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EVALUATION OF FACTORS CAUSING ORDO 3 RIVER FLOOD IN URBAN

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Abstract

The Langsur is a tributary of the Bengawan Solo River (order 3). Every year, the river experiences great flooding. It has an area of 14.88 km² and a length of 12.20 km. It has an average slope of 0.0008 and a small meandering in the middle. Urbanization along the upstream watershed gradually proceeds. The river empties into the Samin River with watershed of 303.46 km². It continues to flow into the Bengawan Solo River. The Upstream and middle stream of Langsur flows on the edge of Sukoharjo city. Therefore if a flood occurs, the social effect is always tremendous. The city district government consciously put great efforts into the control the flooding. Before detailed designing and physical implementations, it is necessary to evaluate the major causes of the flooding. This evaluation highlights some of the causes and it includes: analysis of bankfull capacity, river storage capacity, meandering as well as downstream water level effects. The result shows that the major causes of the flooding are the downstream water level and the narrowing of the crossing. Hopefully, with knowledge of the major factors that cause the flooding, it will be a lot easier for the policy maker to appropriately and effectively control the flooding.

Author Keywords

Appropriate and effectively, Bankfull capacity, Causes of flooding, Down stream water level, Urbanization

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