

Existing Flood Preparedness Measures in Flood Vulnerable Communities: An Analysis of the Situation up to January 2020 of the Deduru Oya Basin in Sri Lanka

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Abstract

Flood preparedness measures in the Deduru Oya basin are seemingly not at a satisfactory level to minimize the flood risk in the area. Therefore, a proper study should be done to identify the existence of flood preparedness measures and the people's consensus on flood preparedness measures that are to be implemented in the area. These findings are necessary to establish flood preparedness measures in flood-vulnerable communities. Accordingly, this study aimed to assess the existing flood preparedness measures and to identify the people's consensus to implement the flood preparedness measures in flood-vulnerable communities in the Deduru Oya basin. Flood preparedness measures generally mean the precautionary actions taken in advance to minimize the damages by floods while the flood vulnerability means the extent to which the people in exposed areas are susceptible to floods. In this context, flood preparedness measures were studied under 16 variables that have been mostly used in the literature, and also, they are familiar to the locality. The stratified random sampling method was used in the current study to select the sample (n = 425). Primary data were used for the study that was collected through a questionnaire survey and interviews. Descriptive data analysis method and Ordinal Logistic Regression Analysis method were used as data analysis techniques. The results have shown that only a flood early warning system is operating in the area while all the other flood preparedness measures i.e. training and awareness programs, village-level disaster management committees, and plans, flood hazard maps, land use planning, building codes, flood risk insurances, local emergency fund, mitigation loans, and reconstruction loans are not operating in the area. However, people's evacuation capacity is at a satisfactory level while the people's rebuilding capacity, public participation in flood risk management activities, communication and coordination, and the government sector involvement in flood risk management activities are not at a satisfactory level. These results show that the flood preparedness measures in the study area are not at a satisfactory level. Roles and responsibilities of the relevant stakeholders have not been specified and empowered by law. Therefore, some stakeholders are not properly engaged

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in due activities. Hence, the government should take necessary actions through the relevant authorities to enhance the flood preparedness measures in the area.

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