

# Prototype tool for mapping flooding from all sources

## Project Summary SC080050/S2

A prototype software tool has been developed to enable sets of flood mapping data representing flooding from different sources (coastal, river, surface water, with and without asset failure, reservoir inundation, and so on) to be combined to produce a flood map for multiple sources of flooding.

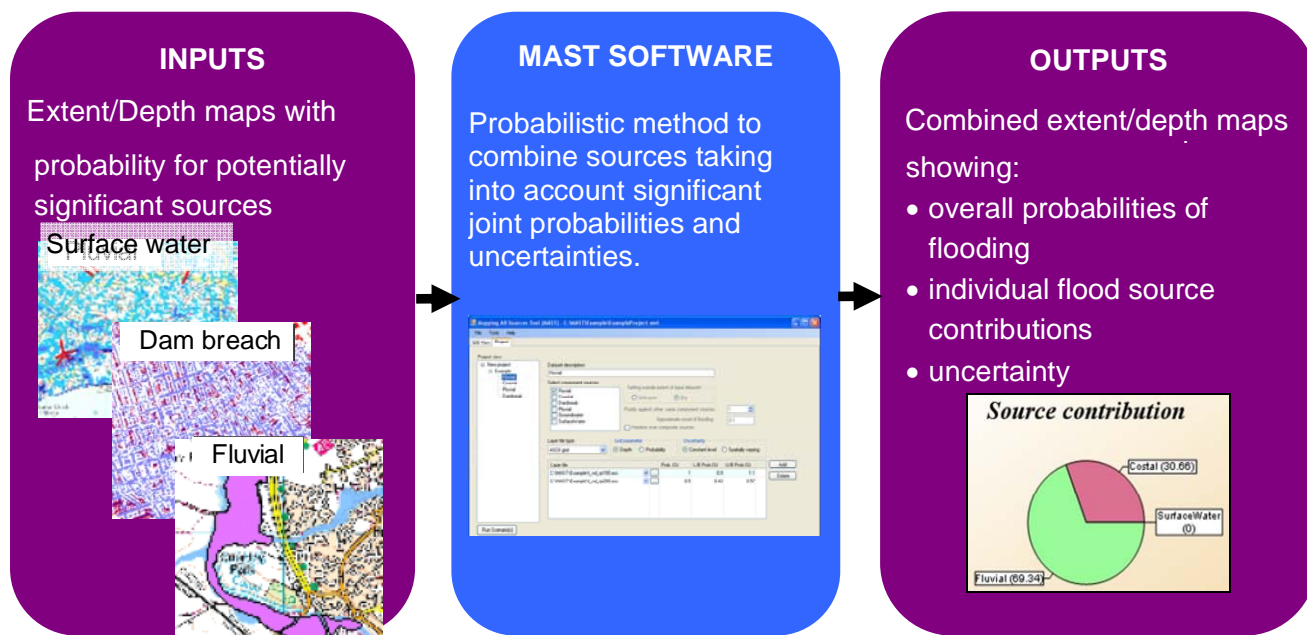
The prototype software, called MAST (Mapping All Sources Tool), is practical and flexible to use, particularly in situations where fully integrated modelling of multiple flood sources cannot be carried out. MAST has been developed to help meet the evolving needs of modern flood risk management, such as clearer communication and integrated management of 'all sources' of flood risk (including awareness raising, investment planning, spatial planning and planning for response to flooding incidents).

The project was carried out in two phases. The Phase 1 report, SC080050/R1, *Developing a prototype tool for mapping flooding from all sources. Phase 1: Scoping and conceptual method development*, includes a review of methods, datasets and consultation with potential

users to establish the requirements of the tool. It also includes a detailed description of the new probabilistic method developed.

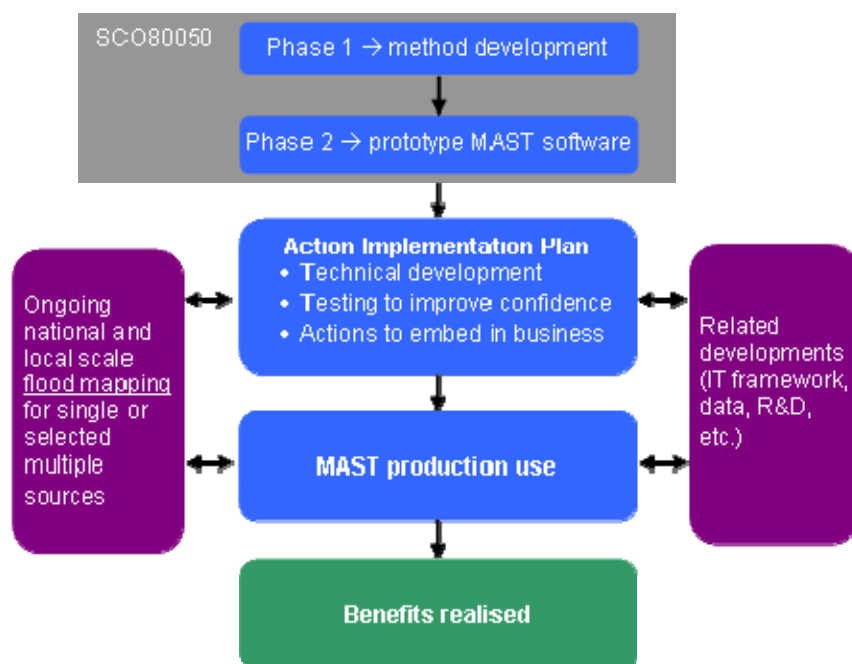
In phase 2 the method was implemented in the MAST software and underwent pilot testing for four locations in Lancashire, Yorkshire, Lincolnshire and Dorset. The feedback from the testing process was that the prototype MAST software has the potential to be an extremely useful tool in an operational environment.

An implementation plan is set out in the main Phase 2 report, SC080050/R2, *Developing a prototype tool for mapping flooding from all sources Phase 2: final report*. The plan describes the actions necessary to achieve the goal of a proven, practical and readily accessible software tool for Environment Agency staff, and the Environment Agency's flood and coastal partners, to use to generate maps of flooding from multiple sources. The main technical development tasks remaining are related to ensuring the software can be efficiently and effectively used by its intended end users - a particular need is



compatibility with Environment Agency IT systems to ensure access from the standard desktops of the intended users.

The MAST software is currently in a prototype state. Access to the software will be considered on a case-by-case basis upon request to the Environment Agency Evidence Directorate (evidence@environment-agency.gov.uk). A user guide to the software is available in report SC080050/R3.



This summary relates to information from project SC080050, reported in detail in the following output(s):

**Report:** SC080050/R1

**Title:** Developing a prototype tool for mapping flooding from all sources

Phase 1: Scoping and conceptual method development

**Report:** SC080050/R2

**Title:** Developing a prototype tool for mapping flooding from all sources

**Report:** SC080050/R3

**Title:** Developing a prototype tool for mapping flooding from all sources

Phase 2: MAST user guide

**Internal Status:** Released to all regions

**External Status:** Publicly available

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**Theme manager:** Jim Walker, Modelling and Risk Theme

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This project was commissioned by the Environment Agency's Evidence Directorate, as part of the joint Environment Agency/Defra Flood and Coastal Erosion Risk Management Research and Development Programme.

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