

Towards revising sediment targets for catchment compliance across England and Wales

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Introduction: The European Union (EU) Water Framework Directive (WFD; 2000/60/EC) is driving an increased focus on the biological effects of pollutant loadings, including those associated with sediment, with the aim of assessing compliance in terms of ‘good ecological status’. It is intended that the WFD will replace guidelines in existing legislation for sediment (the Freshwater Fish Directive; FFD; 78/659/EEC / 2006/44/EC) due to be repealed in 2013. Accordingly, ongoing policy-driven research in England and Wales is extending the empirical evidence base on the ecological impacts of fine sediment and developing a generic modelling toolkit for assessing catchment compliance using revised ecologically-informed targets.

Methods: The ongoing work comprises various key elements, including:

- Reviewing the existing evidence base on the ecological impacts of fine sediment
- Establishing a national scale typology for sediment pressures and ecological impacts to help target new field sampling
- Reviewing and estimating ‘intrinsic’ sediment pressures reflecting loadings before agricultural intensification in the early 20th Century
- Improving the current evidence base on the ecological impact of fine sediment using targeted field sampling and experimental work on the linkages between sector-specific sediment pressures and impacts on macroinvertebrates and fish
- Developing a generic modelling toolkit coupling sediment pressures and ecological condition for macroinvertebrates and fish, taking account of mitigation option efficacy, cost-effectiveness and optimisation of targeting control strategies
- Delivering a manual to stakeholders on catchment scale guidance for positioning and prioritization of sediment mitigation measures.

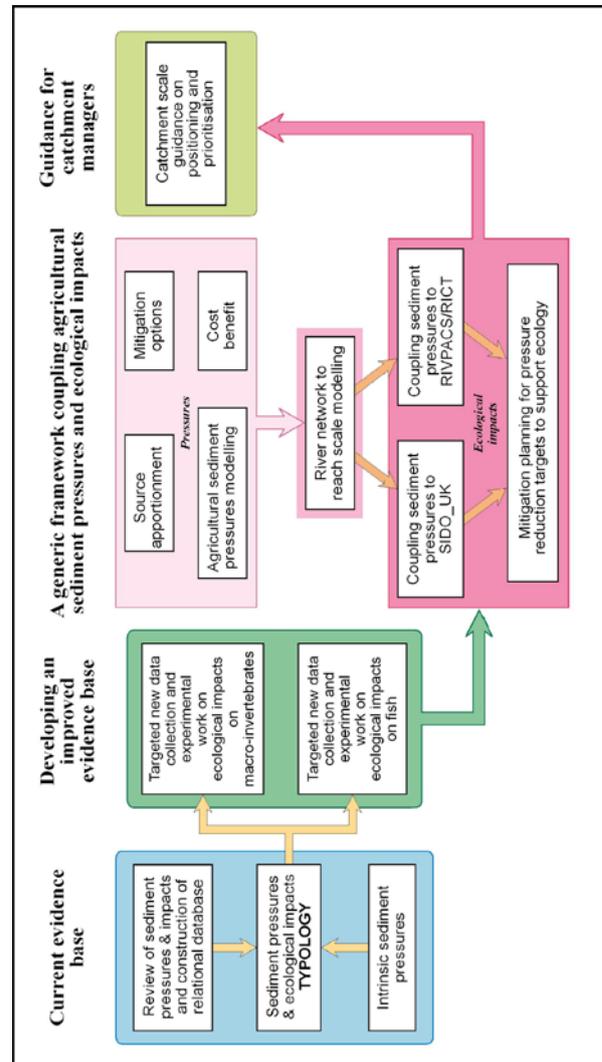


Fig. 1: Key components of the research project.

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