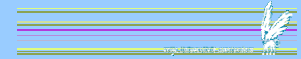


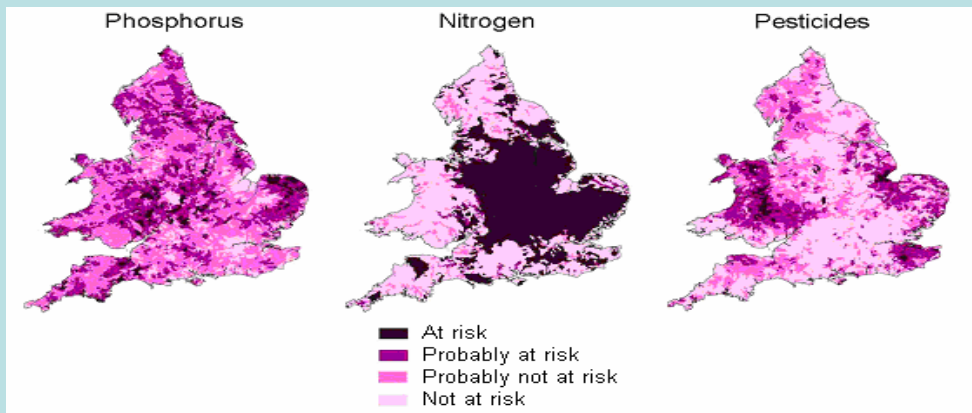
# Catchment Hydrology, Resources, Economics and Management



## Research Context: The Water Framework Directive (WFD)

The WFD represents a fundamental change in the management of water quality in Europe. It introduces a general requirement to improve waters to “good ecological status” by 2015. Implementing the WFD in England and Wales will pose many challenges (see Map 1 below), with particular impacts on the agricultural sector

Map 1. Risk of failing to meet WFD objectives in England and Wales



## Research Objectives

1. To develop a methodology for integrated hydrological-economic modelling of the relationship between rural land use and water quality
2. To estimate the impact upon rural land use and farm incomes of the consequences of implementing the WFD and Common Agricultural Policy reforms.
3. To provide policy guidance regarding alternative strategies for securing the objectives of the WFD and to estimate the impacts of such strategies upon fragile rural economies.
4. To assess economic values for the social benefits that may be generated by implementation of the WFD.
5. To test the transferability of these benefits assessments.
6. To step beyond integrated modelling to combine this with attitude-behaviour surveys of farm decision making.
7. To test the applicability of this integrated methodology across a large and diverse area.

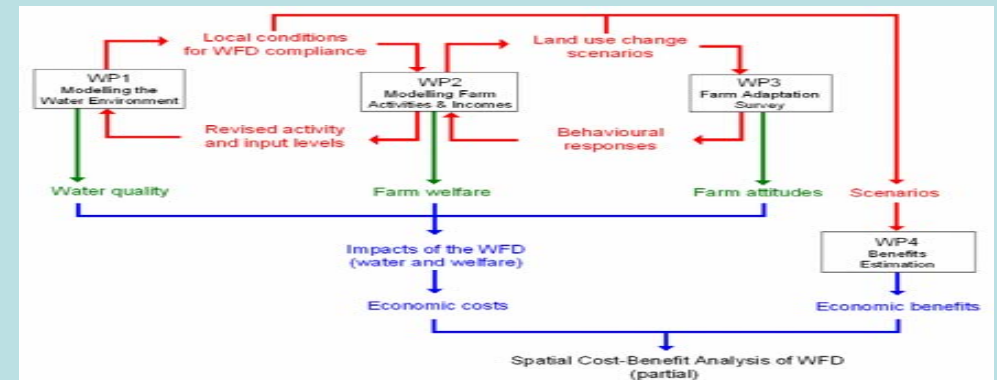
## Study Area

The research is focusing on the Humber catchment (see Map 2). This catchment covers an area of over 25,000 km<sup>2</sup> and has some 10 million residents. It includes a full range of farm types and diffuse pollutant sources. The Humber drains 28% of England and is the major river system entering the North Sea. It has been extensively studied under the Land Ocean Interaction Study (LOIS) and EUROCAT research projects.

Map 2. The study area



## Project Structure



The members of the research team are as follows - **Aberystwyth:** David Kay **Askham-Bryan:** Mervyn Lewis **CEH Oxford:** Helen Davies, Amelie Deflandre, Mike Hutchins, Graham Leeks, Colin Neal **IVM Amsterdam:** Roy Brouwer **Manchester:** Dan Rigby **UEA:** Julian Andrews, Ian Bateman, Brett Day, Salvatore di Falco, David Hadley, Tim Jickells, Andy Jones, Stavros Georgiou, Andrew Lovett, Kerry Turner