

Sustainable Development for Water Supply Case Study: Indonesian Coastal City

Firdaus Ali*, Dwi Lintang Lestari, Marsya Dyasthi Putri and Khalidah Nurul Azmi

*corresponding email: firdausali@ymail.com

Abstract

Increasing need of clean water will affect the needs to get proper and equitable water distribution services throughout the region. City X is a strategic city for the eastern part of Indonesia. Existing water supply is very bad because the water needs are still not achieved. Therefore, sustainable development planning is needed for the water supply system so it can meet the needs of clean water that fulfill three aspects of service, namely quantity, quality and continuity. The method used in this research are compilation of general plans, preparation of programs and development activities, preparation of criteria and service standards, analyze potential sources and allocation of raw water. Based on the projected population density and the planned development of the City X, the service area is divided into six distribution zones, by considering the availability of existing drinking water supply systems, priority of underserved areas, population density and direction of City X. At the end of this plan (in 2036) the achievement of piped drinking water services is around 79%. From the volume aspect, the water balance shows excess of water supply. In this development, a plan is prepared by considers possibilities in the implementation of water supply system development.

Keywords

Clean Water, Sustainable Development, Water Supply System