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Dissemination of modeled and satellite derived flood products: Global coverage to support local needs

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The demand for timely and accurate flood information is well understood and more urgent than ever as flooding has become the most common natural hazard worldwide, impacting people of all continents in both developed and less developed countries. Population and total exposed assets by river flooding are certain to increase in the coming century making the need for flood information even more pressing. Unlike the World Meteorological Organization (WMO), the hydrological community hasn't been very successful in establishing a global hydrological network of observations through which model simulations and measurements and novel measurement technologies could be exploited. Countries that can afford have departments in place that are tasked to develop flood risk maps and are involved in flood forecasting and relief efforts. However, the majority of countries do not or cannot allocate sufficient funds to support such efforts, nor has there been a global initiative to identify and determine global flood risk areas.

Due to the lack of objective knowledge of the impact of flooding during or after an event, first relief agency assistance is often constrained and therefore less effective. These humanitarian catastrophes could be reduced with better transformation of existing observational and modeling technologies into information useful to local populations and decision makers.

Here I present new efforts to produce a state-of-the-art, globally-scoped, flood prediction, monitoring capabilities and risk evaluations platform that is interactive and includes high resolution flood information to better serve local needs. The platform builds upon already operational or quasi-operational NASA-supported global flood systems, including the DFO - Flood Observatory satellite-based hydrological gauging stations, UMD Global Flood Monitoring System (GFMS) and have these integrated with the European Commission's GloFAS, and SAR-based high-resolution flood mapping. This with the intension to have these data layers (flood forecasting, flood extent, and flood history) available to everybody.

