Flood risk assessment for the Thach Han River Basin, Quang Tri Province, Vietnam

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Abstract This paper presents the assessment of flood risk in the Thach Han River Basin, North Central Coast of Vietnam by thoroughly identifying factors that determine current and potential future flood risks; and regenerating flood risk maps of the 2–10 November 1999 flood event. After researching the hydrological processes and behaviours that govern flooding through developing a Digital Elevation Model (30 × 30 m) for the whole basin, the authors have applied MIKE NAM, MIKE 11 HD to propagate floods in the basin and used MIKE 11 GIS to map flood duration and flood inundation. Finally, risk maps with different probabilities are developed as the results of matrix tables of flood hazard and flood vulnerability.

Key words flooding; MIKE NAM, MIKE 11; MIKE 11 GIS; regionalisation method, flood risk assessment; Thach Han River Basin