The Role of water supply and sanitation during floods : case study of flood disaster in five regions of Jakarta

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Abstrak

Jakarta lies in low-lying deltas served by the Ciliwung River and many other small rivers. Due to overpopulation in Jakarta, green open spaces are diminishing. Since infiltration capacities of land in Jakarta have decreased, surface runoff has become more extensive. As a result, Jakarta is often stricken by flood disasters which affect human life, property, and urban infrastructures. The objectives of this study are to identify and develop mitigation strategies during flood disasters for communities and urban infrastructures, including facilities that supply water for daily use as well as drinking water, and also sanitation facilities. Primary data was collected during field surveys, while secondary data represents information obtained from relevant literature. The results of this study show that the average height of water during flooding was about 1 meter, and the highest level reported as 4 meters. The time required to fully drain the flooding areas is typically about five days. However, the degree of damage to buildings and property is relatively minor during a flood. The study also reveals that residents who have lived in their houses more than 25 years generally had been hit by floods at least two times. Thus, these communities demonstrated that they had learned from their experiences to prepare themselves for future flooding to reduce the extent of damage, suffer ing, and loss. Public guidelines for mitigating damages caused by flood disasters should be developed and followed with communication and explanation to the communities within the various regions of Jakarta. The water supply facilities, such as reservoirs, and sanitation facilities should ensure that water tanks are made available to every shelter and campground, and that permanent public toilets are provided.