

Experiences in a Scottish research catchment: Monitored Priority Catchment Project, Lunan Water

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The River Basin Management Planning process in Scotland has classified the national water bodies by degree and nature of risk for failing Water Framework Directive standards. The priority is to ensure water bodies at risk of compliance failures improve towards the 'good' status. In order to understand the effectiveness of our regulatory tools and additional measures to improve water quality a system of Monitored Priority Catchments (MPCs) has been implemented. Presently, there are three MPCs which are catchments with representative land use issues and current non-compliance in WFD criteria. The MPCs provide a research catchment with aims to: (i) develop a strategy to apply and assess effective and proportional mitigation for human impacts in a catchment, and (ii) investigate the potential for standard and alternative policies for achieving Good Ecological Status for waters.

The Lunan Water MPC is a mixed, intensive farming system in NE Scotland with failures in ground water nitrate and loch total P compliance under the WFD. The project is an interdisciplinary one (with a strong socio-economic - biophysical linking) between Macaulay Institute (research partner), Scottish Environmental Protection Agency (regulator), Scottish Agricultural College (farming advisory services), a 'focus farm' and other farmer-led and stakeholder groups (fishermen etc). We have a monitoring network, which is currently assessing baseline conditions and highlighting issues. Using this catchment knowledge and farm audits management plans will be agreed to tackle the diffuse pollution issues. There is a multi-tiered approach envisaged with a subcatchment assessing 'basic' mitigation (that outlined by national guidance - our General Binding Rules system), then a 'research subcatchment' where extra voluntary measures will be encouraged and evaluated. Through this MPC initiative we hope to improve our methodologies for quantifying pollutant loads and assessing their sources for mitigation, better understand the effectiveness of regulatory measures and targeted extra measures, public and stakeholder aspirations for water quality and socio-economic barriers to uptake of measures.