

KEYNOTE ADDRESS BY ENGR. MUSTAFA SHEHU FNSE, ADVISOR TO WFEO PRESIDENT, ON BEHALF OF THE WFEO PRESIDENT, DR. MARLENE KANGA AM, AT THE OCCASION OF THE AFRICA ENGINEERING CONFERENCE HELD AT PRIDE-INN PARADISE HOTEL, MOMBASA, KENYA ON 18TH SEPTEMBER, 2018.

Your Excellencies, Presidents of Engineering Institutions here present, Distinguished guests and delegates at this Forum. I would like to express my appreciations to the Institution of Engineers Kenya and the Federation of African Engineering Organisations for hosting the Africa Engineering Week here in Mombasa. Let me use this opportunity to thank President Collins Juma of IEK and Julius Riungu of FAEO for the hard work.

The World Federation of Engineering Organisations (WFEO) is the peak engineering body, representing about 100 nations and 30 million engineers. It is the voice of engineering at the international level and promotes the important role of engineers in key issues facing the world like sustainable development, security, the growth of our cities, climate change and strategies for sustainable energy production to meet the needs to the growing population around the world. WFEO is recognised by the United Nations, government, intergovernmental organisations, international NGOs and the public in general as a respected and reliable source of advice and guidance on strategies and policies that use engineering and technology for the benefit of human development and wellbeing as well as sustainable outcomes.

The WFEO works through Standing Technical Committees, being hosted by National Members to address various sectors of our lives as follows:

- 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 as special committee

- UN Relations Committee *hosted by USA*

In order to realise its mandate to the global community, the WFEO has reached out to the following United Nations and International Organisations and is working closely with them:

- UN Educational, Scientific and Cultural Organisation (UNESCO),
- UN Economic and Social Council, (ECOSOC),
- UN Department of Economic and Social Affairs (UNDESA),
- UN Development Program (UNDP),
- UN Industrial Development Organisation (UNIDO)
- UN Environmental Program (UNEP)
- UN Framework on Climate Change (UNFCCC)
- UN Office for Disaster Risk Reduction (UNISDR),
- The International Atomic Energy Agency (IAEA)
- The World Meteorological Organisation (WMO)

As a global engineering organisation, we recognise the fact there are other professional and sectoral organisations operating at international level whose mandate can complement ours and therefore thought it wise to partner with them for greater global impact. We can progress joint objectives in education, training, engineering capacity building and sustainable development. In this direction we have signed Partnership Agreements with the following:

- International Engineering Alliance (IEA)
- International Science Council (ISC)
- International Federation of Engineering Education Societies (IFEES)
- Federation of International Consulting Engineers (FIDIC)
- International Network for Women Engineers and Scientists (INWES)
- International Centre for Engineering Education (ICEE, UNESCO Centre)
- International Science Technology and Innovation Centre for South-South Cooperation (ISTIC, Malaysia, UNESCO Centre)

It is important to note that the partnership Agreements with IFEES, FIDIC, INWES, ICEE and ISTIC were all signed this year under the leadership of Dr. Marlene Kanga AM.

The Sustainable Development Goals – *Paris Declaration*

In September 2015, the world came together in New York, United States of America, to declare the new UN Sustainable Development Goals. These goals take an integrated approach for future development, combining progress in economic prosperity, social inclusion and environmental sustainability. The

implementation of these goals is a key objective of the World Federation of Engineering Organisations. Engineers will play a vital role in meeting the challenges of the Sustainable Development Goals (SDGs).

Furthermore, in March 2018, The Federation signed a Declaration jointly with UNESCO, declaring our commitment to advance the UN Sustainable Development Goals through engineering and is being progressed through the Standing Technical Committees. The Declaration recognises that engineers and engineering are needed to advance every one of the Sustainable Development Goals, especially here in Africa. The Declaration was signed jointly on 7th March 2018 in Paris by Dr. Marlene Kanga on behalf of WFEO and Ms. Flavia Schlegel on behalf of UNESCO.

The WFEO and UNESCO jointly Declared as follows:

1. WFEO, a recognized member of the UN Scientific and Technological Community 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:
 - i. 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;
 - ii. 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;
 - iii. Support capacity-building through strong institutions for engineering education and the development of accreditation bodies for the recognition of professional credentials;
 - iv. 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.

A copy of this Declaration is available for delegates here today.

Proposed World Engineering Day

The world we are living is faced with so many societal and infrastructural challenges most of which can only be solved through engineering. We need to provide clean water for all, shelter, security, improve sanitation and provide electricity in a sustainable way to millions around the world. This directly implies the need for more engineers.

Our President Marlene Kanga has initiated the WFEO Engineering 2030 Plan to advance the UN SDGs through engineering. Most importantly, in this Conference which form part of the African Engineering Week, we are launching the project to develop capacity in engineering in Africa. This project will support our universities and our professional engineering institutions and to improve standards of engineering education so as to achieve internationally recognised standards.

WFEO is encouraging more young people, to consider engineering as a career to address the shortage of engineers. For the continued sustenance of this effort, it is seeking to declare 4th March of each year as World Engineering Day for Climate Change Action and Sustainability. The date was decided upon to commemorate the date on which WFEO was established in 1968. The application is in progress at UNESCO Headquarters and WFEO is seeking support from professional engineering institutions, registration bodies, universities, academies and other engineering organisations to support this initiative. To date more than 50 letters of support have been received with anticipated impact on 2 billion people.

Global Engineering Congress 2018

In order to determine how to make the UN Sustainable Development Goals a reality, the WFEO and the Institution of Civil Engineers, UK (ICE) is organising the Global Engineering Congress (GEC2018) on UN Sustainable Development Goals. It will take place between 20th and 26th October 2018 in London. This is also to celebrate the 50th anniversary of WFEO and ICE's 200th year anniversary as well as the UK Government's Year of Engineering.

To this effect, two days, 20th and 21st will be dedicated to WFEO Committees and STCs meetings. The Conference opening will be on 22nd and will continue to 26th October with the WFEO Executive Council sandwiched on 24th September.

Several papers will be presented, mainly targeting solutions towards meeting the SDGs. It is highly delighting to note the fact that about 8 papers will be presented by our members from Africa. This is the first time ever in WFEO history, this monumental level of involvement is recorded....!

In addition, WFEO will establish projects that will continue beyond GEC 2018 including

- The first presentation of the WFEO Engineering 2030 plan. This will become an annual report for WFEO showcasing our progress to achieving the UN SDGs
- Two new WFEO Awards will be presented:
 - The Dr Zuheir Alami Award for Engineering Innovation
 - The Gree Women in Engineering Award

A book of projects from Young Engineers will be launched at the Conference and three speakers will present their views. This is the result of the WFEO Young Engineers Competition, presenting the best project to progress the SDGs. I am pleased to say that out of 150 submissions from 30 countries, there is a highly commended winner from Ghana, Ing. Emmanuel Adams Ghana Institution of Engineers and ABP Consult Ltd. who wrote about the Greater Accra metropolitan Area (GAMA) water project.

Membership Growth of WFEO

While the WFEO is making giant strides in many areas of its endeavours, there is still a lot to do in order to improve our global outreach in terms of the number of National Members. Currently, out of 194 Member countries of the UN, we have in our register, 95 National Members. We also have 10 International Members either representing a region, continent or a major group consisting many countries. This number is small when you compare us with similar international professional organisations like the International Bar Association, IBA with 170 member countries, World Medical Association, WMA with 114 member countries and International Federation of Accountants, IFAC with 130 countries in their memberships. This is lamentable because engineering is a core need for sustenance of life while other professions are peripherals.

In this regard, International Members like FAEO have an important role to play in addressing this challenge, because out of the 54 countries in Africa, only 22 have engineering Institutions that are members of the WFEO. It is therefore imperative that the Federation works harder to ensure the establishment of engineering institutions in other African countries with a view to their subsequent membership of both FAEO and WFEO. That way wise, the impact

and contribution of Africa in the global arena similar to what obtains at the UN, will be much higher.

The recognition of Africa in the Affairs of WFEO

1. As mentioned previously, the World Federation of Engineering Organisations has 10 Standing technical committees that are critical in progressing the strategic objectives of the Federation. Three (3) of these Committees are hosted by engineering organisations in Africa: The Committee on Capacity Building is hosted by the Engineering Council of South Africa and the Chair is Prof. Yashin Brijmohan, the Committee for Anti-Corruption is hosted by the Engineering Council of Zimbabwe and the Chair is Mr. Martin Manuhwa, and the Chair for the Committee for Women in Engineering is hosted by the Nigerian Society of Engineers and the Chair is Mrs. Valerie Agberagba. These three engineering organisations are national members of WFEO.
2. The Federation of African Engineering Organisations (FAEO) is a key International Member of WFEO and its President, is a member of the WFEO Executive Council. In addition myself, Mustafa Shehu is the Chair of the WFEO Awards Committee as well the Advisor to the WFEO President Marlene Kanga, representing Africa. This is a significant departure from the past and shows how African organisations and individuals are becoming more active and relevant in running the affairs of WFEO.
3. Another significant Afrocentric programme by the WFEO is the Africa Catalyst Project, which was initiated at the WFEO through discussions with the Royal academy of Engineering, UK. Today, we are pleased to note that various capacity building projects across Africa are going on for the benefit of Africa and the Engineering Institutions in the Continent. One of such projects is that of strengthening the administrative capacity of the FAEO Secretariat in Abuja.
4. With the leadership and support of President Marlene Kanga, the WFEO scheduled to hold its Executive Council meeting for the year 2020 in Kigali, Rwanda.
5. The African Engineering Week is an initiative of the WFEO with its partners, UNESCO. We are pleased that FAEO has taken active involvement in it and has made it a policy to have Annual Engineering

Conference and Executive Council Meeting/General Assembly concurrently.

Conclusion

It is evidently clear that WFEO holds Africa with high esteem and is engaging at the highest international levels on behalf of Africa and African engineers to promote and support the engineering profession.

However, the international support notwithstanding, achieving SDGs in Africa requires concerted effort from individuals, institutions and governments at all levels within Africa. There is thus the need for leaders of the engineering profession in the continent to collaborate more closely with their National leaderships, regional leaderships (ECOWAS, SADC, EAC, AMU, ECCAS) as well as the continental leadership (African Union). We commend the FAEO for signing MoU on Technical Co-operation with the African Union and hope that the effort will be followed with measures to actualize the envisioned results. We expect similar co-operations between the Regional bodies under FAEO (West, Sothern, Eastern, Central and Northern African Federations of Engineering Organisations) with the counterpart political bodies.

The WFEO President and Executive Board sends its very best wishes for a successful week and look forward to the report on the event and the outcomes that have been achieved.

Thank you.



Engr. Mustafa B. Shehu, FNSE
Advisor to WFEO President

For and on behalf of:
Dr. Marlene Kanga, AM
President WFEO