

Prof. Radianta: Simulation to Minimise Errors Helps Decision Making

Tuesday, 30 March 2010 WIB, By: Marwati

In hydraulic structures, hydraulics has become an integral part. The development of hydraulics has enabled the construction of hydraulic structures, for example weirs, dams, irrigation channels, flood and volcano mud mitigation, river and coastal erosion barriers, harbours, and coastal structures. The science is progressing rapidly.

According to Prof. Ir. Radianta Triatmadja, Ph.D., the development is related to the role of hydraulic simulation that gives an understanding about the function and safety of the hydraulic alic structures, for example, weirs, dams, levees, irrigation channels, harbours, and so on. Simulation is conducted imitating the system and problems, checking the system imitation through made-up problems. Such system includes the existing structures and those that will be built and the environment.

A simulation is done of the strength, function, performance and effect of a dam or river structure's on flooding and erosion. A harbour is simulated to know the height and wave force, sedimentation, and their effects on the environment. Tsunami waves are simulated to know the area that will be hit and their intensity. Or, drinking water pipelines are simulated, among other, to know the remaining pressure in the client's location and the water quality. "All those simulations are done for good purposes, meaning to minimise the predictable and unpredictable errors in planning, even to help decision making in the management of hydraulic structures," the man born in Kulon Progo on 6 December 1958 explained.

In the simulation, apart from the physical way, the model can be imitated non-physically or mathematically. According to the husband of Dra. Triwidanti Laksmini Kisdiarsi and the father of Da, such simulation can be visualised that enables us to see simulated images or video images looking much like the real condition,â€ said the Head of the Hydraulics Hydrology Lab of UGM.



Related News