

Urban flood risk and land use change after circle levee in Dhaka downtown

*Shigeko Haruyama¹

1. Department of Environmental Science, Graduate School of Bioresources, Mie University

Dhaka Flood Control Project has several stages of land use changes with different social economic levels in this metropolitan area. The circle levee has constructed along the western perimeter of Dhaka and embankment along the eastern perimeter stretching to the Shitalakhya River after the memorial floods attacked by cyclone. The 1988 huge flood was the important epoch of regional planning and river management planning with mitigation, however, the second stage of land use change has been guiding the large floods in 1998, 2004 and 2007 again. Under the rapidly urban sprawls, the changing social structure has been pulling the other resilience of urban floods. The socio-economic data provided the information related to flood inundation risk on the basis of various land cover units. The temporal and spatial land use change has been revealed and was one of driven factors of flood risk with population growth and economic activity. Compared with satellite data and DEM, the inland enclosed circle levee has been transfiguration of surface with settlement and built-up zones in the low lying hazard zones. Also, built up area have been developed and have been showing high flood risk area. Towards to secure city, the land use planning should be desirous of flood mitigation understanding landform feature which is mostly related with flood history.

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