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Flood damage modelling: ambition and reality

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Flood damage modelling is of increasing importance for reliable risk assessment and management. Research efforts have improved the understanding of damaging processes and more sophisticated flood damage models have been developed. However, research seems to focus on a limited number of sectors and regions and validation of models still receives too little attention.

We present a global inventory of flood damage models which is compiled from a review of scientific papers and research reports on flood damage models. The models are catalogued according to model specifications, geographical characteristics, sectors addressed, input variables used, model validation, transferability and model functions.

The inventory is evaluated to position the current state of science and technology in flood damage modelling as well as to derive requirements for benchmarking damage models.