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The prone urbanized regions for flash floods disaster along the Nile river, Aswan, Egypt

Mohamed Saber
Assiut University, Egypt

It is well known that flash floods are very devastating for human life and their properties. The main target of this paper is to investigate and determine the prone urbanized regions along the Nile river, Aswan, Egypt relying on numerical simulation and field work investigation. The integrated methodology of GIS and Remote Sensing as well as Physical-based hydrological model has been used for this purpose. The GSMaP precipitation as Remote Sensing data have been used after bias correction for the simulation of flash floods at the target area. The simulation has been successfully carried out to the flash flood event of Jan. 18-20, 2010 as well as some other flash floods events. Numerical simulation and field work of flash floods showed that many urbanized areas are expected to be under the threat of the future flash floods. Therefore, some strategies of mitigation should be considered in those critical regions. These results state that the applied methodology are capable to investigate the vulnerable areas for flash floods in Aswan, Egypt which might be good warning or alarming for the residence people in those regions so that their life and properties might be saved and the threat of flash floods can be minimized in the future cases. Furthermore, the results would be helpful for decision makers to re-manage the urbanized regions to be far from the flash flood threat.

Biography

Mohamed Saber has completed his Ph.D. by September 2010, from Kyoto University, Japan. He is currently working as Assistant Professor, at Geology Department Faculty of Science, Assiut University, Egypt. He is a supervisor of about 8 Master students, He is a member of Japan-Egypt Hydro Network on the Nile River System and the Delta of Egypt, member of the Geological Society of Egypt (GSE), Member of Japan Society of Civil Engineering.

msaber_75@yahoo.com