

Estimation of River Flood Damages Among Farmers and Small Business in Developing Countries: Evidence from the Kali Lamong Indonesia

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Abstract:

Flooding is a severe disaster in the Kali Lamong river basin (58 Km²). For this reason, detailed flood damage estimates are needed to design an optimal flood management strategy. This study aims to estimate flood damage in the Kali Lamong River Basin. The data collection method used cluster sampling in 15 villages with 870 respondents. We surveyed farmers' households and micro businesses from October to December 2022 to obtain information on flood damage, flood characteristics, and socio-economics characteristics based on the 27-30 September 2022 flood event. Based on those data, we used regression analysis to develop flood damage functions to know how flood characteristics are related to the damage. Our study found that the economic flood damage in the Kali Lamong river basin is estimated to be US\$ 2,3 million for farmer's households and US\$ 10,3 million for micro businesses. This study shows that household flood damages 5,2% more than micro business.