

World Engineering Day 2024

Message by:

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Engineering Solutions for a Sustainable World

The **World Engineering Day for Sustainable Development** was proclaimed by **UNESCO** at its 40th General Conference in 2019. It is celebrated worldwide on **4th March of each year** since 2020 as a **UNESCO international day** of celebration of engineers and engineering.

World Engineering Day (WED) 2024: **March 4th** marks World Engineering Day for Sustainable Development, a day to celebrate engineers and their crucial role in shaping our modern world.

To mark this occasion, the World Engineering Day organises a Hackathon to encourage engineering students worldwide to work in teams towards a global real-world problem.

This year's theme is “**Engineering innovation for a more resilient world**” and it will be celebrated in Madrid, Spain, after the conference “Engineering the cities of the future”, organized by the Institute of Engineering of Spain, that will take place on 2 and 3 March, at the Palacio de Cibeles.

4th March every year offers an opportunity to highlight engineers and engineering's achievements in our modern world and improve public understanding of how engineering and technology are central to modern life and for sustainable development. Engineers provide all the basic necessities to sustain life on earth. There cannot be life without water, air, shelter, food, roads, power supply, communications, etc. etc.

All the services to make Mauritius habitable from the arrival of the Arabs, then later the Dutch and the French and the British were provided by the Engineers. All the infrastructures including roads, bridges, water works and water reticulations, irrigation networks, wastewater treatment network, dams, lakes, coastal protection works, to telephone wireless systems, power supply are all provided and serviced by the engineers.

Today, the responsibilities and challenges to maintain a sustainable society have been magnified many times over and this is further compounded by Climate Change.

We have already witnessed and experienced the floodings earlier this year in Port Louis and other low-lying areas. What we have seen and experienced is just a minor sample of what are to come. Just imagine all the coastal areas under water. Can you? Imagine cyclone of over 250 -300 km/hr blowing across Mauritius? Can you see the damage to our infrastructures including water supply, roads and power supply being down for weeks?

The Inter-Governmental Panel on Climate Change (IPCC) has been warning the world of the impending worsening of the Climate and its disastrous impacts on life on earth mainly due to increase in temperature above 1.5 Degree.

Unfortunately, the world leaders, and especially those in developed countries mostly responsible for emission of CO₂, have been paying lip service to this warning to the point that today the global warning has become irreversible.

I have personally has been following the Climate Change convention implementation since 1992's earth summit and despite all the studies, all the warnings and all the speeches by global leaders that they care, the world is worse today than it was 50 years ago.

The situation is alarming and much worse in Small Islands Developing States because they are in the frontline to suffer from Climate Change impacts. Yet, they are responsible for less than 5 % of CO₂ emission and despite all the promises of financial assistance to SIDS to mitigate the CC impacts, hardly any such promises are materializing.

What do SIDS do?

IEM is of the view that Mauritius MUST urgently review its land use model for a start. The questions are many such as, Can we and should We encroach on our catchment areas? Can we in the name of FDI and GDP continue to concrete over our traditional green areas?

Whatever happened to the National Physical Development Plan, funded by the World Bank under the Environment Investment Project, prepared to support

sustainable development by identifying areas for specific purposes such as agricultural (green areas) zone, tourism zone, Industrial zone, catchment areas and residential zone etc. with a view to prevent conflicting activities.

How many more roads do we need in Mauritius? Singapore in 2020 decided to call it a day for new road building as the roads cover a third of its land mass. Mauritius must be the largest market for vehicle sale per capita in the world. Should we not provide alternative safe, reliable and secure modes of transport and encourage the public to use it? What about using economic instruments such as heavy taxes for those single driver vehicles entering Port Louis and other main towns?

Management is about forward planning and forecasting impacts and planning accordingly. Tomorrow will be too late. Time to act is NOW!

There is only one Mauritius, and we need to take care of it now so that future generations will have somewhere to live.

The Message from IEM on this 4th March 2024 is that we need to plan and build a more resilient Mauritius for our children and grandchildren.

Unfortunately, the Climate Change impacts are inevitable and if we do not plan accordingly, no drain will be adequate to deal with flooding in Mauritius.

If all the surface water runs off to the sea, how do we replenish our aquifers which provides with over 50-60 % of our water supply. Presently, we are on course to a water deficient regime and at times of severe drought (Forecast by IPCC), Mauritius will have to resort to importing water to drink!! Shocking statement BUT it can and will happen, if we do not change tact and course.

What is the contribution of the engineers to make the world safer and sustainable?

Given the challenges, IEM has for long now decided that business as usual will not do. Tomorrow's engineers need a new approach. They need to be so educated and trained that no matter what the challenge is, they should be able to think on their feet, analyse a problem no matter how complex, it might be, and come up with options and solutions. In this context, the IEM has been working very hard since 2017 to become a signatory of the Washington Accord, which promotes and regulates the standard for graduate engineers who must be proficient in 12 learning areas, itself based on an outcome-based education system.

This means that the engineering graduate must demonstrate after 4 years of full-time study that he/she has learnt and is competent to solve a complex problem. IEM has already set up its Engineering Accreditation Board and is offering this service to both the public and private universities running engineering Degree Programs.

In line with current practice by other professional bodies, a lifelong learning process should also be put in place to ensure that the Engineer is not left behind with what he / she had learnt at the university years in the past BUT is knowledgeable about the latest technological development and is thus equipped to deal with new challenges.

IEM will support the Council of Registered Professional Engineers in the implementation of such a practice, whereby, the Engineer will have to follow a number of CPD courses during the year, to qualify for the renewal of his/her Professional licence.

Tomorrow's Engineers need to be educated and trained Today.

Thank you and a very happy Engineers Day to all.