

Jeddah's Hydraulic Protection Systems and the Management of Flood: An Assessment

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Abstract : Located in the South-west of Saudi Arabia, Jeddah is more than a harbor. It is a big city of the Red Sea and the second town of Saudi Arabia, after Riyadh the capital. Jeddah profits from several economic assets due especially to its transit position towards the high sacred places of Islam like Mecca and Medina. During summer, this metropolis is transformed into a political capital and a tourist resort for foreigners and Saudis alike. The city of Jeddah was affected by serious sudden floods; two great ones took place in 2009, and in 2011. The human and material tools were considerable, since these events caused the death to hundreds of people, damaged thousands of buildings built on basins slopes, which, however had the authorizations necessary. To cope with these natural disasters, several urban hydraulic measures were undertaken like building dams and canals to collect surface waters. These urban measures aimed at the protection of inhabitants and belongings against the risks of floods as well as the interception and the drainage of streams. Although these protection measures are important, expensive, and effective, they are no longer enough or effective to cope with the evolution of the natural disasters that the city of Jeddah is constantly exposed to. These protective hydraulic measures did not make it possible to reach risk zero situations. They transferred the damages towards other zones. This paper purports to study the protection network systems in Jeddah and to understand their various impacts during floods on the city and on its inhabitants.

Keywords : Jeddah, Saudi Arabia, urbanization, hydraulic protection

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