

# Water Conservation and Use and Flood Management Have to be Integrated

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Water resource management of a river has to be done in an integrated manner. It relates to hydrology cycle, starting from the rain drops that fall to the ground, getting absorbed in the ground, evaporating, flowing from the up to downstream until it reaches the sea. As such, an incident happening in one certain part of the river will affect other parts. This means that many sectors are affected by events happening in the river.

UGM expert in water engineering resource , Prof. Dr. Ir. Budi Santoso Wignyosukarto , Dip.HE., considered that even if Jakarta has done works on the rivers to prevent flooding, but the runoff water in the upstream was not controlled. The capital cannot control the extraction of the ground water either, so the subsidence of surface is still uncontrolled, thus flooding will still happen.

This is exacerbated by the fact that the capacity of the rivers running in the city is low. During elevation of water surface of river discharge, the north coast of Jakarta will be higher than the north Jakarta area, due to the subsidence of excess surface or due to sea surface elevation (effects of climate change). This will result in the smaller capacity of river discharge to the sea, unless water pumps are used to help.



“So, the solution to the flooding problem in Jakarta has to be thought of by various sectors together. We all have to work together to be free from getting inundated, whilst the economy is not hampered, etc,” he said on Wednesday (22/2).

According to Budi, flood and drought are two sides of a coin. Too much water which causes flooding means the less water getting absorbed in the ground, hence less water supply to be used in the dry season. So, integration is needed between water conservation, water use and flood controls.

The combination of dams and pumps can be applied for areas with surface lower than the sea surface.

“The more densely populated settlement means the smaller water catchment area, so the bigger the amount of water to be discharged,” Budi concluded.

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