



Message from Dr. Marlene Kanga

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Dr. Marlene Kanga is the Immediate Past President of the World Federation of Engineering Organizations (WFEO), the peak body for engineering institutions internationally representing some 100 engineering institutions and approximately 30 million engineers.

A chemical engineer, she was the 2013 National President of Engineers Australia and is a Fellow of the Australian Academy of Engineering and Technology and a Member of the Order of Australia, a national honor, in recognition of her leadership in engineering profession.

During her term as WFEO President, Marlene led the initiative for the member states at UNESCO to declare 4th March, the founding Day of WFEO, as World Engineering Day. The inaugural World Engineering Day was held on 4th March 2020 and developed the vision and strategy of the importance of engineering for sustainable development and to advance the UN Sustainable Development Goals. Marlene has been listed among the 100 engineers making a contribution to Australia in the last 100 years as part of Engineers Australia Centenary celebrations in 2019 and one of the Top 10 women engineers in Australia.

It gives me great pleasure to support this publication that 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 UN Sustainable Development Goals are particularly relevant to the SIDS. Many have low income levels and are depend on agriculture, natural resources and tourism for employment and income (SDG #1). While many are transitioning towards improved health outcomes, life expectancy continues to be lower than in other nations (SDG #3). Many nations have limited access to clean sources of water and sanitation and low cost reliable sources of energy (UN SDG #6 and #7).

Engineers have an important role in developing reliable access to clean water and efficient sanitation systems that do not discharge polluted waste and thus also preserve the pristine environment that surround the islands.

Engineers can also develop and implement low cost wind and solar energy and energy storage systems to address the issues of access to sources of clean, low cost and reliable energy.

The impact of climate change (SDG #13) presents unique challenges that also needs engineers. The Small Island Developing States (SIDS) are particularly exposed to the impacts of rising global temperatures. Sea level rise, altered rainfall patterns and extreme weather events such as cyclones have a devastating impact on essential infrastructure such as roads, schools and hospitals as well as the economy, affecting important industries such as tourism (SDG #10).

Resilient infrastructure and innovation (SDG #9 and #11) including housing is essential for nations that are buffeted regularly by strong cyclonic winds. It is important that nations can recover quickly from extreme weather events to reduce the adverse impacts on the economy.

Importantly, education of students at school, technical institutes and university on issues relating to sustainable development is needed to empower young people to understand the challenges of sustainable development and to develop solutions appropriate to their environment and culture.

I hope that this document will encourage young people in Mauritius to consider how they can make a difference to their own beautiful and precious country, to improve the lives of its citizens and for a better sustainable world.