

## **Creative Collaboration in Urban Polder of Jakarta: In the Framework of Integrated Water Management**

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### **ABSTRACT**

*Urbanization in developing countries happened rapidly since the 20<sup>th</sup> Century. Coastal cities are affected due to unplanned and uncontrolled developments, which encroach rural and low lands. Because of unsustainable development, many environmental issues occur in cities such as floods. Floods are contributed by insufficient infrastructure for flood prevention and mitigation, unmanaged infrastructure and climate change. Understanding these facts, we believe that Integrated Water Resource Management (IWRM) needs to be implemented in solving those problems. It could be defined as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.” In this case, IWRM comprises of efforts in controlling land-use change and urban surface run-off; drainage planning and management; landscape design; and infrastructure provisions, which are conducted simultaneously. We conclude that to conduct successful IWRM, creative collaboration among the Urban Planning Authority and Drainage Management Authority is compulsory. In the urban low-lying lands like Jakarta, extra flood prevention and mitigation efforts are needed. A polder system is appropriate and effective for flood control. The polder must be managed as an integrated drainage system consisting of dikes, drains, retention ponds, outfall structures or pumping stations. Furthermore, designed landscape in the polder is required to ensure effectiveness. Polder dikes must be planned and designed considering potential social conflict and accessibility issues. Maintenance of infrastructure becomes a critical point for successful polder operation. The Polder system cannot be planned separately from macro spatial plan, urban design and water management of the macro (river basin) system. We believe creative collaboration in Integrated Water Management, particularly Polder System should be joined by Government, the People and the Private sector. This will eventually ensure the sustainable development of urban low-land areas.*