



A GUI for exploring financial solutions to flood-induced losses

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This paper explores an extension of the widely used software InaSAFE <http://inasafe.org/> to incorporate financial risks. InaSAFE allows visualisation and quantification of the impacts of natural hazards on infrastructures using open source GIS. It is mature open-source software that has been widely adopted in Indonesia and elsewhere by emergency planning and response professionals. However, InaSAFE currently lacks a functionality to estimate financial losses.

We will present our work on integrating financial features into InaSAFE. These are intended to allow government agencies and other practitioners to easily visualise and summarise the financial impact of a flooding event; and hence simplify the communication of alternative approaches to mitigation of the resulting financial risks.

This work is part of a research project, FloodFinJava, investigating how financial instruments could be used to for better assessing and responding to the costs of flooding in Central Java, Indonesia. In most countries around the world, governments carry the major burden of the financial costs from extreme natural hazards. However, lack of adequate information on and tools to assess these costs, hinders the required financial planning, especially in developing countries.

It is one of several project outputs for facilitating the communication and understanding of potential arrangements for managing the risks of loss amongst local stakeholders. It will allow analysis of the use of various financial instruments (indemnity-based insurance, indexed insurance, catastrophe bonds, etc.) under different flood scenarios.