

Structural and non-structural measures

Paul Samuels



Structural

- **Permanent engineering works**
- **Intended to reduce the frequency of flooding - examples include**
 - Flood storage reservoirs,
 - flood walls,
 - embankments,
 - tidal barriers

Non-structural

- **Instruments (see later)**
- **Physical interventions which are not permanent or do not necessarily involve traditional engineering works - examples include**
 - catchment management to enhance water retention,
 - erosion control by reforestation
 - river rehabilitation
 - temporary defences
 - flood resistant
 - construction techniques
 - flood proofing

Measures and instruments

- **Measures**

- Measures are direct physical interventions
- usually implemented by flood management authorities

- **Instruments**

- Changes to the social, financial and institutional context of the flood risk system

Measures

- **Direct intervention**
- **Three categories**
 - Control measures
 - E.g. Raised defences, channel capacity, flood storage, flood proofing
 - Adaptation measures
 - E.g. catchment land management, coastal management
 - Retreat measures
 - E.g. no habitation, total abandonment

Instruments

- **Non-structural interventions**
- **Three main categories**
 - Regulation
 - E.g. Law, policy, spatial planning etc
 - Financial
 - E.g. Grants, insurance
 - Communication
 - E.g. Community education service, flood warning services

FLOODsite Reports

- **Task 12 - Ex-post evaluation of measures and instruments in flood risk management**
- **Task 29 – Guidance on Flood risk assessment and flood risk management**
- **Task 32 – Language of risk**
- **Available from**
 - www.floodsite.net
 - Project outputs CD