ZONING REGULATION PRINCIPLES OF SETTLEMENT ACTIVITIES IN THE CATCHMENT AREA OF DRAINAGE SYSTEM GUNUNGSARI SURABAYA CITY

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Abstract

The increase of settlement activity in the catchment area of Drainage System at Gunungsari Surabaya will directly affect the increase of runoff water. The increased of runoff water will cause certain impacts, economic, social and environmental impact. Those impacts will be experienced again and again by the people who lived in those settlements. In order to reduce the impacts caused by the runoff water because of the influence of settlements development, then the control instruments regarding the use of land settlement is highly required.

Based on the problems above then it is needed to conduct study considering the settlement activities management in the catchment area of Drainage System at Gunungsari of Surabaya. The objective of this research is to formulate the principles of zoning regulation for settlement activities in the catchment area of Drainage System at Gunungsari of Surabaya. In order to achieve the goal then it was conducted the identification of characteristics of settlements development, followed by identification of the characteristics of runoff and then proceeded with the identification of the influence of settlements development towards runoff water using regression analysis, next it would be followed with determining the risk zones of floods disaster through overlay techniques, and finally determining the principles of zoning regulation through simulation techniques.

The increase of settlement activities, especially reviewed from the broad of the settlements has a close correlation or there is a positive
influence between the broad of settlement and the increased of runoff water area. From the level of influence then the area of research can be mapped into 2 zones, they are the moderate risk zone and low risk zone. The two zones are then simulated and resulting the principles of arrangement / management based on its intensity. At middle risk zone the development of settlement should start to be limited, while in the low risk zone, the development of settlement is more focused on the vital areas - such as border of rivers or channels.

**Keywords:** zoning regulation, the risk of disaster, runoff water, settlement.