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ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

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**CSTD 2022-2023 priority theme on “Ensuring safe water and sanitation for all: a solution  
by science, technology and innovation”**

Statement submitted by

The Philippines

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# PHILIPPINES

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## Commission on Science and Technology for Development (CSTD) 2022-2023 Intersessional Panel Meeting

### **Theme 2: Ensuring Safe Water and Sanitation for All: A Solution by Science, Technology, and Innovation**

*Delivered by H.E. Renato U. Solidum, Jr.  
Secretary, Department of Science and Technology*

Thank you, Madam Chair.

Excellencies,

In the Philippines, 14.5% or a total of 22.7 million families have no access to safe water supply based on the Philippine Development Plan 2017-2022. Around 332 municipalities, mostly located in the nation's poorest provinces and urban poor spaces, are still considered "waterless". Despite being surrounded by ocean, source of potable water in different regions of the Philippines, especially in small islands or in geographically isolated and disadvantaged areas (GIDA) is a major concern. There are also several sources (commonly deep wells, streams and wells) which are contaminated and are unsafe for human consumption.

The Harmonized National R&D Agenda (HNRDA) crafted mainly by the Department of Science and Technology or DOST highlighted the research priorities for environmental pollution control and management on water and wastewater management. In 2004, the Philippine Clean Water Act or RA 9274 was enacted to protect the country's water resources, abate pollution from land-based sources, and improve water quality through the formulation of better water quality management. The law states that "Pollution Research Development Programs, in coordination with the DOST and other concerned agencies and academic research institutions shall establish a National Research and Development Program for the prevention and control of water pollution." This reflects the Philippines' strong commitment ensure improved and safe water and sanitation.

Several programs and projects have been funded by the Department of Science and Technology that aim to provide access to potable water; develop cleaner, safer and compact technologies for application to industrial wastewater; develop materials that detoxify harmful substances in water; and conduct wastewater remediation. On water technologies, studies and output include the development of ceramic water filters at different scales and designs. A low-cost modular-type rainwater collection system was also invented and has been distributed to various local government units.

The Department of Science and Technology of the Philippines has also been at the forefront of harnessing frontier technologies for water and sanitation. As an example, the DOST uses artificial intelligence or “AI” and machine learning to help curb water shortages in the east service area of Metro Manila. A research team developed simulation modelling software to enhance a private water management company’s capability in forecasting the water supply system of dams and its treatment plants and storage reservoir. Another is the use of satellite through the Remote Sensing and Data Science (DATOS) Project that developed a Geographic Information System-plugin to train and implement AI models to extract features from satellite imagery. The technology uses the agency’s High-Performance Computing which can also be used by public users from academic institutions as well as government agencies.

Excellencies,

The Philippines recognizes that there are widening inequalities in access to water and sanitation between regions, countries, and groups within nations. The CSTD and other multilateral linkages provide us an avenue to work hand-in-hand to address our common challenges through knowledge sharing and international technical cooperation and it is our duty to maximize these platforms. The Philippines believes that together, we can create enabling infrastructure, framework, tools, and environment that would help all of us move forward in attaining Sustainable Development Goal 6.

Thank you.