United Nations
Educational, Scientific and
Cultural Organization

WFEO / FMOI

5th UNESCO Africa Engineering Week (AEW), 3rd Africa Engineering Conference (AEC) 2018 & 25th IEK Conference 17th -21st September 2018

Mombasa Declaration on Harvesting Blue Economy for Accelerated Economic Growth.

Preamble:

The participants at the 5th UNESCO Africa Engineering Week (AEW), 3rd Africa Engineering Conference (AEC) and the 25th IEK Conference on "Harvesting Blue Economy for Accelerated Economic Growth", held in Mombasa, Kenya, from September 17th -21st, 2018, discussed the current state, future, and expected innovations of the various fields of engineering with regard to the blue economy and other issues facing the world and humanity, and the relationship between these problems and national development with emphasis on Africa in general and Kenya in particular. The participants applauded Kenya's big four agenda strategy and its effort towards effective achievement of the African Union Agenda 2063 and sustainable development goals (SDGs) making it easy to grow the blue economy.

In this regard, the country was further urged to implement the resolutions of this conference to forge ahead with its vision 2030 plan especially on the blue economy. This strategic leadership in blue economy by Kenya will indeed inspire the rest of Africa to follow suit, especially at a time Kenya is implementing its big four agenda. The African continent is urged to implement the resolutions and adopt the contents of this declaration.

Major topics of discussion of the 3rd Africa Engineering Conference were devoted to:

i. Marine Engineering,
ii. IEA Framework and International Recognition Arrangements,
iii. Engineering Ethics and Anticorruption
iv. Africa Engineering Report & Capacity Building,
v. Infrastructure Score Card,
vi. Renewable Energy,
vii. Marine Administration & Tourism,
viii. Marine Construction Equipment,
ix. Desalination,
x. Marine Fisheries & Aquaculture,
xi. Port, Shipping and Marine Surveillance,
xii. Blue Economy,
xiii. Pollution Control & Water Catchment areas,
xiv. Student presentation

The results of these discussions are presented in the following Mombasa Declaration on "Harvesting Blue Economy for Accelerated Economic Growth".

Considering that:

a. The United Nations has unanimously adopted 17 Sustainable Development Goals (SDGs) and an associated 2030 Development Agenda to address extreme poverty and grand challenges of development;

b. Lack of effective blue economy policies means the continent's economic growth is slowed down due to the opportunity costs;

c. The building of safe and reliable marine infrastructure and other blue economy activities require large numbers of engineering professional practitioners;

d. Life-cycle and systems thinking in marine development proposals and projects require thorough analysis of their technical, economic and environmental feasibility and social and cultural impacts, before their approval and implementation, and

e. International governance institutions must strengthen the involvement and linkages between science, engineering, education and policy for sustainable marine industry development;

f. Adequate, safe and reliable energy infrastructure must be developed to enable the growth of the blue economy.

g. Industries such as transportation, fisheries, sport, tourism and construction must be enhanced to improve the efficiency within the blue economy activities.

h. Ethics and professionalism must be enhanced to ensure zero tolerance to corruption as a guarantee for development and prosperity of the blue economy for the people of Africa.

Declare that:

1. Substantial technological improvements as well as sound, evidence based policies are needed for an effective blue economy to ensure access to fresh and safe drinking water (desalination), energy, sanitation, communications, shelter, and transport services in communities of Africa;
2. The conference believes that inadequate involvement of African stakeholders in finding solutions to their problems is the reason for underdevelopment of the continent. Hence Africa by exchanging and applying appropriate policies, scientific knowledge, engineering creativity and best practice with up-to-date technology on blue economy, engineers are able to substantially introduce sustainable solutions into most areas of activity that contribute to African citizens' quality of life and wellbeing.
3. In order to enhance the recognition of engineering to national development, we propose the need to support WFEO in its bid for UNESCO to have the 4th of March declared the "World Engineering Day for Climate Change Action and Sustainability".
4. In order to mitigate the effects of natural disasters, that create problems in the water environment, blue economy and food production, Engineering has to implement measures to protect infrastructure with the most resilient technologies.
5. Engineering is the activity of utilizing the output of science and technology to create safe and prosperous lives for humanity. Engineers must, not only work for the advancement of specialist knowledge in the areas of science, technology, and engineering, but they must also take into account ethical and professional concerns especially by taking responsibility to fight corruption.
6. Engineering education especially in the blue economy is important for enabling people to make good use of up-to-date scientific knowledge and engineering means and processes to advance the state-of-the-art technology to improve the quality of life of citizens of Africa. Engineering education must be introduced into every area of society,

as for example "engineering liberal arts, and cultural heritage, entrepreneurship, innovation and critical thinking", and included at each educational stage in schools from early childhood development, but also throughout the Engineer's professional career.

7. The increase of women entry, who comprise roughly half of the population, into the realm of engineering is essential for assuring the availability and balance of sufficient engineering professionals to take charge of economic development through implementation of feasible engineering projects. The number of opportunities in engineering education for women must be increased.
8. Engineers as members of society must carry out their work providing for the enhancement of the life conditions of society, focusing their activities on the creation of a prosperous and safe society. There is need to harness and develop advanced competences such as inter-cultural and emotional intelligence competences.

We urge the Africa's leaders to accept this opportunity to engage the World and Africa's Engineering Community as a full partner in addressing the complex challenges as we evolve toward a sustainable planet. The World and African Engineering Community is ready, willing and able to contribute its expertise, creativity and dedication to achieve the elements of this Declaration.

Dated this 21sy September, 2018 in Mombasa, Kenya

For the Institution of Engineers Kenya (IEK)

Eng. Collins Juma

The President;

For the Federation of African Engineering Organizations (FAEO)

Eng. Julius Riungu

The President;

M. MANUHWA
Pres. Elect FAEO.

pp

For UNESCO, Regional Office for Eastern Africa, (Nairobi)

Alice Auma Ochanda, PhD

Programme Officer – Gender and Science;

For the World Federation of Engineering Organizations (WFEO)

WFEO President Representative;

Eng. Mustafa Shehu