

Results and Recommendations: Flood Risk Prevention



Keith Matthews, The James Hutton Institute, Scotland Helen Hangelbroek & Karin Tromp, Hoogheemraadschap van Delfland, The Netherlands



The Issue

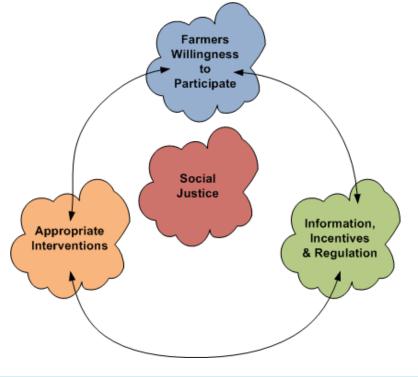
- Need to cope either with more intense rainfall in some seasons and having less space and time in which to do this.
 - intensity can exceed capacity of infrastructure
 - space issues urbanisation and glass houses but in other areas there
 is development of flood plains for housing and commerce.
 - time issue water moves faster through drainage systems as they have been "improved" increasing peak flow.
 - moving water off land faster is seen as better in the farming community but the water has to go somewhere.
- Farmers have a strong emotional connection with their environment and care deeply about it but see their primary business role as food producers.
- The cooperation of farmers in water management is needed to deliver cost-effective water management responses to current and future climate.



The Objective

 To achieve the water management goals more sustainably through cooperation with stakeholders in the region -

"Breaking into the Circle".





Interventions - I



Interventions - II













Results: Technical Findings

- Strong Linkages of technical-institutional/financial-participation (lock-in?)
- Equity of Burden Sharing
 - logic of cost effective engineering and control is one site
 - equity of burden sharing means catchment wide, smaller scale measures
 - who pays and why
- Appropriate Scale of Interventions
 - large interventions can work but on a more limited number of sites
 - smaller interventions can be part of learning process, less risky, more in control, act as demonstration, but take longer may be less cost effective (but better than nothing?)
 - how best to organize maintenance small scale actors, coordinated by intermediaries
- View Water Management as an Ongoing Process not a one-off project
 - incremental, building over time (monitor, evaluate, adapt = learning)
 - can include some trade-offs e.g. wetlands vs. local dredging
- Evidence Base for the Effectiveness of catchment wide natural flow measures still mainly within the academic domain
- Need to Reduce the Net Costs to tax payers a key driver





Results: Institutional/Financial Findings

- Need for clear roles and enforcement of responsibilities (government, municipalities, agencies, farmers, developers)
- Need for commitment to ongoing funding (revenue) rather than just capital (capitalization can inflate costs)
- Need for finances to match objectives and responsibilities
- Need to **coordinate actions** e.g. fluvial and pluvial flooding, infrastructures etc
- Green-blue service catalogues need to match better with local characteristics and farmers' interest as well as with water management interests
- Insufficient understanding of all the relevant (EU) laws and regulations can lead to costly and time consuming setbacks
- Make sure any financial agreement with farmers (and other stakeholders) are compliant.
- Opportunities to include more measures as part of Pillar 2 CAP payments



Results: Participatory Findings

- Participation varies Responsible, Accountable, Consulted, Informed (RACI model)
- Participation requires trust, mutual understanding and willingness to learn from each other
- When to involve stakeholders can be difficult to decide, early as possible (not just early) but a clear proposal with preliminary analysis can help by providing a focus for discussion (not too abstract)
- All appropriate stakeholders need to agree the definition of the problem and the relevant parts of the system, e.g. why allow houses to be built on flood plain and then use engineering to stop flooding
- Participants need to feel they are being listened to not to dictate but not to be dismissed
- Data and analyses on which decisions will be based need to be open to review by local stakeholders and to incorporate knowledge from experience.
- Take time early to reach clear agreements about shared tasks and responsibilities
- A solid business case enhances the chance of turning initiatives into a practical success.
- Definition of win-win needs to incorporate all factors (including non-monetary).
- Having an intermediary can help to recruit participants and coordinate work more
 efficiently but they need sufficient knowledge about both project technicalities and general
 process requirements





Recommendations

- Focus on process organization: involving relevant stakeholders appropriately
- **Step into projects** devise small scale ways to start to participate, harness peer-to-peer networks, use demonstration sites but only in realistic settings, progress towards catchment wide
- Use a credible intermediary: when you need to coordinate the action of many actors.
- **Focus on communication**: participation of stakeholders requires building trust; mutual understanding and willingness to learn from each other are key factors.
- **Identify win-win situations**: ensuring a solid business case, including all factors, greatly advances the chance of turning initiatives into a practical success.
- Make sure you have comprehensive knowledge of (European) legislation: to ensure any financial
 agreement with farmers and other stakeholders are in full legal compliance.
- Think local and practical: schemes need to match better with local characteristics and farmers' interest as well as with water management interests.