position statement

Environment Agency

The Environment Agency's position on Land Management and Flood Risk Management

Key issues

We are actively looking at how we can use land management practices to deliver flood risk management benefits. Such approaches are supported by Making Space for Water, the Water Framework Directive, Defra's Water Strategy and the Pitt review.

There is strong evidence that small scale catchment management approaches deliver flood risk management benefits. Farmland can store floodwater to reduce downstream flood risk. Large washland (storage) or managed realignment areas can be designed to store excess water and slow down flood peaks. These storage areas may help farmers provide some income to farmers. We are actively working on projects to investigate these approaches.

Although there can be benefits for local flooding mitigation, the evidence to date has not demonstrated there are benefits in reducing extreme flood events at the catchment scale. We will continue to support research into large catchment scale impacts of land management changes on flood risk, water quality and resource protection and will actively seek partnership projects.

The Environment Agency's role

The Environment Agency is responsible for delivering sustainable flood and coastal erosion risk management solutions across England and Wales and for overseeing the delivery of solutions by Local Authorities and Internal Drainage Boards. We have many tools to manage flood risk including flood warnings, hard engineering and the construction of washlands.

Our strategic role in delivering flood and coastal erosion risk management puts us in a unique position to drive forward research in the area of land management and flood risk. We advise Defra, WAG and academic institutions on the research that is needed to move this policy area forward and can contribute funding to the delivery of scientific research that will increase understanding.

We are the competent authority for several EU Directives, including the Water Framework Directive and the Habitats Directive that drive us to deliver sustainable flood risk management solutions through land use and land management change.

Our Catchment Flood Management Plans and the Shoreline Management Plans indicate where land is suitable for flood risk management purposes. We are a key advisor to Natural England in the delivery of Environmental Stewardship.

We can help deliver changes in land use and land management on the ground by working with NGOs like the RSPB and the National Trust. We can support this through our development control and consenting works.

Solutions - we propose:

- We will **use Flood Risk Management GIA** to deliver land management and land use change where we have sufficient scientific evidence to support the benefits and it is cost beneficial to do so.
- We want a concerted effort to assess the larger catchment scale benefits of land use change and will **actively participate** in catchment scale research. We support partnership working on larger scale trials that seek to provide long-term monitoring.
- **Further research into the catchment scale impact of land management change** on flood and coastal erosion risk management work will be a priority for the joint Defra, Environment Agency flood and coastal erosion risk management R&D programme to **prioritise**
- We will work with Natural England to seek to **maximise the flood risk management benefits** in existing Environmental Stewardship options alongside resource protection, water quality and biodiversity.
- We want agri-environment schemes (i.e. wet grassland creation) and Catchment Sensitive Farming Capital grants schemes to deliver **flood storage through land use change on flood plains**.
- We will work with Natural England to seek to ensure that **Environmental Stewardship** payments for land management changes, i.e. woodland creation, managed realignment, **helps deliver** the strategic, sustainable, flood risk management approaches that have been identified by Catchment Flood Management Plans and the Shoreline Management Plans.
- We want **flood risk management to become an objective of the England Catchment Sensitive Farming Delivery Initiative**.

Background

In 2004 Defra announced Making Space for Water, a new strategy focused on developing a new and sustainable approach for flood and coastal erosion risk management in England. This involves an integrated approach to managing flood risk. As part of this work projects HA6&7 (The role of land use and land management in delivering flood risk management)[1] investigated the role that rural land use and land management can play in reducing flood risk at the farm and catchment scale. This work was completed in January 2008[1].

This work, plus many other pieces of research (i.e. FD2114[2] and FD2120[3]) have been unable to demonstrate that extreme flood events are reduced to an acceptable level through rural land use and management at the large catchment scale. We have good evidence for the benefits of washlands and flood storage areas for flood risk management and for the impact of land management change on flood risk at the small catchment scale. However, the benefit of large scale land management solutions, i.e. peat restoration, afforestation, grass buffers have been more difficult to prove. There is a significant theoretical basis to suggest there is a relationship between land use and flood risk management but little monitoring data to demonstrate the effects in practice.

Effects at a large catchment scale are difficult to determine as they are the result of aggregating many local-scale effects and are also dependent on individual physical catchment characteristics. The lack of understanding does not necessarily mean that there is no catchment-scale effect, but rather that the nature of the effect differs between different catchments and is difficult to detect.

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[1] Delivery of Making Space for Water: The role of land use and land management in delivering Flood Risk Management – Final Report, January 2008
[2] FD2114: Review of the impacts of rural land use and management of flood generation – Technical Report, 2004
[3] FD2120: Analysis of historical datasets to look for impacts of land use and management on flood generation – Final Report, March 2008