



Natural Water Retention Measures

Web-based knowledge
Community of practice
NWRM practical guide



Pilot Project - Atmospheric Precipitation - Protection and efficient use of Fresh Water: Integration of Natural Water Retention Measures in River basin management

Service contract n°ENV.D.1/SER/2013/0010

The added value of regional networks: experiences from the Western Network

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The Western Network

Workshop held in Brussels 22-23 January

Participants from UK, Ireland, Netherlands, Belgium, Germany, France and Switzerland

Included experts in NWRM, agriculture, forestry and urban measures and nature conservation, along with water management practitioners from around the region

An opportunity to:

- Determine the level of knowledge, interest and willingness with respect to NWRM
- Identify relevant and valuable case studies



NWRM in the Western Region

Key points:

1. The focus was on Natural Flood Management



Recent flooding in Scotland
Photos courtesy of Roy Richardson, SEPA



Afforestation for Natural Flood Management
Photos courtesy of Roy Richardson, SEPA

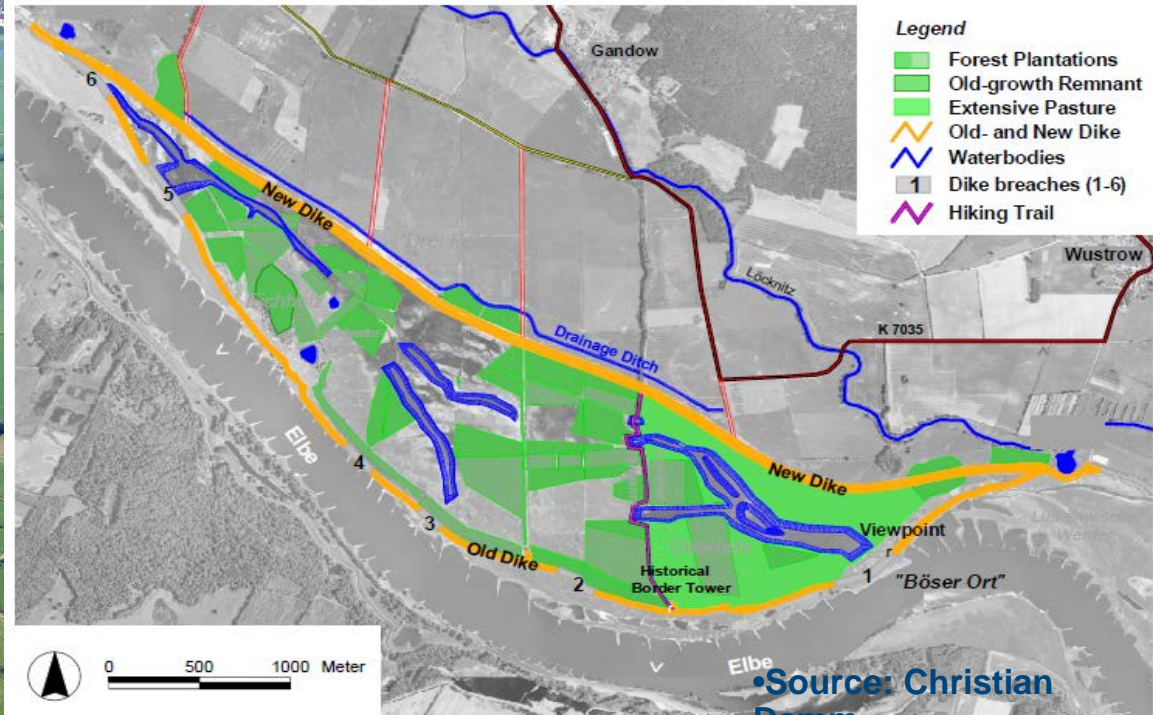




Small-scale Runoff Attenuation Features
Photos courtesy of Mark Wilkinson, James Hutton Institute



•Source: Christian Damm



•Source: Nora Künkler

Large-scale Floodplain Restoration (dyke relocation)
Photos courtesy of Thomas Borchers



Re-meandering for river restoration and flood management
Photos courtesy of Chris Spray, University of Dundee



Sustainable stormwater management
Photos courtesy of Peter Close

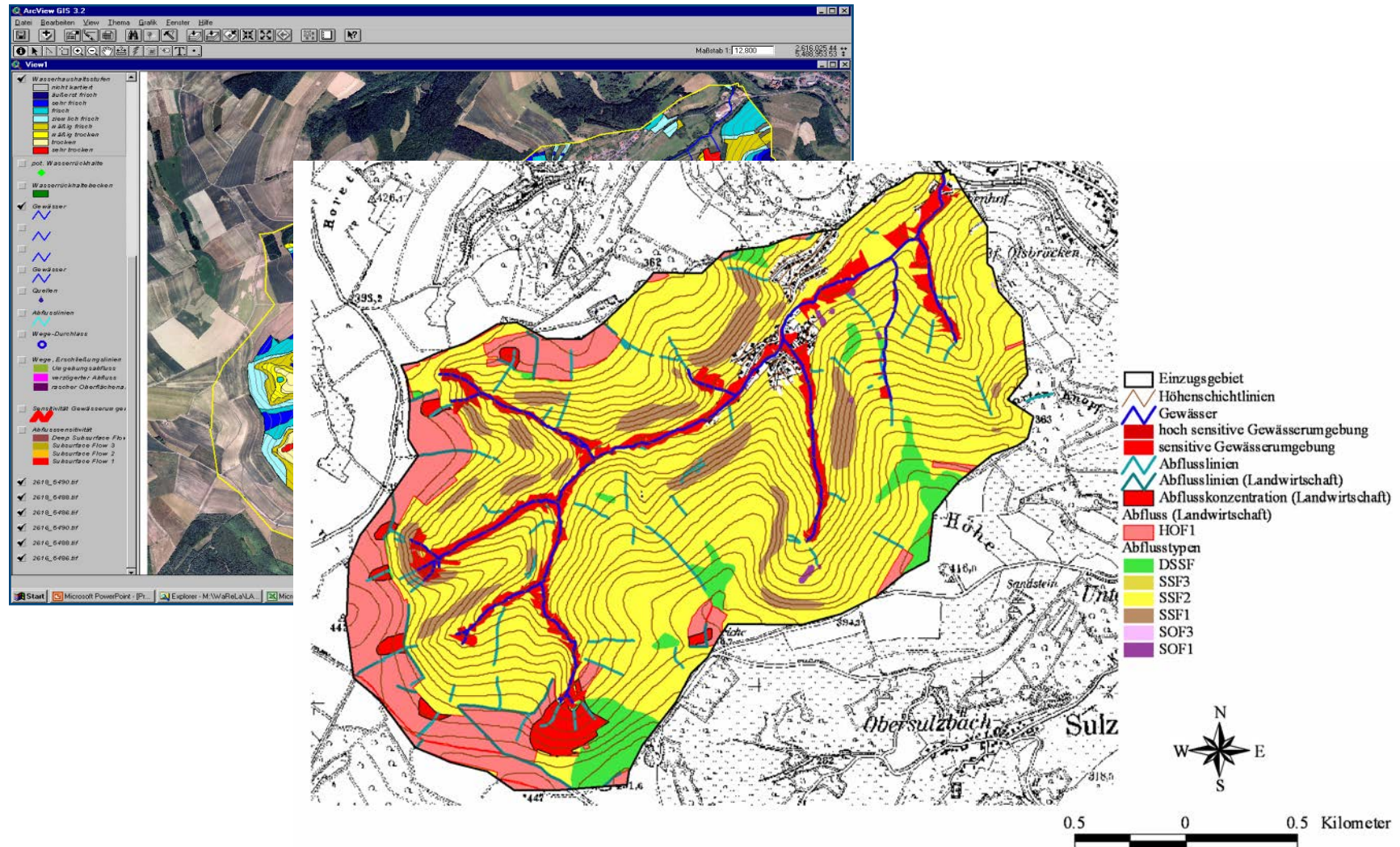


NWRM in the Western Region

Key points:

1. The focus was on Natural Flood Management
2. Catchment-scale application is key:
 - Placement of measures in the catchment
 - Cumulative/ downstream benefits
 - Partnership working

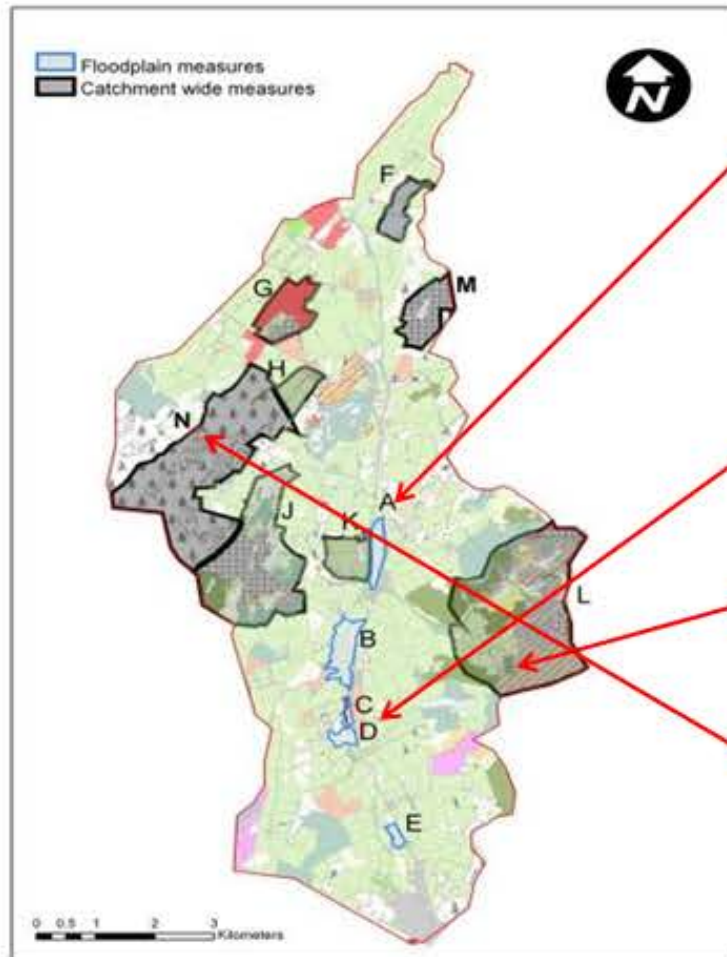
Forested headwater catchment, Germany



Courtesy of Gebhard Schueler

Eddleston Water, Scotland

Identified potential options to restore the river: - reduce flood risk and improve habitats - in different locations (sources and pathways)



Selected options/measures:

A: breach/set back embankments, new fence margins, riparian woodland, wet woodland,

C: re-meander channel - Cringeltie

L: Reduced stocking density, tributary woodland, floodplain forest – Longcote burn

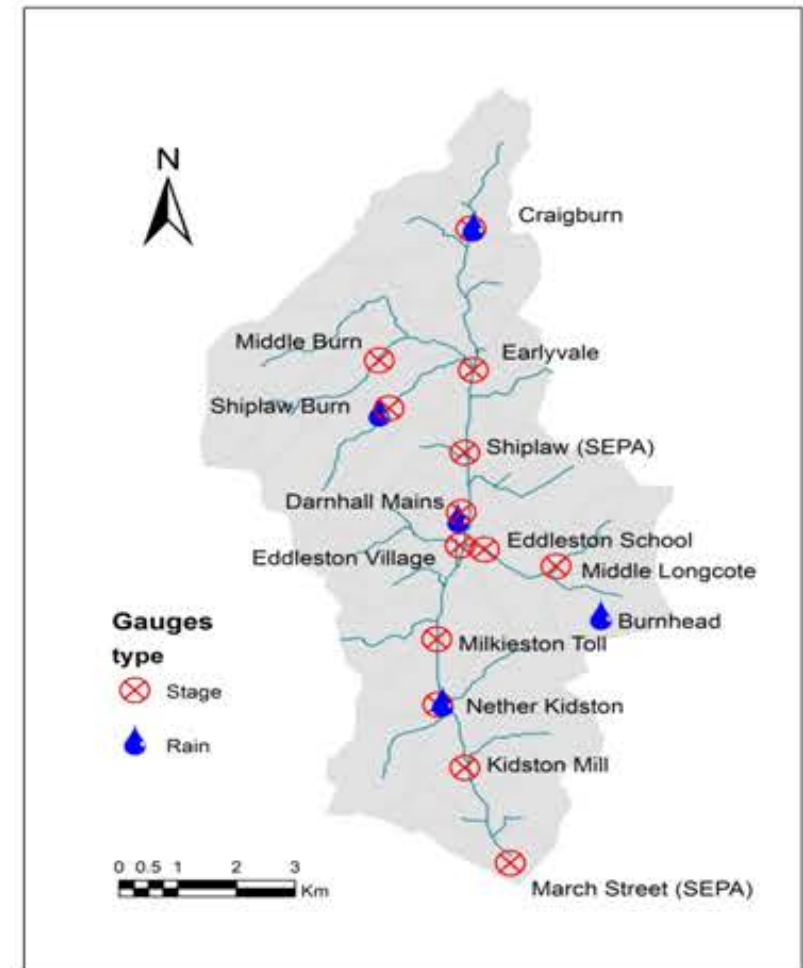
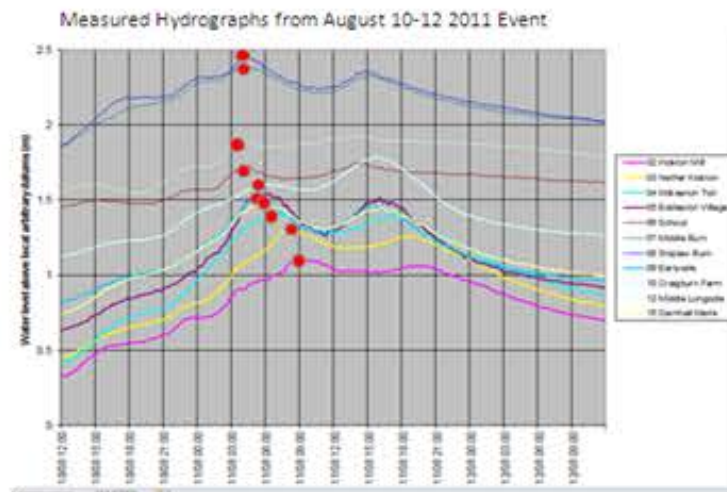
N: create ponds, wetlands, riparian woodland block ditches, engineered log jams – Middle burn

Courtesy of Chris Spray

Eddleston Water, Scotland

Installed Monitoring network for Catchment flood flows

- Installed a new detailed Hydrometric Network to record river levels and flood flows. Also Weather stations
- Identification of how and where flood runoff is initiated and its conveyance downstream, causing flooding



Courtesy of Chris Spray

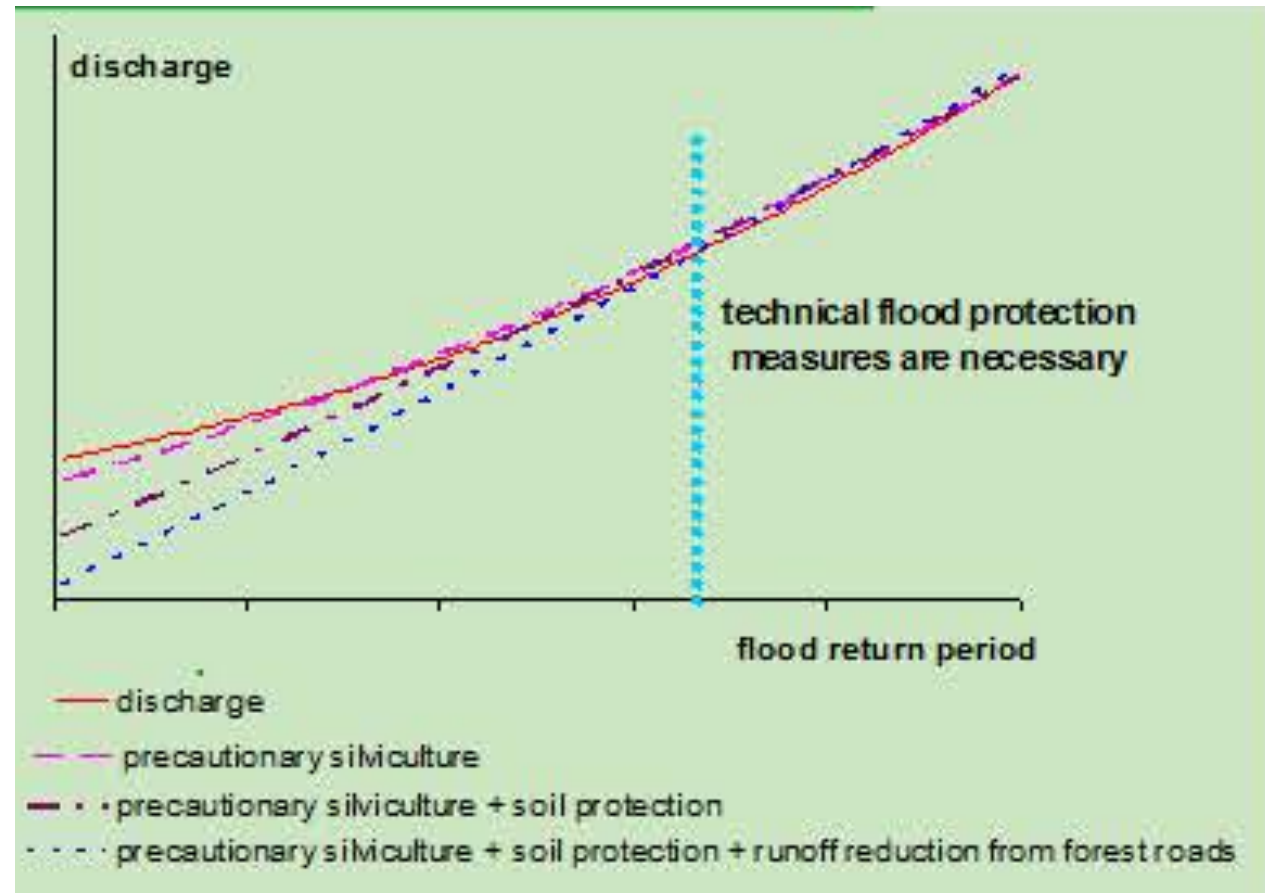


NWRM in the Western Region

Key points:

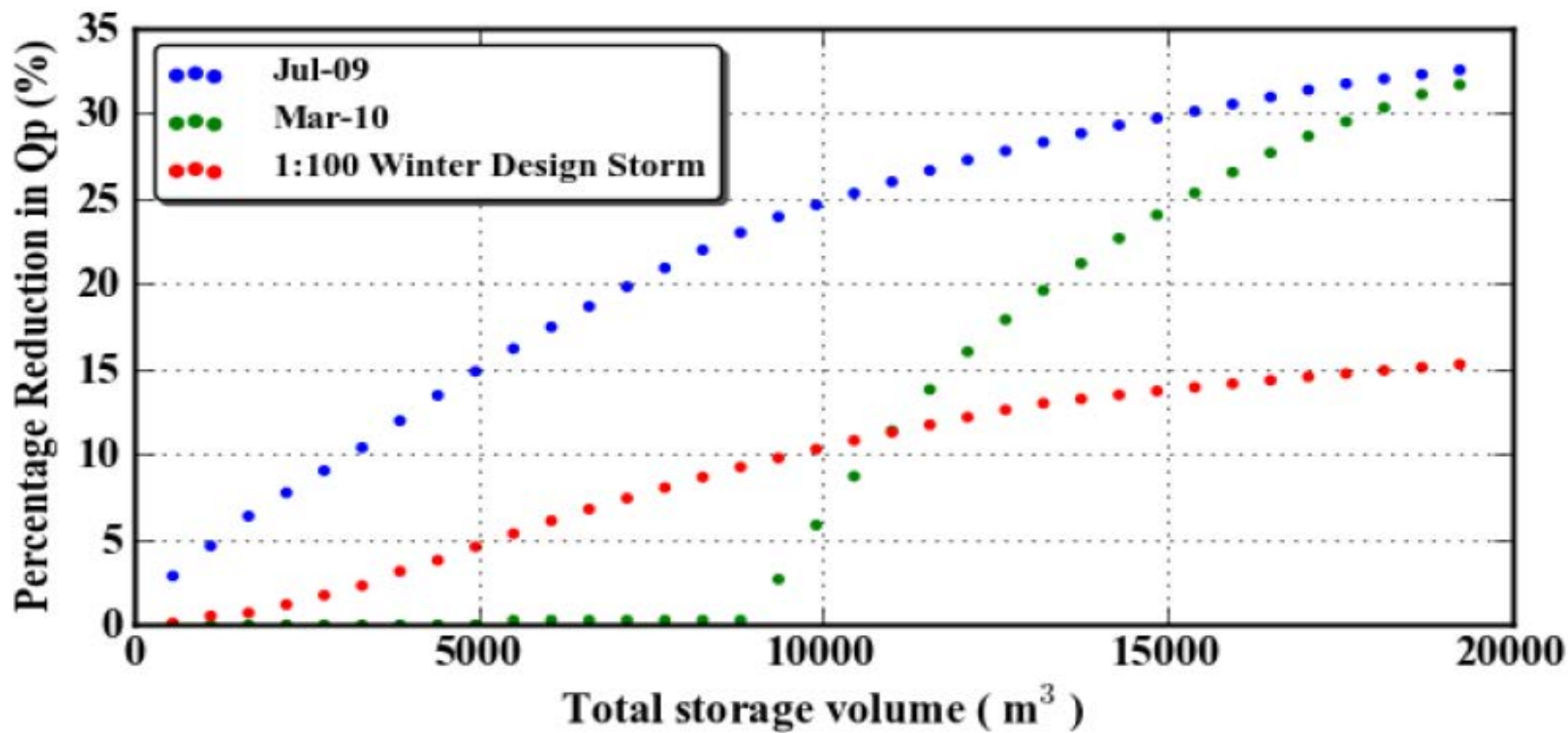
1. The focus was on Natural Flood Management
2. Catchment-scale application is key:
 - Placement of measures in the catchment
 - Cumulative benefits
 - Partnership working
3. How far can Natural Flood Management go?

Forested headwater catchment, Germany



Courtesy of Gebhard Schueler

Rural catchment, England



Courtesy of Mark Wilkinson



NWRM in the Western Region

Key points:

4. Main drivers:

- Flood risk management
- River restoration
- Biodiversity- nature conservation projects
- ... not WFD, for any of the case studies!

So how can it be tied more closely to WFD?

5. Because of this: may be seen as a burden rather than an opportunity- just something needed for compliance

- How can this be overcome?

6. Timescales for implementation can be long!



In summary: the Western Network workshop taught us about...

The value of the regional networks

- Allowing experts and practitioners in different fields to engage with each other
- Sharing experiences of NWRM implementation, including introducing the 'concept' of NWRM to those who know it by other names or apply it incidentally
- Understanding challenges and barriers to implementation
- Realising that many drivers can lead to the same benefits, but that this alone may not encourage uptake of NWRM

The value of case studies

- Understanding how measures are situated in the catchment and in relation to other measures
- Provide realism about limits of effectiveness
- Time taken for implementation
- Engagement with landowners and other stakeholders

And the value of the project deliverables

- Make best use of existing information/databases
- Clarity about the purpose and benefits of NWRM
- Be clear about the end-users

Thank you for attention

