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

*50th anniversary*

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***Engineering for Sustainable Development***

[www.wfeo.org](http://www.wfeo.org)



- **The international organization for the engineering profession**
- **Founded in 1968**
- **Under the auspices of UNESCO**
- **90+ national engineering institutions**
- **Representing more than 30 million engineers**



# Engineering for Sustainable Development

Algeria  
Argentina  
Australia  
Bahrain  
Bangladesh  
Belize  
Bolivia  
Brazil  
Bulgaria  
Cameroon  
Canada  
Chile  
China  
Chinese Taipei  
Colombia  
Costa Rica  
Croatia  
Cuba  
Cyprus  
Czech Republic

Ecuador  
Egypt  
Ethiopia  
Fiji  
France  
Germany  
Ghana  
Greece  
Honduras  
Hong Kong, China  
Hungary  
India  
Iraq  
Italy  
Ivory Coast  
Japan  
Jordan  
Kenya  
Korea  
Kuwait

Lebanon  
Libya  
Macedonia (FYROM)  
Madagascar  
Malawi  
Malaysia  
Malta  
Mauritius  
Mexico  
Moldavia  
Mongolia  
Montenegro  
Morocco  
Nepal  
New Zealand  
Nigeria  
Pakistan  
Palestine  
Peru  
Poland

Portugal  
Puerto Rico  
Qatar  
Romania  
Russia  
Rwanda  
Saudi Arabia  
Senegal  
Serbia  
Sierra Leone  
Singapore  
Slovakia  
Slovenia  
South Africa  
Spain  
Sri Lanka  
Sudan  
Switzerland  
Syria  
Tanzania

The Philippines  
Tunisia  
Turkey  
Uganda  
Ukraine  
United Arab Emirates  
United Kingdom  
United States  
Uruguay  
Yemen  
Zambia  
Zimbabwe





**Recognised NGO at UNESCO, with association status**

**Member of UN Scientific and Technological Community Major Group**

**10 Standing Technical Committees**

**Executive Council**

**Executive Board**

**Supported by a small secretariat based in Paris**

*Engineering* for Sustainable Development



# WFEO Standing Technical Committees

- **Engineering and the Environment (Hosted by UK)**
- **Energy (Hosted by USA)**
- **Engineering Education (Hosted by Lebanon)**
- **Information and Communication (Hosted by India)**
- **Engineering and Innovative Technologies (Hosted by China)**
- **Engineering Capacity Building (Hosted by South Africa)**
- **Disaster Risk Management (Hosted by Peru)**
- **Anti-Corruption (Hosted by Zimbabwe)**
- **Women in Engineering (Hosted by Nigeria)**
- **Young Engineers/Future Leaders (Hosted by Kuwait)**

**Also**

- **UN Relations Committee (Hosted by USA)**



- Influencing...** a respected source of advice & guidance on engineering and technology
- Supporting...** UN sustainable development goals
- Partnering...** with our international peers in engineering and science
- Growing...** engineering capacity and mobility
- Improving...** the ethical engineering practice and a diverse and inclusive profession
- Convening...** world engineers' events
- Recognising...** excellence in engineering





# SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

<b>1</b> NO POVERTY 	<b>2</b> ZERO HUNGER 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	





## Celebrating 50 years of global leadership in engineering (I)

- On March 7, 2018 WFEO co-organized with UNESCO a half-day symposium at UNESCO headquarters in Paris.
- Top representatives from UNESCO, WFEO national and international members, and partnering NGOs presented their views on **advancing the Sustainable Development Goals through engineering.**
- The **Paris Declaration** was signed by WFEO President and UNESCO Assistant Director General for Science, the first ever joint commitment by UNESCO and any organization to promote engineering as a means of building sustainable development.







## Celebrating 50 years of global leadership in engineering (II)

- On October 20-26 will be held in London WFEO Executive Council Meetings and the **Global Engineering Congress** (GEC 2018) hosted by WFEO National Member for UK, the Institution of Civil Engineers, celebrating its 200 years
- Two specific days will be organised by WFEO: October 22-23
- The WFEO Engineering 2030 plan will be presented
- Two WFEO Awards laureates will be announced:
  - The Dr Zuheir Alami Award for Engineering Innovation
  - The Gree Women in Engineering Award
- And so will be the laureate of the WFEO Young Engineers Competition, presenting the best project to progress the SDGs.



**WFEO – UNESCO**  
*Declaration, signed on March 7, 2018*



**WFEO / FMOI**

## Paris Declaration

**Advancing the United Nations  
Sustainable Development Goals  
through Engineering**



The World Federation of Engineering Organizations (WFEO) is the main body for engineering globally, representing nearly 100 nations and some 30 million engineers.

The members of WFEO are the national and regional professional engineering institutions of the world. WFEO is a member of the United Nations Scientific and Technological Community (UN STC) Major Group and has an official Associate status with UNESCO.

UNESCO, as the United Nations agency for education, science and culture, supports engineering through its Natural Sciences Sector, and acknowledges engineering as a powerful means to achieve sustainable development, capacity-building in engineering education and gender equality in developing countries, as well as the safeguarding of world heritage.

CELEBRATING 50 YEARS OF INTERNATIONAL ENGINEERING LEADERSHIP

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*Engineering* for Sustainable Development





## Paris Declaration - Advancing the United Nations Sustainable Development Goals through Engineering

### Considering that:

1. In September 2015, the United Nations General Assembly adopted its Resolution 70/1 announcing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), which take an integrated approach to future development, combining progress in economic prosperity, social inclusion and environmental sustainability.
2. Engineers and engineering are critical for achieving the SDGs. Engineers have a key role in supporting the growth and development of essential infrastructures such as: roads, railways, bridges, dams, waste management, water supply and sanitation, energy and digital networks. They are responsible for developing and implementing technologies and systems that contribute towards achieving the SDGs as they relate to water, energy, environment, sustainable cities, natural disaster resilience and other areas, which will benefit people and the planet for greater prosperity and better quality of life.
3. WFEO is committed to playing a key role in leading and coordinating projects to achieve the SDGs through engineering. WFEO can bring together its members, educational institutions, government and industry to address the need for engineering capacity and the quality of engineers around the world and develop strategic frameworks and best practices for the implementation of engineering solutions for sustainable development. The national and regional members of WFEO, that are leading professional engineering institutions, will develop country and region-specific responses.
4. The celebration of WFEO's 50th anniversary in 2018 is a catalyst to develop a framework for an action plan for the engineering capacity that is required to achieve the SDGs. The Symposium held today, on 7th March 2018, is the first stage in bringing together the WFEO members and partners to develop the *WFEO Engineering 2030 Plan*.

### Accordingly, we declare:

1. WFEO, a recognized member of the UN STC Major Group and UNESCO, through its Natural Sciences Sector, will work together and in cooperation with other UN organizations, including UNEP, UNFCCC and UNISDR towards achieving the SDGs through engineering.
2. WFEO and UNESCO are committed to the following principles for action through engineering to achieve the SDGs:
  - a. Increase the numbers and quality of engineering graduates that meet the needs of sustainable development with rapidly changing technologies, in collaboration with educators, government and industry;
  - b. Inform global standards for engineering education, support the development of a range of engineering education systems to comply with agreed standards and facilitate the mobility of engineers;
  - c. Support capacity-building through strong institutions for engineering education and the development of accreditation bodies for the recognition of professional credentials;
  - d. Establish policy frameworks and best practices, notably through WFEO Standing Technical Committees, as digital technologies, data sciences and artificial intelligence have ethical and social implications.

Signed in Paris, 7 March 2018

Marlene Kanga  
President  
World Federation of Engineering Organizations

a.i. Flavia Schlegel  
Assistant Director-General for Natural Sciences  
UNESCO



# WFEO Engineering 2030 Plan

- **WFEO Engineering 2030** - A Plan to develop engineering capacity for a sustainable world through partnerships with educators, government, industry and professional engineering institutions
- a strategic initiative to address the gap in engineering capacity and the quality of engineering professionals
- recognises that engineers are essential for sustainable development good engineering is essential achieving the UN Sustainable Development Goals Consistent with the mission and objectives of WFEO
- WFEO will play a key role in leading and coordinating the Plan
- Result of wide consultation between national and international members of WFEO and other international partners



# Engineering 2030 – Principles for Action

1. **Encourage young people** – To consider engineering as a career
2. **Graduate Outcomes** - Agree with educators, government, industry
3. **Global standards** - for engineering education and professional development
4. **Partnerships** – with international standard setting organisations for consistent framework (IEA, ENAEE etc)
5. **Support** – development of national engineering education systems to comply with agreed standards
6. **Capacity Building** – for accreditation of engineering education and accreditation bodies
7. **Capacity Building** – for professional engineering institutions
8. **Develop professional development pathways** – so graduates meet employer needs
9. **Support national and international registration** – for recognition of qualifications and experienced of practising engineers
10. **Liase with governments** – to establish consistent regulation policies for engineers
11. **Establish an international platform for engineering standards** – Education and professional development, under auspices of WFEO and UNESCO
12. **Report on progress** - to UNESCO and other international organisations





- Participation
- Advocacy
- Representation



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