

DATA BOOK C
Flood Potential Area Maps

**THE STUDY ON THE NATIONWIDE FLOOD RISK ASSESSMENT
AND THE FLOOD MITIGATION PLAN FOR THE SELECTED AREAS
IN THE REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT
VOLUME IV
DATA BOOK C
FLOOD POTENTIAL AREA MAPS**

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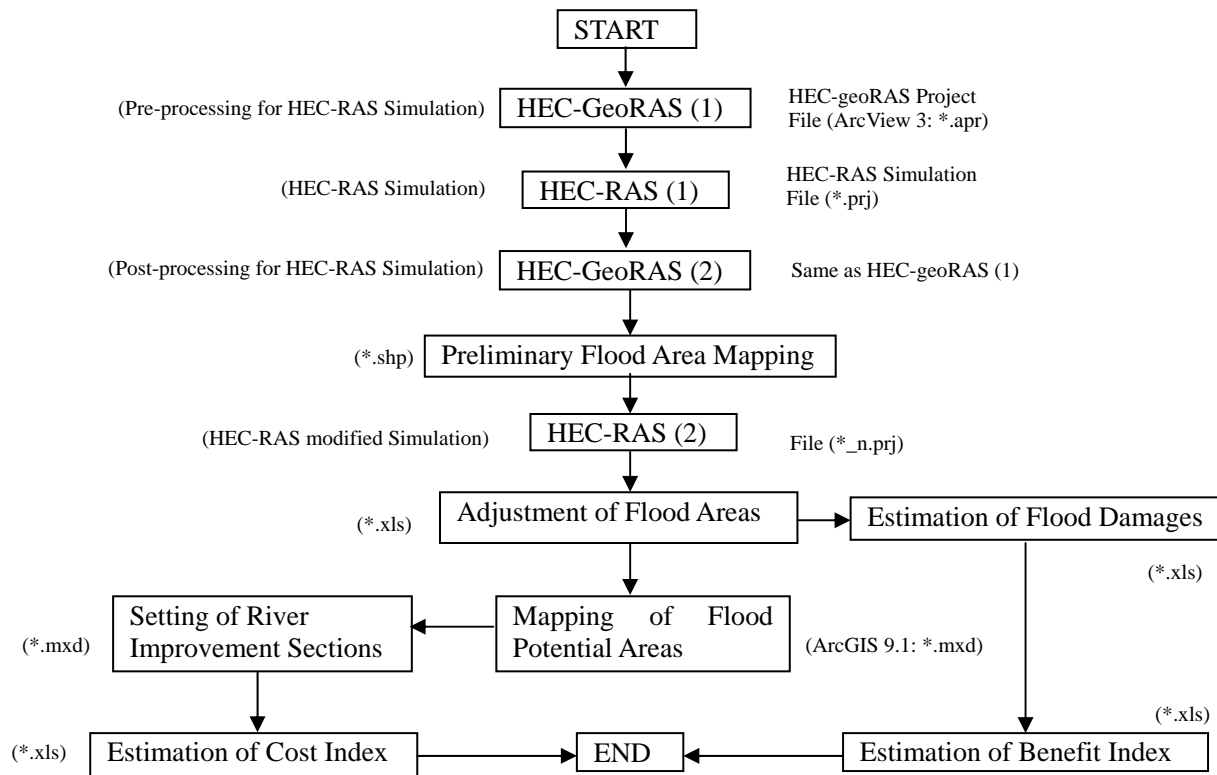
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MAPPING OF FLOOD POTENTIAL AREAS

120 river basins were selected through the First Screening, and the Second Screening was conducted for these 120 river basins considering the Cost and Benefit Indexes together with the scores of the First Screening. In the course of the estimation of the Cost and Benefit Indexes, HEC-RAS and HEC-GeoRAS model was utilized, and the flood potential areas were mapped out. Figure below shows the flowchart of this procedure.



HEC-RAS/GeoRAS and Mapping of Flood Potential Areas

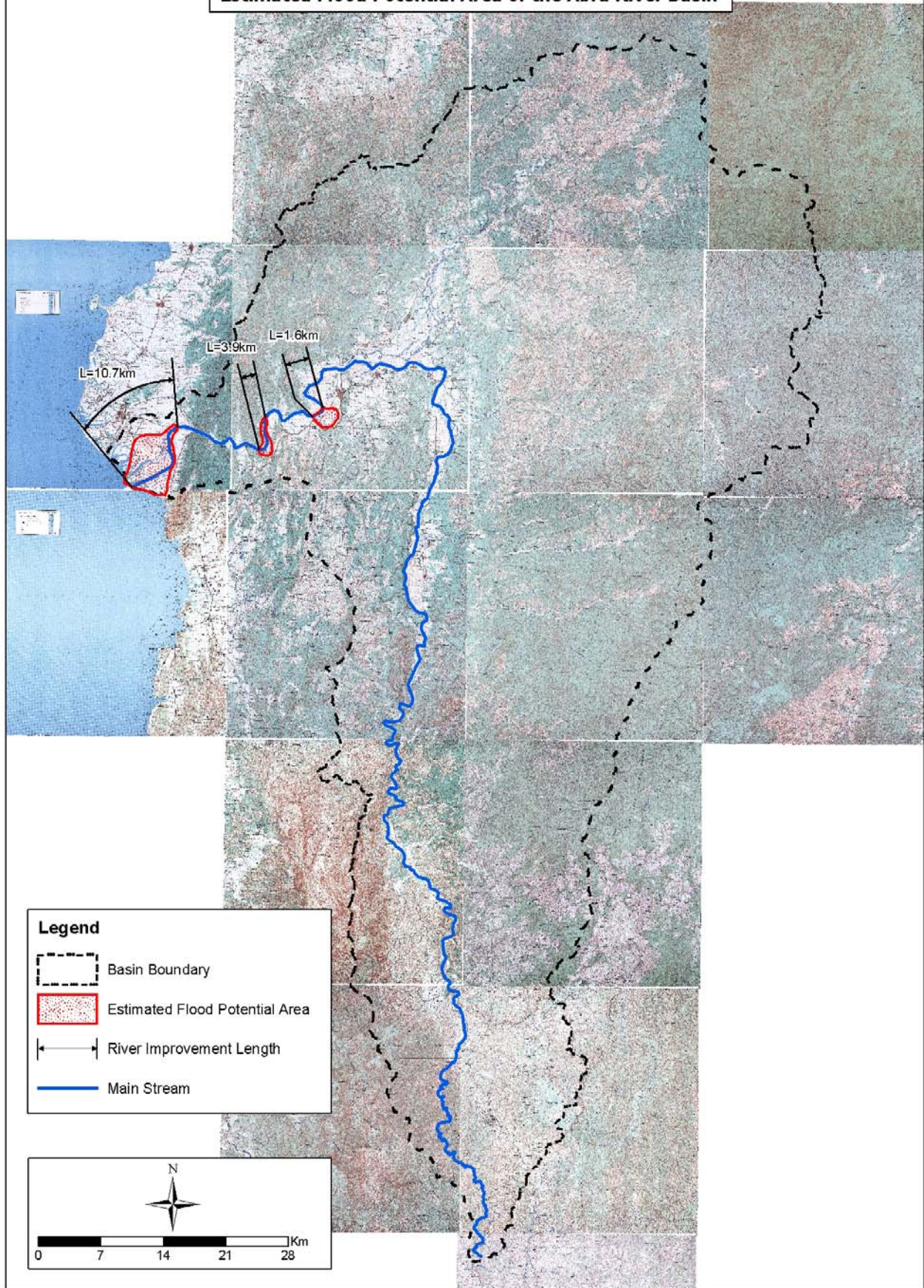
Following to this flowchart, the flood potential areas were mapped out as described below.

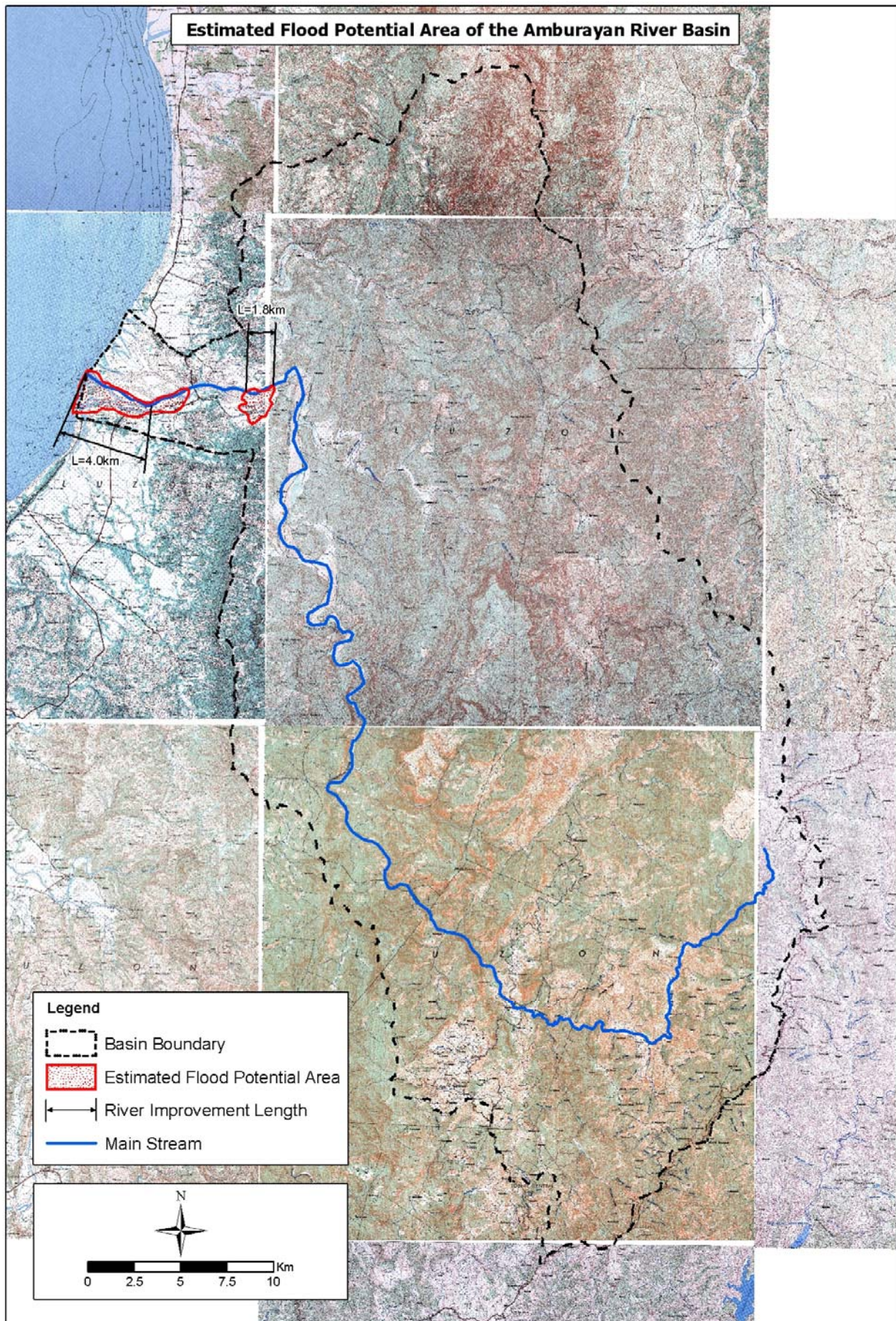
HEC-GeoRAS (1) was performed in order to obtain the cross section data from the DEM. HEC-RAS (1) was then roughly performed in order to calculate the water level in the river, and HEC-GeoRAS (2) to map out the preliminary flood area. Based on this preliminary flood area mapping, HEC-RAS (2) was re-performed in order to improve the calculation accuracy, which was mainly realized through:

- Up graded accuracy of sub-basin area using 1/50,000 scale maps
- Improved accuracy of estimated design discharges using Specific Discharge Formula

Base on the results of HEC-RAS (2), flood area was adjusted by comparing the flood area widths of the preliminary flood area and the results of HEC-RAS (2). Following to this adjustment, the preliminary flood area was modified and the flood potential area was mapped out as shown in this Data Book C.





Estimated Flood Potential Area of the Abra River Basin





Estimated Flood Potential Area of the Sinocalan (Dagupan) River Basin

Legend

-  Basin Boundary
-  Estimated Flood Potential Area
-  River Improvement Length
-  Main Stream

