



# Integrated Approaches to Managing Floods and Droughts for a Changing Climate

**Wednesday 24th April 2013, 5:00 - 7:00pm**

Attlee suite, Portcullis House

**Water is a shared natural resource society relies on and its management needs to take into account a wide variety of conflicting interests. It is critical to food, energy and material production (the 'food-water-energy nexus') as well as the functioning of natural resource systems. This seminar will be an opportunity for MPs and Peers to consider changing flood and drought risks and discuss with experts the opportunities and challenges arising from more integrated approaches to managing water resources.**

Climate projections for the UK suggest that total rainfall will increase in winter and decrease in summer, while individual rainfall events may increase in intensity, especially in winter. This may simultaneously increase risks of flooding and drought. These risks are also increased by:

- The alteration of the natural hydrology of river catchments over the last 500 years in England through extensive drainage of land, water bodies and wetlands reducing the resilience of river flows.
- Degradation of upland habitats, such as moorland, extensive development of built infrastructure in floodplains and increased intensity of agricultural activity in river catchments.
- In coming decades, projected population growth in the UK is likely to increase water demand.
- Environmental targets to improve the ecology of freshwater bodies under the EU Water Framework Directive that require reductions in the quantity of water withdrawn for water supplies from surface waters and groundwater.

These risks could be managed by large scale investment in infrastructure or through adapting landscapes and existing infrastructure through measures to restore freshwater systems, including:

- Restoration and recreation of landscape features such as ponds, ditches, channels, wetlands or riverside woodlands to slow surface water flows to reduce maximum flood heights or delay the arrival of flood peaks, as well as increasing infiltration into groundwater and the resilience of river flows during low rainfall periods ('Natural Water Retention Measures').
- Minimising impact of built infrastructure on natural hydrological and ecological processes, through 'water sensitive urban design'. This approach, widely adopted in Australia, incorporates a range of technologies that promote water efficiency, manage the effects of urban surface water flows on watercourses and maintains groundwater levels and flows
- An 'ecosystems approach' to managing river catchments, based around the connections between natural processes, the services water systems provide to humans and the participation of stakeholders, which integrates competing social, economic and ecological needs and values (as demonstrated by Defra's catchment based approach to water management pilots).



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## Programme

**5.00pm** Chair's Welcome, Lord Whitty of Camberwell

**5.05pm** Speech by **Richard Benyon MP**, Defra Parliamentary Under-Secretary for Natural Environment and Fisheries (TBC)

**5.15pm** Presentations

**Professor Ed Maltby** - Emeritus Professor of Wetland Science, Water and Ecosystem Management, University of Liverpool and Visiting Chair of Research Innovation at Louisiana State University

**Professor Jim Hall** - Director of the Environmental Change Institute, University of Oxford and Member of the Adaptation Sub-Committee of the UK independent Committee on Climate Change

**Professor Alan Jenkins** - Deputy Director of the Centre for Ecology & Hydrology and Science and Director for the Water Research Programme

**Ian Barker** - Head of Land and Water at the Environment Agency

**6.15pm** Discussion

**6.45pm** Chair's closing remarks

**7.00pm** Close

To attend please email [postevents@parliament.uk](mailto:postevents@parliament.uk) or telephone 020 7219 8377  
Please bring this invitation with you to access the Houses of Parliament via the Visitor Entrance at Portcullis and allow at least 30 minutes to clear security. The meeting room is booked in the name of Adam Afriye MP.