

WFEO BIENNIAL REPORT 2017-2019

Name of STC/PIC/WG : *Committee on Engineering and the Environment*
Chair : **Jean Venables**

Date sent by HQ: 1 May 2019

Deadline for return: **30 June 2019**

Date returned:
28th June 2019

WHEN WRITING THIS REPORT

➔ *Please take into consideration that the Biennial Report is intended to promote the work of WFEO to UNESCO and its member nations, to UN and other international organizations and to institutions wishing to join WFEO as Members or Associates.*

➔ *Each Committee/Working Group will have a maximum of 2 pages. We request the following:*

- *Narrative of the main focus of the last two years, achievements and outcomes, key events and publications. Please provide a PDF copy of the publication to ensure that it is also on the WFEO web site if not already uploaded.*
- *The specific UN Sustainable Development Goals that have been addressed (Maximum two – specific to the achievements/events of the past two years)*
- *4 to 6 High resolution photographs with captions where you or your committee/WG owns the copyright.*

- Main Themes covered in the past two years:
- Your text (~500 words):

The work of the Committee on Engineering and the Environment (CEE) is aimed at enabling WFEO and the global engineering profession to support the achievement of the UN Sustainable Development Goals through the development, application, promotion and communication of:

- 1) Environmentally sustainable and accountable engineering practices and technologies;
- 2) The adaptation of infrastructures to the impacts of a changing climate (SDG 13), decreasing resources and increased populations;
- 3) Assessing and promoting engineering practices to mitigate climate change (SDG 13);
- 4) Coordinating perspectives on the engineering required to deliver SDGs 6 on clean water and sanitation, 7 on affordable and clean energy, 9 on industry, innovation and infrastructure and 11 on sustainable cities and communities.
- 5) Policy frameworks sets of guidelines and best practice for practicing engineers on responsible environmental stewardship and sustainable and ethical practices in various areas of engineering practice.

Since 2017 the committee on engineering and the environment has become increasingly focused on SDG 13 'climate action'. Task groups on climate change adaptation regularly attend the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) meetings to promote the engineering perspective on what is required in order to adapt to climatic uncertainty.

At COP 24, WFEO-CEE, together with the Politechnika Krakowska Poland and the Leibniz Institute for Tropospheric Research (TROPOS) Germany, co-hosted a side event entitled “Sustainable solutions to combat climate change: contribution of engineers and reduction of air pollutants”. Former CEE Secretary David Lapp delivered a presentation “Framing Climate Science and Engineering Needs for Sound Science-based Decision Making for Climate Resilient Infrastructure”. Past CEE Chair Darrel Danyluk participated in a panel “Future actions in our particular field that will contribute to climate change and air pollution reduction.

WFEO participated in a workshop at the EU Pavilion at COP24 and a presentation from CEE members entitled “Energy and climate plans as a key engineering tool to create evidence based dialogue” was delivered.

Later in the conference WFEO CEE and GIZ co-hosted a side event entitled “Progress and prospects: The implementation challenge of adaptation within the Paris Agreement”. Past Chair Darrel Danyluk delivered an introductory presentation entitled “The role of engineering in general and the WFEO in particular in supporting the implementation of adaptation strategies”. Attendance at this event was over 75 people.

At the UNFCCC SB50 held in Bonn In June 2019, Past CEE Chair Darrel Danyluk delivered a presentation “Infrastructure, Climate Change and Engineering Interaction” in a joint WFEO-GIZ side event entitled “Policy to Action: Use of Climate Services & Risk Insurance towards Climate-Resilient Infrastructure”.

As well as the above the current chair Jean Venables has also represented WFEO and CEE at a number of international events including the World Engineers Summit in Singapore in July 2017 on “A Low Carbon and Sustainable Future: how partnership working can help us deliver our goals” as well as speaking at the Hong Kong Innovation Summit in January 2018.

In 2017-18, Engineers Canada and Polytechnique Montreal collaborated to develop a Massive Open On-Line Course “Sustainability in Practice”. This free, four module course presents the principles explained in the WFEO Model Code of Practice for Sustainable Development and Environmental stewardship and the equivalent national guideline published by Engineers Canada. The course was delivered in fall 2018 and spring 2019 with registrations of over 1,500 and 1,700 participants respectively. The WFEO and CEE promoted the course to national and international members which contributed to the registration numbers.

2018 also saw many CEE members contributing to the Global Engineering Congress held in London in October. These included sessions on:

- Strengthening Mobility: Promoting Small and Medium Enterprise for Sustainable Development in Asia Pacific
- Low Carbon local energy systems
- Integrating Climate Vulnerability Assessment with Asset Management to Build Resilient Public Infrastructure.

In 2019 Fethi Thabet (CEE member) of the Order of Tunisian Engineers organised the conference Engineering and Food Security in Africa, which took place in Tunis, Tunisia, 24-25 June 2019 and focused on Agricultural policy and engineering needs to meet the challenges of food and water security.

In November 2019 Chairmanship of the CEE will pass from Jean Venables to Davide Stronati, Global Sustainability leader at Mott Macdonlad. We would like to thank Jean for her hard work over the last 4 years and offer our support and congratulations to Davide for continuing her good work for the next 4 years.

KEY ACHIEVEMENTS, PUBLICATIONS, DECLARATIONS ETC.

- Workshops held at COP23 in Germany and COP24 in Poland promoting the work of WFEO and highlighting the engineering challenges in delivering climate action.
- Engineering and Food Security conference held in Tunisia in June 2019
- Launch of a massive open online course on Sustainability in Practice a joint project between Engineers Canada and Polytechnique Montreal.
- 8 sessions held or chaired at the Global Engineering Congress in London 2018.

PLEASE INDICATE ANY SPECIFIC ACTIONS OR PROJECTS AROUND SUSTAINABLE DEVELOPMENT GOALS 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](#))
- 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](#))

In 2019 Fethi Thabet (CEE member) of the Order of Tunisian Engineers organised the conference Engineering and Food Security in Africa, which took place in Tunis, Tunisia, 24-25 June 2019 and focused on Agricultural policy and engineering needs to meet the challenges of food and water security.

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

CEE task groups on climate change adaptation and mitigation have attended the UNFCC COP meetings 2017-2019, to promote the work WFEO CEE is doing in relation to climate change mitigation and adaptation.

- 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](#))

PLEASE INSERT A SHORT QUOTE/STATEMENT ABOUT YOUR COMMITTEE/WORKING GROUP

The work of the Committee on Engineering and the Environment (CEE) is aimed at enabling the development, application, promotion and communication of environmentally sustainable and accountable engineering practices and technologies.

The committee is focused on SDG 13 – ‘climate action’ looking at both the adaptation of infrastructures to the impacts of a changing climate and assessing and promoting engineering practices to mitigate climate change.

PLEASE SEND 4 TO 6 HIGH RESOLUTION PHOTOS/LOGOS WITH CAPTIONS, AS ENCLOSED FILES IN AN EMAIL OR IN A CLOUD STORAGE SERVICE (DROPBOX, WETRANSFER..) BUT NOT INSERTED IN THE BODY OF AN EMAIL OR IN A WORD/PFD FILE.

As a reminder, a link towards the [Biennial Report 2015-2017](#)