

# The Role of Ministry of Public Works and Housing in Improving the Quality of Water Supply in Indonesia: The Implementation of Microbubble and Plasma Ozone in Wastewater Treatment

Firdaus Ali

Email: [firdausali@gmail.com](mailto:firdausali@gmail.com)

## **Abstract**

The increase in population in Indonesia indicates the raise of various needs including drinking water. The Government of Indonesia, Ministry of Public Works and Housing, during the period of 2015-2019, is establishing the strategic policy of improving the infrastructure of drinking water services in a number of particular areas. The policy is in line with National Movement of 100-0-100, which is providing access to drinking water 100%, reducing the slum area to 0%, and providing access to sanitation worth 100% for the people of Indonesia. The proposed strategy to achieve 100% drinking water accessibility generally are include improving safe access of drinking water to all communities, increasing operational funding capability and development of alternative sources of financing, improvement of institutional capacity of water supply development, development and implementation of standard and procedure over the country, increasing provision of raw water for drinking water in a sustainable manner, increasing the role and partnership of business entities and communities, and development of technology innovation. For technology innovation, implementation of microbubble in ozone system is possible to reduce reactor size, amount of ozone decomposition equipment needed and ozone dose rate. By testing it in WTP Buaran, it proved to be able to improve the efficiency of wastewater treatment into drinking water. It shows efficiency in terms of investment cost 67%, land for site 50%, operation cost 47%, only need 1 operator; reduction in treatment time, from 12 to 1 hour; stability in operation; high quality water; and full confirmation of 46 standards drinking water. To achieve 100% drinking water accessibility, it needs coordination of the stakeholders and related parties.

## **Keywords**

Microbubble technology; MPWH Role; Water Supply