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**CSTD 2022-2023 priority themes on “Technology and innovation for cleaner and more productive and competitive production” and “Ensuring safe water and sanitation for all: a solution by science, technology and innovation”**

Statement submitted by

Oman

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**Dr. Afkar Al Farsi intervention on the first theme on Technology and innovation for cleaner and more productive and competitive production**

The Institute of Advanced Technology Integration (IATI), under the Ministry of Higher Education, Research & Innovation establishes a culture of innovation and entrepreneurship in the fields of research and science and functions as an intermediary between the industry and business sector and the academic sector in Oman to develop scientific researches into innovative technologies and marketable products as well as to create a stimulating environment to conduct researches that will help the Sultanate meet market demands and tackle current challenges in water, renewable energy and oil and gas sectors. Likewise, Innovation Park Muscat is another initiative under the Ministry that aims at encouraging scientific research, innovation, and collaboration between various sectors. It provides an access to various facilities and services to create an environment that motivates innovators and entrepreneurs and companies to develop amazing ideas in the sectors of energy, food and biotechnology, health, water, and environment sectors.

The use of drones has been one of the very effective leaps in utilizing technology to facilitate better performance. In agriculture, and steered by engineers and farmers, drones are used to farm high-quality crops in a shorter period with high rates of success. A group of Omani researchers came up with a new method to pollinate palm trees by mixing pollen with water and then spraying it on palm pollen using drones. In comparison with the traditional methods of sprouting, a single worker can only sprout six palm trees per hour; instead, drones can pollinate about a thousand palm trees per hour with higher quality. Drones are also used in monitoring agricultural operations, growing the best and most productive crops, and collecting data to monitor the vegetation index of crops and protect the crops from any potential hazard that might affect their growth.

**Muhanna Al Zuheimi intervention on the second theme on Ensuring safe water and sanitation for all: a solution by science, technology and innovation**

Oman has relatively low rainfall rate and hence we have no running rivers. But we have what is known as wadis which are similar to rivers but run for two or three months per year after rains in mountain areas. Drinking water is sourced from sea water desalination plants, and underground aquifers. Therefore, Oman has built many dams along the sea shore of the country in order to enhance the underground water rezerves.

On the Science, Technology and Innovation, I would like to share with you one of the initiatives that Oman has undertaken, and that is the Leaks Diction System which was created in 2020 by Oman Energy Centre to reduce the amount of waste in water resources to a minimum. The system applies the measurement through smart meters, which request no human intervention, to collect the data on water consumption which resulted in a significant reduction of 15% in water waste.

As such, there is a high level of implementation of plans for the maintenance and sustainability of safe water and sanitation services. This is also reflected in the basic law of the Sultanate of Oman for provision of access to safe drinking-water and sanitation services.