



# The Pakistan Academy of Engineering

## 27<sup>th</sup> Symposium: “Sustainable Development Goals for Clean Water & Sanitation for Pakistan”

Held on Saturday, March 18, 2023

Address of the President

Dr. -Ing. Jameel Ahmad Khan

Respected Speakers,  
My dear fellow Engineers,  
Honourable Guests,  
**Ladies and Gentlemen!**

### **SALAMUN ALA MANIT-TABAUL-HUDA**

I am privileged to welcome you and express my gratitude to you for your valuable participation in our prime event, that is our 27<sup>th</sup> Symposium on an extremely important and complex subject. A Third Party Assessment of the achievement of targets in respect of SDG 6 is also absolutely necessary.

Engineering is vital in achieving the SDGs, yet engineering is not always placed centrally in these processes.

The UN member states adopted the 17 SDGs in 2015. The UN is organising an event “The AI for good Global Summit on July 6 and 7, 2023, to showcase capabilities of humanoid robots from fighting fires, delivering and providing healthcare, and farming sustainability according to the International Telecommunication Union (ITU).

The Millennium Development Goals (MDGs) lasted for fifteen years. The Rio+20UN Conference came up in 2012 with a set of 17 goals (SDGs) that came

into action in 2016 leading global development agenda upto 2030. Pakistan signed the international agreement on the agenda in 2015.

The Planning Commission of Pakistan provides National Support to the SDGs unit. Provincial SDGs support units have been established in each Planning & Development Department. Framework for the SDGs have been developed by the provinces.

Engineering has a crucial role in achieving each of the 17 SDGs. Engineering innovations are shaping our world, especially emerging technologies such as big data and AI, which are crucial for addressing the pressing challenges facing mankind and the planet. SDG 6 on clean water and sanitation includes the “Water Goal”, which aims to provide universal access to clean water and sanitation by 2030.

Access to safe drinking water has been recognized as a fundamental right of every citizen in the National Drinking Policy 2009. The policy’s key goal is to ensure safe and sustainable drinking water to all by 2025. The Pakistan’s Agriculture and Research Council designed household level solar powered filtration plants, which were installed in Umerkot district, Sindh back in 2015.

Many of the SDGs require solutions rooted in technology. Therefore, engineers must play an important role when it comes to achieving these goals. For SDG 6, Clean Water and Sanitation, engineers and technology are essential to providing a sustainable, affordable, and reliable supply of clean water and of area-wide sewerage water treatment.

Engineering education must reflect the change that is taking place on all levels of Life.

A new report from the U.S National Academy of Engineering identifies possible action steps the governments, non-governmental and philanthropic organizations, universities and the private sector can take to operationalize the UN Sustainable Development Goals. The SDGs must be rooted in local buy-in and implementation.

For the purpose of assessment, we have picked up Goal 6, Clean Water and Sanitation. The achievement of targets of Goal 6 will need judicious application of emerging technologies. That is the domain, The Pakistan Academy of Engineering, would like to assess.

Let us see what has been achieved so far and what barriers are being faced to meet the targets by the year 2030.

The Sindh Government has reported current status of the targets achieved.

The Federal SDGs Support Unit under the Ministry of Planning, Development and Reform, Government of Pakistan issued a report on the Data Reporting Gaps in the year 2018.

Ensuring Access to clean Water and Sanitation SDGs Status Report of 2021 states that at the national level 94% of the population is using safely managed drinking water sources. How much of the population is drinking bottled water and at what cost. This has not been answered. Proportion of population using. (a) Safety managed sanitation services and (b) a hand washing facility with soap and wash is reported to be 98% for Urban and 70% for Rural.

In 2011 Bill Gates addressed the Toilet Challenge. Several teams have put up prototypes in the field. All process the waste locally, so there is no need for large accounts of water to carry it to a distant treatment plant.

Source of Drinking water: Percent of household using tap water 22%, Handpump 23%, Motor pump 30%, Dry well 3%, River/Pond canal stream 2%, Bottle water 2%, Tanker 4%, Filtration Plant 10%, others 3%.

According to the Pakistan Bureau of statistics, 2019 – 2020 proportion of population living in household with access to Basic Services is as follows:

Access to Basic Drinking water services 94%,

Access to Basic Sanitation services 68%.

Rapidly detection of recognized or emerging infectious disease outbreak is essential for timely public health response. Wastewater Surveillance Systems are absolutely necessary.

The UN central agency UNESCO said in a new report that One in Three schools worldwide has no basic sanitation. Globally, 33 pc of school children lack potable water.

According to the One United Nations program 3. 2018 – 2022 in respect of the UN Sustainable Development Framework for Pakistan, WASH facilities in schools would be a boost to attendance, performance and enrollment, particularly for adolescent girls.

Pakistan Floods 2022, issued by the Ministry of Planning, Development and Special Initiatives, recounts the Assessment of Post – Disaster Needs. More than 7,060 schemes, including 4,344 water supply schemes and 2,716 sanitation were adversely affected. The estimated damage for public sector schemes is Rs. 40

billion. And for community or private infrastructure and water and sanitation that serve two-third of the affected population at 83 billion Rs. Drinking water sources in flood-hit areas of Sindh, Balochistan were found highly contaminated.

Globalisation of supply chains has an impact on the sustainability of Development Goals. Its structure is changing.

I fervently hope you will enjoy the presentations made by our learned speakers and perceive the dimensions of the SDGs Pakistan is facing. We shall be going on record to have made viable recommendations to overcome the crises.

Thanking you, Ladies & Gentleman.