



# Strengthening flood risk governance in the Netherlands

STAR-FLOOD Policy Brief 3 — the Netherlands. March 2016.

## Increasing flood risk in Europe

At a time where flood risks are projected to increase in line with climate change and other risk-enhancing factors, efforts to enhance societal resilience to flooding are essential. In response to mounting risks and uncertainty, there is a strong consensus that holistic approaches to Flood Risk Management (FRM) are required. Such approaches combine strategies and measures to manage flood risk (including exposure, the hazard potential and consequences). Flood Risk Governance underscores the delivery of FRM, from policy and legislation through to its implementation. **Governance therefore plays a pivotal role in supporting (or potentially constraining) societal resilience to flooding.**



The Maeslant barrier  
The Netherlands

## Project summary

STAR-FLOOD was an EU FP7-funded project researching means of “*STrengthening And Redesigning European FLOOD risk practices*” (2012-2016). Adopting a combined public administration and legal perspective, **STAR-FLOOD examined how current Flood Risk Governance Arrangements (FRGA) can be strengthened and (re)designed to enhance societal resilience to flooding in urban areas.** Empirical research was conducted in six selected EU countries; namely Belgium, England (UK), France, the Netherlands, Poland and Sweden, and 18 local case studies therein. Each national FRGA was evaluated in terms of the normative stance adopted by the project that governance should enhance *societal resilience* to flooding and do so in an *efficient* and *legitimate* way.

## Methodology

- **Semi-structured interviews** with past and current flood risk professionals with experience in all aspects of flood risk governance; including spatial planning, flood defence and mitigation, forecasting, warning, emergency management, financial recovery mechanisms and climate change adaptation;
- **In-depth policy analysis;**
- **Legal analysis** based on historical and positive law;
- Consultation of post-event inquiries and reviews, spending figures etc.
- **18 case studies** in contrasting urban areas
- **Expert workshops** with practitioners, policy-makers and academics

[www.STARFLOOD.eu](http://www.STARFLOOD.eu)



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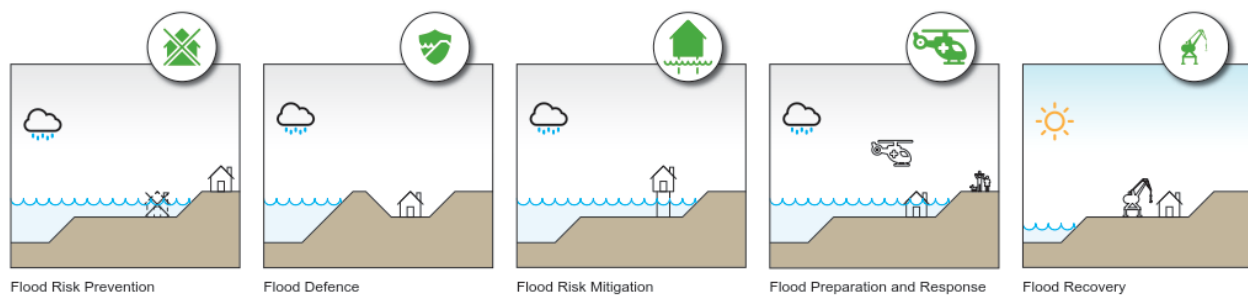




## Overall key finding and recommendations

### 1. Necessity and importance of a diversification of Flood Risk Management Strategies (FRMSs)

- To be resilient, a country should have the capacity to resist, absorb and recover and to adapt;
- To enhance societal resilience to flooding, diversification of FRMSs is both necessary and important. Diversity of FRMSs in itself is not enough, though, to guarantee societal resilience, indeed each strategy must be sufficiently invested in to be effective in its own right;
- In most cases, the practical on the ground implementation of diversified strategies is lagging behind intentions as laid down in discussions and policy plans;
- Main drivers for diversification are: policy entrepreneurs; bottom-up initiatives by local stakeholders; a broader discursive shift towards sustainability and resilience; the presence of enforceable rules and regulations; the availability of financial resources; technical improvements; broader shifts 'from government to governance'; and Europeanisation.
- Main barriers for diversification are: lack of resources, path dependency, and blurred responsibilities.



### 2. Establishing connectivity between actors, levels and sectors

- Diversification in strategies in many cases leads to fragmentation between actors and sectors and fragmentation in turn often leads to inefficiencies and even ineffectiveness. To counteract this fragmentation, bridging processes and mechanisms are needed: instruments or 'tools' which facilitate integration between aspects of governance such as between different policy sectors.
- Examples of bridging processes and mechanisms include the role of coordinating actors; procedural duties and instruments; formal rules and regulations; financial and knowledge resources and bridging concepts.
- A clear need was found to better bridge the gap between actors operating within distinct spatial planning and flood risk management policy domains and deliver a more integrated approach. The requirement of water assessment/water test that is applied in Belgium, England and the Netherlands could be an effective way to integrate flood risks in the spatial planning and permitting processes also in other countries.
- Decentralisation may help in bridging different levels of government to ensure a good combination of top-down and bottom-up governance, however, provided that the shifting tasks and responsibilities is accompanied by a shifting of formal powers and resources.

### 3. The involvement of private parties, including businesses, citizens and NGOs in flood risk governance

- The involvement of private parties in Flood Risk Governance (FRG) is necessary both for substantive and normative reasons. They can provide extra resources for implementing a diverse set of FRMSs. In addition, in Europe participation in decision making is considered important (Aarhus convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters). Governments need to involve other actors in decision-making, starting with a joint definition of objectives and strategies.

### 4. Diversification in rules and regulations

- Diversification of FRMSs is accompanied by a diversification in *rules and regulations*. However, in some cases a lack of rules can be witnessed, especially in cases in which certain strategies have not yet been implemented to a significant extent.



- According to the subsidiarity principle, devolution of decision-making to the lowest appropriate scale, with collaboration and coordination at the highest level necessary should be strived for (NB. The Treaty on the Functioning of the European Union adopts another legal definition). This principle is widely endorsed, not only at the level of the EU but also at the national level in many European countries. The principle is essentially a political choice based on knowledge that multi-level governance works better to create legitimacy and resilience. But this goes with fragmentation and the fragmentation should be addressed in a way that it doesn't hamper effective or legitimate flood risk management.

#### **5. Availability of resources**

- Different types of resources (finance, knowledge, skills, ICT tools, public support) should be mobilised efficiently. At the same time, resource availability should be increased, if possible.
- The availability of resources for different flood risk management strategies differs significantly between countries. The quality of knowledge infrastructure and the structure of funding systems also varies. This may be problematic since the lack of resources was shown to be an important reason for underinvestment in and underdevelopment of FRMSs.
- An important policy issue for the coming years will be to have political debate and make political choices in order to combine the (perceived and sometimes already legally settled) 'right to be protected' of citizens by public authorities with the decreasing resource base many public authorities are facing.
- Resources may also play a key role in bridging, for instance by ensuring that actors involved have the necessary skills, and that private actors receive sufficient payment to increase their willingness to let their land function as flood storage.

#### **6. Evaluations of flood risk governance in terms of resilience**

- Diversification of strategies can be seen as a necessary but not sufficient precondition for enhancing societal resilience to floods.
- We stress that resilience should be disentangled into three capacities: capacity to resist flooding, the capacity to absorb/recover when a flood event occurs and the capacity to adapt to future risks. These are to be seen as different views on desired outcomes for FRG and have been found to be to some extent mutually exclusive (e.g. over-investment in one strategy can be at the expense of investment in other strategies).
- Efforts to improve resource efficiency by increased application of (societal) Cost Benefit Analyses are underway in different countries, albeit to a different extent. These CBAs were found to contribute to resource efficiency, but in some countries were perceived as rather technocratic.
- The researched countries are doing well on access to information and transparency; and accountability. The most potential for improvement lies with the criteria of social equity; procedural justice; public participation and acceptability by all actors involved.

#### **7. What is needed to enhance flood resilience and improve efficiency and legitimacy of flood risk governance?**

- Important process-related aspects pertain to: managing expectations and debating acceptable levels of risk; the need for long-term policies; the development of knowledge infrastructures; the involvement of private actors (businesses, NGOs and citizens); carrying out FRG at the most appropriate level; adequately prioritising flood risks in spatial planning; clarifying rules and improving follow-up and their enforceability in legal instruments; improving procedural justice by enabling access to courts; and the promotion of catchment-based approaches.
  - To improve resilience, there is: i) a need to establish adaptive management to aid the implementation of defence and mitigation measures that can be adjusted to suit changing circumstances; ii) a need to deliver spatial planning in such a way that consequences are prevented and minimised if floods occur; iii) a need for further improving systems for forecasting, warning and emergency responses that are proactive, risk-based and use collaborative approaches, for instance by optimising the use of ICT (apps); iv) a need to have strategies to recover from flood events available for all citizens while at the same time ensuring that these provide sufficient incentives for citizens to encourage the adoption of prevention and mitigation measures; v) a need for institutional systems that foster learning and innovation.
  - Legitimacy requires that the decision-making process is characterised by a high degree of public participation, social equity and accessibility.
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## Key findings and recommendations for the Netherlands

The highly institutionalised flood defence approach that provides basic and adequate protection, is a key element of FRM in the Netherlands. The flood defence approach is characterised by a clear responsibility division, explicit standards and regulations, and secure financing. It is relatively independent of political whims. Furthermore, the strong knowledge and expertise base ensures a sound implementation and maintenance of the structural measures, an ongoing adjustment and improvement of the flood defence approach. It also produces innovative technologies that can be exported.

Reducing the potential consequences of flooding is only marginally established, but increasingly being developed. The integration of spatial planning and flood risk tends to be insufficient and emergency management is undergoing reorganisation. Identified weaknesses are financing and the expertise and knowledge base of emergency management, which is in a developing stage. Moreover, the roles and responsibilities of utilities (e.g. electricity/energy companies and ICT/communication services) in consequence-reduction remain unclear.

Due to lack of effective preventive, mitigative and responsive strategies, in case of major flooding consequences may be disastrous. Depending on the scale of the damage, compensation is delayed or impossible, which could cause a delay in recovery and a marked disturbance of economic activity. Citizens could, moreover, react inadequately due to a lack of awareness and risk communication.

Based on the STAR-FLOOD research, STAR-FLOOD gives the following recommendations:

- 1) **Keep the foundation of flood defence and its ongoing adaptation to provide basic safety.** It provides a good level of flood risk protection.
- 2) **Strengthen the integration of spatial planning and FRM, and the implementation of prevention and mitigation strategies in spatial planning.** There is little attention for FRM in spatial planning, while spatial planning is seen as one of the important elements in many FRMSs.
- 3) **Strengthen the implementation of the preparation/response strategy in emergency management.** Knowledge and expertise in the development of Security regions should be supported to increase their potential to effectively respond to floods and to advise spatial planners and water authorities.
- 4) **Avoid fragmentation of responsibilities, unnecessary complexity and legal uncertainty during the implementation of consequence-reducing strategies.** Many organisations play a role in the implementation of consequence-reducing strategies, such as municipalities, water boards and provinces. This gives a high risk for fragmentation, complexity and uncertainty.
- 5) **Risk communication to citizens should be improved.** The preparedness of citizens could be enhanced by better informing them about (local/regional) flood risks and opportunities to cope with these risks.

### Further reading

- [www.starflood.eu](http://www.starflood.eu): for the [Practitioner's Guidebook](#), other policy briefs, and all research deliverables, e.g.:
- Hegger, D. L. T., Driessen, P. P. J., Bakker, M. H. N. (Eds.), 2016 A view on more resilient flood risk governance: key conclusions of the STAR-FLOOD project. STAR-FLOOD consortium, Utrecht, the Netherlands
- Kaufmann, M., Van Doorn-Hoekveld, W.J., Gilissen, H.K., Van Rijswick, H.F.M.W., 2016. Drowning in safety. Analysing and evaluating flood risk governance in the Netherlands, STAR-FLOOD Consortium, Utrecht, The Netherlands.