

WFEO YEFL REPORT - OCTOBER 2021

Name of STC/PIC/WG: *Young Engineers / Future Leaders Committee (YEFL)*
Chair: Eng. *Firas Bou Diab*

Date: 24 October 2021

The WFEO committee on Young Engineers / Future Leaders (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. 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.

Firas N Bou Diab
Chair of YEFL
Federation of Lebanese Engineers



MAIN THEMES COVERED IN THE PAST TWO YEARS:

World Engineering Day 2020 – YEFL Celebrating the Achievements of Young Engineers Around the World

The goal of the competition was to highlight the work of young engineers and their engineering achievements in advancing the UN SDGs. More than 400 young engineers from more than 70 countries, including some from the leading engineering universities of the world, showcased their projects to advance sustainable development through engineering as part of this competition aligned with UNESCO World Engineering Day.

Winner: Aida Rafat, Imperial College London UK. Reducing textile waste and reducing pollution from textile dyeing technologies – SDG12.



World Engineering Day 2020: Engineering Heroes Mini-Series

YEFL Chair Firas Bou Diab speaking on SDG 8 – “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.

Episode link: <http://www.wfeo.org/podcast-engineering-leaders-sdg-8-firas-bou-diab/>



World Engineering Day 2021 – YEFL Video Campaign: Young Engineers Leading the Way

YEFL invited young engineers from around the World to submit a video to showcase contributions that young engineers are making towards a more sustainable, resilient, and inclusive world. More than 40 young engineers from more than 20 countries, showcased their videos that highlighted the important role that young engineers play towards accelerating action towards sustainable development. All videos answered one of the following three questions:

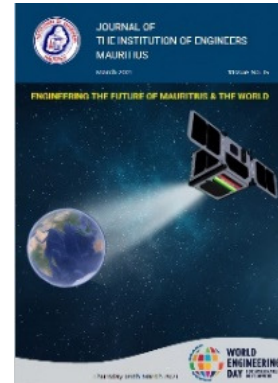
1. What is the importance of engineering in working towards a more sustainable world?
2. What advice do you have for young engineers interested in making a positive impact in their community?
3. Share an example of how young engineers are already contributing to sustainable development.

Winner is Roshan TEELUCK, from The Institution of Engineers Mauritius (IEM): <https://fb.watch/44LLZOfVB2/>
Runner up, Ludvig Vraadal from Association of Nordic Engineers (ANE): <https://fb.watch/44LNZLQWJP/>

World Engineering Day 2021 - Launch of Engineering the Future of Mauritius and the World - Engineering and the UN Sustainable Development Goals in a Small Island Developing State



The Journal of the Institution of Engineers Mauritius (IEM), March 2021 Edition, "Engineering the Future of Mauritius and the World", was released at a gala event on World Engineering Day, 4th March 2021. This publication showcases the strategies and work of engineers to address sustainable development in the context of the Small Island Developing States (SIDS). Mauritius is a small and beautiful island state that is facing many of the issues of SIDS around the world. The Chair of the WFEO Young Engineers/Future Leaders Committee, Eng. Firas Bou Diab has also valued the Journal with the article entitled "The Next-generation Mauritius: Smart, Resilient and Sustainable".



<http://worldengineeringday.net/wp-content/uploads/2021/03/Firas-Bou-Diab-IEM-Final-Journal-March-2021.pdf>

YEFL Webinar Series "Engineering the Future"

Engineering plays an indispensable role in designing resilient and sustainable societies. The COVID-19 pandemic has exposed inequalities and vulnerabilities across social, economic, and environmental spheres. Ensuring a rapid recovery, while laying down the foundation for more resilient systems is a precondition to achieving the 2030 Agenda, including the SDGs. The webinar series seek to highlight the role of engineering design and systems-based approaches in risks identification, mitigation, and reduction, as well as recovery. It will highlight the key challenges to address and opportunities for better engineering systems across multiple sectors.

The sessions will also discuss how different levers - technology, finance, governance, collective action - can promote a shift towards more sustainable social, economic, and environmental systems.

China Beijing International High-Tech Expo & WFEO webinar "A Sustainable Future: Young Engineers and 4IR"

The WFEO Engineering for Innovative Technologies Committee and the Young Engineers / Future Leaders Committee organized the webinar "A Sustainable Future: Young Engineers and the Fourth Industrial Revolution (4IR)" on the 18th September 2020, during the 23rd China Beijing International High-Tech Expo (CHITEC). Young Engineers have ambition and desire for changing the world and are always contributing in proposing innovative technological solutions, driving the emerging 4IR. They are mobilizing to advance the Sustainable Development Goals to improve the lives of people and the health of the planet.



Collaboration with European Young Engineers (EYE)

Water Reuse for a Sustainable Industry - Challenges and Opportunities in a Circular Economy.



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.



COLLABORATION WITH FIDIC FUTURE LEADERS

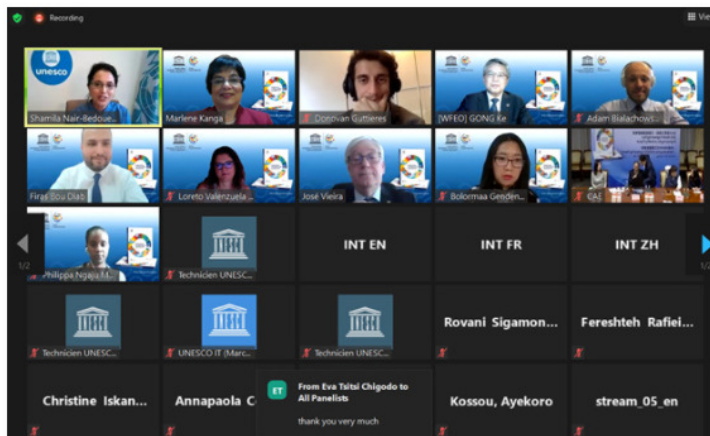
FIDIC Future Leaders is the group of young professionals of the International Federation of Consulting Engineers (FIDIC). Participation in the Future Leaders Management Certificate (FLMC) programme to strengthen the business expertise of young engineers and other professionals working in the field of consulting engineering.



Second UNESCO Engineering Report, "Engineering for Sustainable Development – Delivering on the Sustainable Development Goals"

YEFL Chair Firas Bou Diab participated in the Round-table on the Engineering Report, featuring young engineers from every region of the world, at a high-level virtual event hosted by UNESCO on 4th March 2021. This high-level event showcased the leadership and contribution of Engineers from around the world to Sustainable Development.

<http://www.wfeo.org/world-engineering-day-engineering-for-a-healthy-planet-celebrating-the-unesco-engineering-report-young-engineers-panel-discussion-at-the-main-event/>



Screenshot of speakers at the UNESCO-WFEO launch of the Second UNESCO Engineering Report

Under the High Patronage of
Mr Emmanuel MACRON
President of the French Republic

ICEE
International Council of Engineering Education

WFEO / PHU

AGENDA - WED 2021
Engineering for a Healthy Planet -
Celebrating the UNESCO Engineering Report

4 March 2021
1:00-2:30pm CET (Paris time, online)
Registration: <http://www.unesco.org/Eng04-03>

Master of Ceremonies: Sharmila Nair-Bedouelle, ADG/SC

13:00-13:40 High-level Opening and Launch of Report
Audrey Azoulay, Director-General of UNESCO
Li Xiaobang, President of Chinese Academy of Engineering (representing Tsinghua University and ICEE)
Genna Rajan Bangaroo, Civil Engineering Student, University of Mauritius, Mauritius
Joint launch of the report by DG UNESCO and President CAE

13:40-14:00 Introduction to the Report on Engineering for Sustainable Development: Delivering on the Sustainable Development Goals
Wu Qidi, Director of ICEE and Co-chair of Engineering Report Steering Committee - Introduction of the Report
Marlene Kanga, Immediate Past President, WFEO - Engineering to advance the UN Sustainable Development Goals
Gong Ke, President, WFEO - Engineering Innovations responding to pressing Challenges
José Vieira, President Elect, WFEO - Engineering education and capacity-building

14:00-14:25 Round-table on the Engineering Report
Moderator: Donovan Gutierrez, former Chair UN Major Group Children and Youth, MIT, engineer (USA)
Firas Bou Diab, Chair, WFEO Young Engineers/Future Leaders (Lebanon)
Adam Bialachowski, Chair, International Federation of Consulting Engineers (FIDIC) Young Leaders Council (Poland)
Loreto Valenzuela Rosdiger, International Federation of Engineering Education Societies (IFEEES), Associate Professor, Catholic University Chile, (Chile)
Philippa Njijju Makobore, IEEE, Head, Instrumentation Division, Uganda Industrial Research Institute (Uganda)
Isolomaa Gondensson, International Network for Women Engineers and Scientists (INWES), School of Chemical Engineering, University of Ulsan (South Korea)

14:25-14:30 Closing Remarks
Sharmila Nair-Bedouelle, ADG/SC

WFEO – YEFL HLPF 2021 Side Event: Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13

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>

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

Terminology of climate breakdowns are the most common source of confusion. The engineering community is responsible for transport, energy, water, waste, telecommunications and flood defenses, all of which are major contributors to the global carbon footprint. The engineering community is also responsible for the design and construction of the infrastructure that will be needed to address the challenges of climate change.

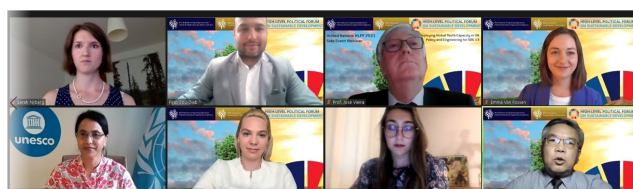
WFEO commends the members of the climate emergency and the urgent need for an engineering community that is diverse and inclusive membership can work collaboratively towards innovative climate mitigation strategies, engaging women and young engineers in particular to combat climate change.

The event will feature an engineering community that is 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 link: <https://bit.ly/2Ualsad>

The WFEO Committee on Young Engineers / Future Leaders Committee is pleased to host this event. <https://bit.ly/2Ualsad>

WFEO and its Committee on Young Engineers / Future Leaders organized the HLPF 2021 side event "Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13" on Friday, 09 July 2021, as a side event of the 2021 edition of the High-level Political Forum. 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 aimed 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.



<https://youtu.be/zmzQufF6zY>

Participation in Glasgow Climate Change Conference (UNFCCC COP 26)

The Glasgow Climate Change Conference is a uniquely symbolic moment occurring in uncertain times. It is the first meeting of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) to be held since the Paris Agreement took over from the Kyoto Protocol in 2020. It is also the first major UN environmental meeting to be held in person since the beginning of the Coronavirus pandemic.

Young engineers are contributing to the below:

1. COP Resilience Hub - Enhancing Climate Resilience through water by building the capacity of Youth, 5th November 7pm BST.
2. International Chamber of Commerce - Closing the Youth Skills Gap to Fill Green Jobs of the Future 8 November 13:00-14:00 CET
(This event is happening on the margins of COP, fully virtual)
3. COP Capacity Building Hub - Finance & Technology Day on 4th November 2021.



**UN CLIMATE
CHANGE
CONFERENCE
UK 2021**
IN PARTNERSHIP WITH ITALY

Noting that Youth are critical stakeholders in creating solutions and contributing to Climate Action, a Joint Statement will be submitted by a number of Youth Groups.

World Engineering Day 2022 – Updates

WFEO Board agreed to set up working groups (WGS) on Hackathon, 24 hours event, Social media and website, and fundraising. The WFEO Committee for Young Engineers / Future leaders is engaging this work.

The Hackathon Working Group and Engineers Without Borders (EWB) have been engaged and have commenced activities. Early deliverables included the agreement of the rules and identifying the entry criteria.

Next activities are focused around communicating this event to interested parties to determine judges and prizes. These tasks are dependent upon sponsorship activity performed by the wider WFEO group.

KEY ACHIEVEMENTS, PUBLICATIONS, DECLARATIONS ETC.

Statement by the World Federation of Engineering Organizations, United Nations Secretary General Youth Advisors on Climate Action, Major Group for Children and Youth the Youth Science-Policy Interface Platform (SPI) At the 2021 High-Level Political Forum Side Event “Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13.

https://sustainabledevelopment.un.org/content/documents/28752Engineering_Joint_Statement.pdf

TICK THE CORRESPONDING BOX AND ADD AN EXPLANATORY TEXT ON THE WORK THAT HAS BEEN DONE IN RELATION TO THE SDG. (50 WORDS MAX. AND MAX OF TWO SDGS)

- ☐ **Goal 1: No Poverty** (detailed [in this page](#))
- ☐ **Goal 2: Zero Hunger** (detailed [in this page](#))
- ☐ **Goal 3: Good Health and Well-being** (detailed [in this page](#))
- ☐ **Goal 4: Quality Education** (detailed [in this page](#))
- ☐ **Goal 5: Gender Equality** (detailed [in this page](#))

☒ **Goal 6: Clean Water and Sanitation** (detailed [in this page](#))

Young Engineers/Future Leaders Committee and European Young Engineers, organized a webinar on Water Reuse for a Sustainable Industry: Challenges and Opportunities in a Circular Economy. The aim of this panel discussion was to define any remaining existing barriers between current politics, industry, and academia regarding the promotion of water reuse in industry, to create a sound cohesion between the technical and natural world. Through webinars like this, we aim to bridge the existing gap between politics and engineering.

☐ **Goal 7: Affordable and Clean Energy** (detailed [in this page](#))

☐ **Goal 8: Decent Work and Economic Growth** (detailed [in this page](#))

☐ **Goal 9: Industry, Innovation and Infrastructure** (detailed [in this page](#))

☐ **Goal 10: Reduced Inequalities** (detailed [in this page](#))

☐ **Goal 11: Sustainable Cities and Communities** (detailed [in this page](#))

☐ **Goal 12: Responsible Consumption and Production** (detailed [in this page](#))

☒ **Goal 13: Climate Action** (detailed [in this page](#))

Young Engineers/Future Leaders Committee set-up a working group on SDG 13 to include and deploy young engineers' capacity in the Global Climate Emergency work. This working group aims to streamline the national young engineers' initiatives on SDG 13 so they contribute to the global UN targets. This will be achieved by preparing the national young engineers' strategies which are aligned to the UN initiatives and addresses the national climate change challenges including those relevant to the resource efficiency.

☐ **Goal 14: Life Below Water** (detailed [in this page](#))

☐ **Goal 15: Life on Land** (detailed [in this page](#))

☐ **Goal 16: Peace, Justice and Strong Institutions** (detailed [in this page](#))

☐ **Goal 17: Partnerships for the Goals** (detailed [in this page](#))