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The Global Flood Model

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Recently, a Global Flood Model (GFM) initiative has been proposed by Willis, UK Met Office, Esri, Deltares and IBM. The idea is to create a global community platform that enables better understanding of the complexities of flood risk assessment to better support the decisions, education and communication needed to mitigate flood risk. The GFM will provide tools for assessing the risk of floods, for devising mitigation strategies such as land-use changes and infrastructure improvements, and for enabling effective pre- and post-flood event response.
The GFM combines humanitarian and commercial motives. It will benefit:

– The public, seeking to preserve personal safety and property;
– State and local governments, seeking to safeguard economic activity, and improve resilience;
– NGOs, similarly seeking to respond proactively to flood events;
– The insurance sector, seeking to understand and price flood risk;
– Large corporations, seeking to protect global operations and supply chains.

The GFM is an integrated and transparent set of modules, each composed of models and data. For each module, there are two core elements: a live “reference version” (a worked example) and a framework of specifications, which will allow development of alternative versions. In the future, users will be able to work with the reference version or substitute their own models and data. If these meet the specification for the relevant module, they will interoperate with the rest of the GFM. Some “crowd-sourced” modules could even be accredited and published to the wider GFM community. Our intent is to build on existing public, private and academic work, improve local adoption, and stimulate the development of multiple – but compatible – alternatives, so strengthening mankind’s ability to manage flood impacts.

The GFM is being developed and managed by a non-profit organization created for the purpose. The business model will be inspired from open source software (eg Linux):
- for non-profit usage, the core specifications and reference version of the GFM will be licensed free.
– for commercial use, users (such as software companies, engineering companies and business or risk management consultancies) will pay an annual fee, contributing to upkeep and maintenance.

The GFM demonstrator will be shown and discussed. The initiative is seeking active involvement of the academic community.