO Committee on Young Engineers / Future Leaders

**HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT**

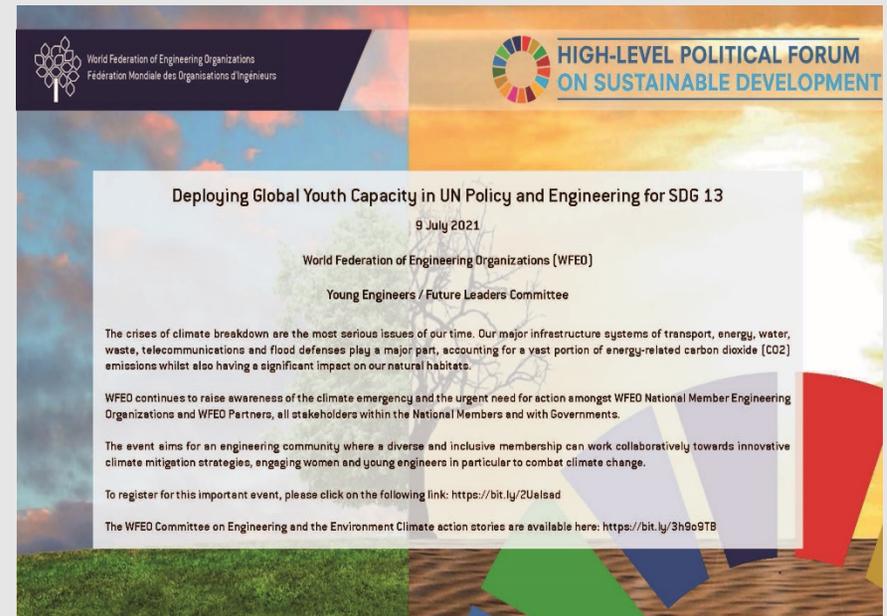
United Nations HLPF 2021 Side Event - Webinar

**Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13**

9 July 2021

1:00 - 2:30 PM ET New York / 7:00 - 8:30 PM CET Paris

Register Here: <https://bit.ly/2Ualsad>  
 Live Streaming: <https://bit.ly/3yyVa1c>



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

**HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT**

**Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13**

9 July 2021

World Federation of Engineering Organizations (WFEO)  
 Young Engineers / Future Leaders Committee

The crises of climate breakdown are the most serious issues of our time. Our major infrastructure systems of transport, energy, water, waste, telecommunications and flood defenses play a major part, accounting for a vast portion of energy-related carbon dioxide (CO2) emissions whilst also having a significant impact on our natural habitats.

WFEO continues to raise awareness of the climate emergency and the urgent need for action amongst WFEO National Member Engineering Organizations and WFEO Partners, all stakeholders within the National Members and with Governments.

The event aims for an engineering community where a diverse and inclusive membership can work collaboratively towards innovative climate mitigation strategies, engaging women and young engineers in particular to combat climate change.

To register for this important event, please click on the following link: <https://bit.ly/2Ualsad>

The WFEO Committee on Engineering and the Environment Climate action stories are available here: <https://bit.ly/3h9o9TB>



## Collaboration with European Young Engineers (EYE)



## Collaboration with FIDIC



**WATER REUSE FOR A SUSTAINABLE INDUSTRY**  
 Challenges and Opportunities in a Circular Economy

**Speakers:**

- Alexandros Stefanakis: Editor in Chief of Journal Circular Economy & Sustainability
- Joaquim Poças Martins: Former Secretary of State for the Environment of Portugal
- Virginijus Sinkovičius: European Commissioner for Environment, Oceans and Fisheries
- Hans-Martin Friis Møller: CEO of Kalsbeek Limbry, Chairman Danish Water Forum
- Francesca Pizzi: Secretary of the Joint Working Group on Water Reuse, EURLas

**Moderator:** Jeanrice Mallia, EYE Head of WG, Water Forum

**Introductory Talks:** Firas Bou Diab, Chair of WFEO FIDIC Committee; Nadja Yang, EYE Vice President of Global Policy

**26 JANUARY 3:00 - 4:15 PM CET**

Register here: <https://bit.ly/2NbcnZ>

**FRIDAY 19th NOV 2021 14:00-15:30 (CET)**

**Webinar Series "Engineering the Future"**  
**ETHICS IN ENGINEERING**

**Speakers:**

- Neill Stanbury: Co-Founder and Director, GIACC
- Gregory Skeen: Chair, Ethics Committee, SAICE
- Rodrigo Juárez: Vice Chair, FIDIC Future Leaders Council
- Michael Mhango: Chair, Young Members Panel of SAICE, Member, WFEO YE/FL
- Priscilla Kettametswe Monye: Member of the Young Members Panel & Ethics Committee, SAICE
- Papias Kazawadi: Chair, WFEO CAC
- Firas Bou Diab: Chair, WFEO YE/FL

**Moderator:** Michael Mhango

**Register:** <https://shorturl.at/prV24>

The webinar defined the barriers existing between politics, industry, and academia in regards to the promotion of water reuse in industry, to create a sound cohesion between the technical and natural world. The webinar promoted SDG 6 and Young Engineers.

The webinar aimed to educate and inspire young engineering professionals from all over the world and make them aware on the urgency of implementing measures that promote ethical behaviour in their organizations, ethical theories to use in our ethical decision making, and some tools to identify and resolve ethical conflicts.

## 7<sup>th</sup> Annual Multi-stakeholder Forum On Science Technology And Innovation For The Sustainable Development Goals - Virtual Side Event

### *Preparing the Future Engineering Workforce to Achieve the SDGs Through Multi-Stakeholder Engagement” at the UN STI Forum on May 6, 2022*

Organizations such as the ITU, WFEO YEFL, E4C, and academic and industry partners, shared outcomes of programs that prepare rising engineers to apply their skills for sustainable development.

Discussion of best practices, opportunities for growth, and barriers that prevent young engineers from aligning their work with the SDGs.

**YEFL role in Climate Action and how it pertains to SDG 13 with strategies to mitigate effects from climate change.**

Outcomes of this side event included the identification of opportunities for greater collaboration between stakeholders and a written brief of lessons learned and areas for future growth.



Pulkit Kanotra

Michaela Chan

The world's engineers  
united in rising to  
**the world's challenges.**  
For a better, sustainable  
world.



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

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