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Digital Earth: Advancing hydro-geomorphology and hazard prediction

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In 1998, Al Gore in his famous speech "The Digital Earth: Understanding our Planet in the 21st century" presented a vision for Digital Earth: a multi-resolution, three-dimensional representation of the planet, into which we can embed vast quantities of geo-referenced data and which can provide the basis for understanding our complex planet, predict disasters, undertake humanitarian efforts, and assist in planning and decision making, as well as create the basis for scientific inquiry. This effort is beyond any single investigator, any single group, any single funding agency, any single country. Instead it is an effort of global involvement which requires sustainable resources to create the platform on which the international community (scientific, government agencies, and informed citizens) can build upon. In this talk, we will present some recent efforts to develop tools that can be supported within the Google Earth Engine (EE) environment for wide use in river basin applications including flooding and landslide prediction.