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### **Reactivating floodplains, the socio-economic aspects**

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# **REACTIVATING FLOODPLAINS, THE SOCIO-ECONOMIC ASPECTS**

Summary for Flood Prevention – an international exchange of experiences, Bonn, 5-6 February

Erik Mostert<sup>1</sup>

In Europe a new approach to flood protection is gaining popularity: flood plain reactivation. By giving more space to the river and to flood waters, peak water levels will be lower and the risks for people and property will be minimised. Moreover, space for water can be combined with nature protection or development and is better for the landscape than the traditional approach: dykes, reservoirs and river regulation. Nonetheless, the new approach is often not popular among the local population. But why, and what to do about it?

The traditional approach to flood protection has been costly, but it has also had benefits. It has made more intensive land use possible. E.g., if no dykes had been build, the Western part of the Netherlands would now have been a large and very "dynamic" wetland area with gradual and shifting boundaries between land and water and between freshwater and salt water. From a nature point of view it would be spectacular, but it would never have been able to support the amount of people it does presently.

Nonetheless, the traditional approach has often gone too far. Once you start to protect land against river floods with dykes, an irreversible process of river bed heightening and dyke heightening may start. More people come to live behind the dyke, which requires a higher protection level, which attracts even more people, requires an even higher protection level, etc. And when the dykes do break, this is not an issue of material damage anymore, but people may actually loose their lives.

The traditional approach has not always been economically sensible either. Sometimes billions were spent to save millions. This did not happen when water management was still a regional or local activity. If the costs of flood protection exceeded the benefits derived from the protected land, this land was given up: it simply was not affordable anymore.

Finally, one should not forget the damage done to nature and the economic benefits of natural rivers (e.g. fishing, recreation).

These drawbacks of the traditional approach make one wonder why floodplain reactivation is not more popular. One reason is the involvement of central government in flood protection, which means that the costs of the traditional flood protection measures do not have to be paid by the beneficiaries. A second reason is the scale issue or, in economic terms, the occurrence of geographical externalities. Locally, the benefits of traditional flood protection measures may exceed the costs, but downstream peak water levels and therefore flooding risks may

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increase. The situation with respect to floodplain reactivation is exactly the reverse: there are benefits downstream, but locally the costs often outweigh the benefits.

Thirdly, awareness and acceptance of flooding risks has decreased. Increased mobility meant that "new" people live in flood-prone areas, who have never experienced a flood. Added to this, traditional flood protection measures have prevented many minor floods and have created the illusion of total safety. People increasingly expect from government that it provides total safety. And government has not always informed the public adequately about flood risks, for different reasons: because it is not a popular message, in order not to deter investments, because there were no funds available for extra flood protection measures, because government itself believed it had to provide 100% safety, because government was too busy with other things, etc.

The final reason why floodplain reactivation is not more popular is the still common method of policy development and implementation: top-down, technocratic and sectoral. First, the water ministry and its research institutes develop a new flood protection policy. Following, the policy is communicated to the regional and local governments and only at the very end to the local population. However, floodplain reactivation is as much a land use issue as it is a water management issue. By not involving the land-use planning authorities (usually local governments) in an early phase, support for the new policy is minimised. The land-use planning authorities have not been confronted with the same facts as the water managers, they have not been involved in formulating the research supporting the new policy, and there has been no opportunity to integrate land-use planning issues in the new policy.

By not involving the public, public support is minimised, and this in turn minimises support by the local authorities, eager to be re-elected. Sometimes "public participation" is organised, but if it is organised after everything has been decided, it should rather be called public information, to prevent unrealistic expectations, disillusionment and *less* instead of more support. It is especially important that proposed measures are – and are shown to be – technically sound and effective. Moreover, the public should be adequately compensated for any disproportionate damage they may suffer and they should not remain in uncertainty.

What to do about the unpopularity of floodplain reactivation? The preceding sections already contain a lot of suggestions, but the best suggestion is not to do anything about it. The flooding problem and not floodplain reactivation be the starting point for any discussions on flood protection. All reasons for floodplain reactivation can then be discussed and floodplain reactivation might be the conclusion of the discussions. It will not do to say that "the dykes cannot be raised anymore" (they can, but at a cost), or to use "national policy" as a conclusive argument. Moreover, in most parts of Europe it is not realistic to do without traditional flood protection at all.

What is needed is an open discussion, involving authorities, experts, stakeholders and the general public, if possible across levels: national, international, regional, local. First and foremost, the discussion should be open. The guidance on Public Participation (<http://forum.europa.eu.int/Public/irc/env/wfd/library>) gives some ideas on organising such a discussion, but it is a very difficult task.

# Reactivating floodplains, the socio-economic aspects

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# Floodplain reactivation

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- Restoring (protecting) functions of floodplains
- Laying back, removing, or not constructing dykes
- Combined with land-use controls or insurance
- Alternative for "traditional" flood protection

# Advantages

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- Reduces peak water levels
- Often more landscape-friendly
- Often makes economic sense
- No dangerous “dyking cycle”

Why is floodplain reactivation  
not more popular?

1. Traditional flood protection  
makes more intensive land-  
use possible

## 2. The scale issue

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- Traditional flood protection:  
Usually local benefits, but increased flooding risks down- and upstream
- Floodplain reactivation:  
Locally mainly costs, the benefits are up- and downstream

## 3. Financing

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- Traditional flood protection:  
The costs are usually born by central government
- Floodplain reactivation:  
Financing is often unclear

4. Awareness of flooding risks  
is limited; expectations of  
government are unlimited

5. Policy making is often *top-down, sectoral and technocratic*

# What to do about the unpopularity?

- Tackle the causes (financing, awareness raising, etc.)
- Government, do not advocate floodplain reactivation!

# Instead.....

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- Discuss all alternatives, their pros and cons
- Involve planning authorities, local governments, organised stakeholders, the general public and the "experts"
- From the very beginning
- Main issue: how to organise this? (WFD guidance)