www.water-alternatives.org Volume 3 | Issue 1
Werners, S.E.; Warner, J. and Roth, D. 2010. Opponents and supporters of water policy change in the Netherlands and Hungary. Water Alternatives 3(1): 26-47

Opponents and Supporters of Water Policy Change in the Netherlands and Hungary

Saskia E. Werners
Wageningen University and Research Centre, the Netherlands; saskia.werners@wur.nl

Jeroen Warner
Wageningen University and Research Centre; Twente University, the Netherlands; jeroen.warner@wur.nl

Dik Roth
Wageningen University and Research Centre, the Netherlands; dik.roth@wur.nl

ABSTRACT: This paper looks at the role of individuals and the strategies that they use to bring about or oppose major policy change. Current analysis of the role that individuals or small collectives play in periods of major policy change has focussed on strategies that reinforce change and on the supporters of change. This paper adds the perspective of opponents, and asks whether they use similar strategies as those identified for supporters. Five strategies are explored: developing new ideas, building coalitions to sell ideas, using windows of opportunity, playing multiple venues and orchestrating networks. Using empirical evidence from Dutch and Hungarian water policy change, we discuss whether individuals pursued these strategies to support or oppose major policy change. Our analysis showed the significance of recognition of a new policy concept at an abstract level by responsible government actors, as well as their engagement with a credible regional coalition that can contextualise and advocate the concept regionally. The strategies of supporters were also used by opponents of water policy change. Opposition was inherent to policy change, and whether or not government actors sought to engage with opponents influenced the realisation of water policy change.

KEYWORDS: Individuals, coalition, water policy change, transition, Hungary, Netherlands

> *"(…) we are open to any idea, whether it comes from a Democrat or a Republican or a vegetarian".*
>
> Barack Obama, February 10th 2009

INTRODUCTION

During the last two decades, the water policy in the Netherlands and Hungary, two flat and low-lying countries in Europe, underwent major change. Having relied on flood levees, river normalisation and drainage for over two centuries, water retention and floodplain rehabilitation were introduced to replace or complement prevailing water management practices. Whereas the substance and organisational aspects of water management in these countries are well documented, much less is known about the dynamics and path of the policy change itself. This paper seeks to improve our understanding of how periods of major water policy change unfold. We frame major policy change as a policy transition[1] (cf. Huitema and Meijerink, 2009) and build on results from transition literature.

[1] How to distinguish transitions from shallow levels of change is contested. Here we follow Huitema and Meijerink (2009), who postulate that policy transitions should become visible in a reorientation of the substance of policies (e.g. from flood levees to water retention) or the governance paradigm (e.g. from state control to privatisation). A transition consists of both changing

To analyse and interpret the dynamics of fundamental change, transition management frameworks have been developed that describe the different stages and processes of transitions (Rotmans et al., 2005) and transition pathways (Geels and Schot, 2007). Research has attempted to uncover the process dynamics which can lead to a transition's success or failure (Olsson et al., 2006). One new development is to look at governance and agency. For example, Kemp et al. (1998) and Smith (2003) studied incumbent actors and (niche) pioneers. In addition, Schot and Geels (2007) aimed to provide insight into how actors create, nurture and sustain niches that can drive a transition. Huitema and Meijerink (2009) analysed strategies employed by individuals and small collectives during a transition, going beyond pioneers and recognising a broader set of roles that actors can fulfil. So far, the emphasis in the research on transition dynamics has been on how a transition is reinforced and on transition supporters (Rotmans et al., 2005; Van der Brugge and Rotmans, 2007). In transition literature, the opposition is typically described as a group that 'has to be persuaded' or 'aligned'; opponents are rarely studied as actors in their own right. The influence of opponents on the direction of a transition, and the strategies that they use remain largely unexplored. This is all the more surprising as, for example, Loorbach (2007) recognised that transitions go against existing assumptions and worldviews, and that a transition may need certain elements of dissent, conflict and difference of opinion to facilitate innovation, competition and learning.

To add to the debate on the role of individuals and groups of individuals in the unfolding of major policy change, we narrow our analysis to individuals (both supporters and opponents of water policy change) and compare the strategies that they used in two case studies: the Hungarian Tisza river and the Ooij polder in the Netherlands. The cases have been selected to represent a so-called "most different cases design" in Europe. That is, the cases have been selected to minimise the difference in the type of water management activities under discussion, yet maximise the difference between historical and institutional contextual factors. In the face of these contextual differences, this case design allows for ground to suggest that similarities found between the cases are robust elsewhere.

The cases have in common that water policy was reoriented towards measures to create space for rivers, water retention and emergency storage reservoirs. This reorientation to non-structural and land use-related water management activities has been observed since the 1980s in countries around the world (e.g. Fokkens, 2001; Kundzewicz, 2002; Huitema and Meijerink, 2009; Molle et al., 2009), adding to the relevance of the cases. In both case studies this reorientation was confirmed by national policy, yet implementation slowed down or was abandoned altogether. Here too, the cases are not unique, as, for example, Rhodius (2008) and Hartmann (2010) noted opposition to the introduction of controlled flood storage in Germany, while in Britain a 'green river bypass' to make space for the river Thames raised controversy.

The cases differ in terms of the historical and institutional context and the governance traditions upon which water management has developed. In Hungary, the Hungarian government, under the Austro-Hungarian Empire, started major drainage and river normalisation projects in the Tisza Basin, which continued during the communist era after the Second World War. Over the last two decades, Hungary has changed from a communist state to a post-communist democracy and European Union (EU) member, where remnants of previous economic and political orders still shape expectations and patterns of conduct (Pérez-Solórzano Borragán, 2005). The Netherlands, on the other hand, has been a constitutional monarchy since 1815 and a parliamentary democracy since 1848. It has an open economy, relying largely on international trade, and is one of the founding members of the EU. Water management and its institutions have evolved over several hundred years from private initiatives building dikes and reclaiming land to a governance regime with well-recognised national and regional responsibilities.

policy on paper and implementing change on the ground. The more fundamental the change in policy and its implementation, the more it resembles what we call a transition.

The analysis in this paper consists of three parts. First, we examine our two case regions from an empirical perspective, based on interviews, a literature review and stakeholder workshops. We discuss the role of individuals during the attempt to change policy and in the following years when actors had to deliver on the new direction taken in water policy. After these chronological case descriptions, we elaborate on the interaction of supporters and opponents in the discussion section. In particular, the research is synthesised to discuss the fivefold distinction of strategies of individuals in Huitema and Meijerink (2009):

1. Developing new ideas (cf. Hajer, 1995; Baumgartner and Jones, 2002; Van der Brugge et al., 2005),
2. Building coalitions[2] for selling ideas (cf. Sabatier, 1988; Folke et al., 2005; Olsson et al., 2006),
3. Recognising and exploiting windows of opportunity[3] (cf. Kingdon, 1995),
4. Using multiple venues[4] (cf. Baumgartner and Jones, 2002), and
5. Orchestrating networks (cf. Folke et al., 2005; Caniëls and Romijn, 2008).

The paper closes with conclusions and recommendations for future research into the role of individuals in furthering or blocking water policy transitions.

Our case studies suggested that opposition is an inevitable element of major policy change. The influence of individuals on policy change became particularly prominent in the interaction between supporters and opponents of (parts of) a transition, while engaging with or managing opponents was a strategy that individuals used to advance the transition. A special role was that of translating the idea of the transition to other actors. In the cases we analysed, the influential coalitions had an individual that took this role at their base. Whether or not government actors sought to involve these individuals in policy making influenced the realisation of the transition. In the Dutch case, where this was omitted, the coalition obstructed the transition. By engaging with opponents, negotiated solutions could give the transition a new impetus, yet at the same time steer away from the original idea, alienating supporters. Successful strategies to discredit the transition included: challenging the legitimacy of (assumptions underlying the) new approach, engaging with experts from the supporters' research community and changing budget priorities.

WATER POLICY CHANGE IN HUNGARY AND THE NETHERLANDS

In order to analyse the strategies of supporters and opponents of water policy change, this section chronologically describes attempted transitions in Hungarian and Dutch water policy. The narrative is based on information from interviews and workshops with regional and national stakeholders and analysis of documents on the new water policies and related project plans. In the Netherlands, sixteen non-directive interviews were conducted with key players, mainly in 2005 and 2006, and a public information meeting of the then operational water policy commission was attended. This information was complemented by documentary analysis, including draft and internal documents. In Hungary, data were collected in three ways: through twenty-one semi-structured interviews with actors from national and regional organisations (ministries, water authorities, planners, academic institutions, non-governmental organisations (NGOs), municipalities and farmers), a series of group discussions with local and national stakeholders and by analysis of policy and planning documents and background studies.

[2] Coalition building emphasises shared beliefs and explicit agreements on how to pool and use resources to achieve common goals.

[3] A 'window of opportunity' opens when three issue streams align: 1) problem stream (issue on the public agenda), 2) political stream (on the political agenda) and 3) policy stream (attention for official policy options).

[4] We understand venues as the possible places where policy issues can be debated. Typical venues include levels of government, media and research forums.

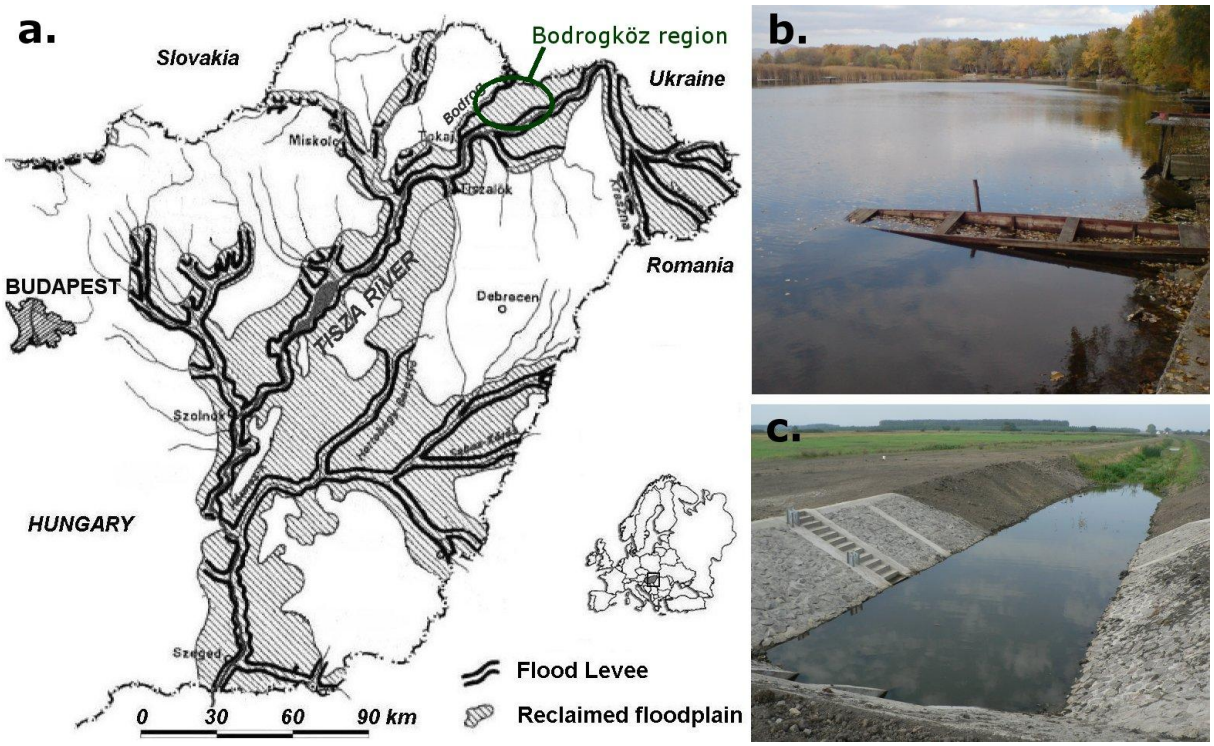
River Tisza policy, Hungary

The Tisza river is the largest tributary of the Danube, receiving water from the Carpathian Mountains in Romania, Slovakia and Ukraine before running through Hungary and meeting the Danube in Serbia. Almost fifty per cent of Hungary is located in the Tisza basin. Until the 18th century, river management was mainly organised around the operation of a system of small structures and channels that regulated the water flow between the main riverbed and the floodplain (Balogh, 2002). The inundation frequency determined land use, giving rise to a patchwork of plough land, forest, floodplain orchards, meadows, fish ponds and grazing areas (Bellon, 2004). From the 1750s, the Tisza river was heavily modified, with major changes introduced by the Hungarian government under the Austro-Hungarian Empire in the 19th century. Dike building, regulation of one-third of the river's length and floodplain drainage decreased the total naturally flooded area by 84 per cent (figure 1). The communist era after the Second World War supported large-scale intensive agriculture in the region. Water management was controlled by a powerful water bureaucracy that was well expanded socially (through prestige attached to engineering profession), politically (with close relationships between both local and national politicians, state bureaucrats and planners), informationally (state support for research) and economically (due to large budgets and proximity with construction and consulting firms). Privatisation at the beginning of the 1990s led to a drop in the operation and maintenance of the large irrigation systems and of agricultural output. Scientists increasingly associated the prevailing water management of river regulation and drainage with problems such as increased flood risk, inland drought, water stagnation, soil salinisation, the degradation of peat lands and wetlands and the loss of the traditional water management system and related production systems (Barta et al., 2000; Vámosi, 2002; Bellon, 2004). At present, the Tisza region is socio-economically challenged by a high unemployment rate, ageing and migration (Sendzimir et al., 2004; Linnerooth-Bayer et al., 2006). Large areas have an unclear property status and unresolved responsibility for water system maintenance and taxation (Matczak et al., 2008). On a more upbeat note, the region has great potential for recreation and nature conservation (Vári et al., 2003).

After twenty years of drought, annual floods returned from 1998. The floods acted as a driving force behind the development of a new water policy for the Tisza river, in Hungary known as the New Vásárhelyi Plan. Below, we describe chronologically the development of water policy and the activities of supporters and opponents in the last decade. Figure 3, at the end of this section, summarises the actions of key individuals.

Recurring major floods and the cyanide spill on the Tisza river in 2000 backed the strategy of local NGOs to define the prevailing water management as unsustainable and requiring a different approach. At the time, the consensus amongst scientists grew that raising dikes was no longer efficient from an economical perspective and was likely to increase flood levels (Glatz, 2003). This consensus proved instrumental in opening up the debate about an alternative water policy. The abstract notions of water retention, floodplain rehabilitation and integrated river basin management already had supporters in the national government and major NGOs, such as the WWF, as well as abroad (Váradi, 2003). This was at least partly so because European directives advocated such approaches and the European Union offered indispensable financial support (e.g. the pre-accession funds; see McGuinn, 2003) as well as pressure to take cropland out of production (Gere, 2007).

Figure 2. a) Hungarian Tisza river basin; b) oxbow lake: traditional water management used oxbows and creeks for water regulation; and c) construction of water infrastructure in the first retention reservoir (Photos: Werners).



A group of civil servants and scientists developed a first version of the new water policy in consultation with the WWF. Its innovation was the introduction of water retention in built reservoirs[5] and the widening of riverbanks. Built retention areas had supporters among water engineers as an alternative to raising dikes (Szlávik, 2001; Somlyódy, 2002; Váradi, 2003). An early supporter in the context of the development of the new water policy was the head of department at the Water Resources Research Center VITUKI (Szlávik, 2001a; Szlávik, 2001b). Although the policy's main aim was flood protection, it allowed for 'nature development' in accordance with the European Water Framework Directive and environmental regulations (Bálint et al., 2000; KöViM, 2002). To achieve the target flood level reduction, and to keep reservoir size and depth manageable, the Ministry of Transport and Water Management presented a series of fourteen potential sites. Little attention was paid to affected parties: "We will propose to enlarge the flood banks and make other corrections, but it will be the task of politicians to make people accept it and ensure compensation for them wherever homes would have to be moved", said Lajos Kovacs, chief advisor at the Ministry of Transport and Water Management (Fenyo, 2001). Opposition grew and local parties refused to take part in the implementation (Gere, 2007).

Implementation of the policy required local support and a concrete example of the application of the proposed (abstract) principles to the regional situation. A new coalition of twelve municipalities in the Tisza region, three non-profit organisations[6] and researchers, known collectively as Bokartisz, offered both. Bokartisz opposed the government's version of the water policy, but offered to cooperate with the national planning bodies to implement water retention, on condition that its own concept of floodplain rehabilitation and shallow flooding would be considered and tested (alongside the

[5] Reservoirs created by building a ring dike in the floodplain next to the river with a floodgate for letting in water during high water events and an outlet to return water to the river.

[6] The E-misszió Environmental Association, the Hungarian Environmental Economy Centre, and the Palocsa Association.

government's plan). Bokartisz' leader, Géza Molnár, had studied the floodplain management system in the Tisza valley from old documents (Andrásfalvy, 1973; Bellon, 1991). Together with a group of farmers and landowners he had restored and experimented with traditional water steering systems on a small scale at various locations along the Tisza since the 1980s. Based on these experiments, the founders of the Bokartisz coalition developed their concept of integrated floodplain management and floodplain rehabilitation, aiming to recreate a mosaic landscape structure and regular shallow flooding for sustainable rural development. Coalition members began advocating their concept under the name 'Last Straw' in 2001 (Botos et al., 2002). The main difference with the government plans and Bokartisz' concepts was that the former proposed to build retention reservoirs to be used during extreme floods, whereas the latter focused on rural development and revitalisation of the floodplain through annual shallow flooding, making use of natural landscape elements. It is important to stress that Bokartisz did not present floodplain rehabilitation as something new, but rather referred back to floodplain utilisation before river regulation. Researchers at the Hungarian Academy of Science and the national Water Resources Research Centre lent authority to the ideas Bokartisz promoted.

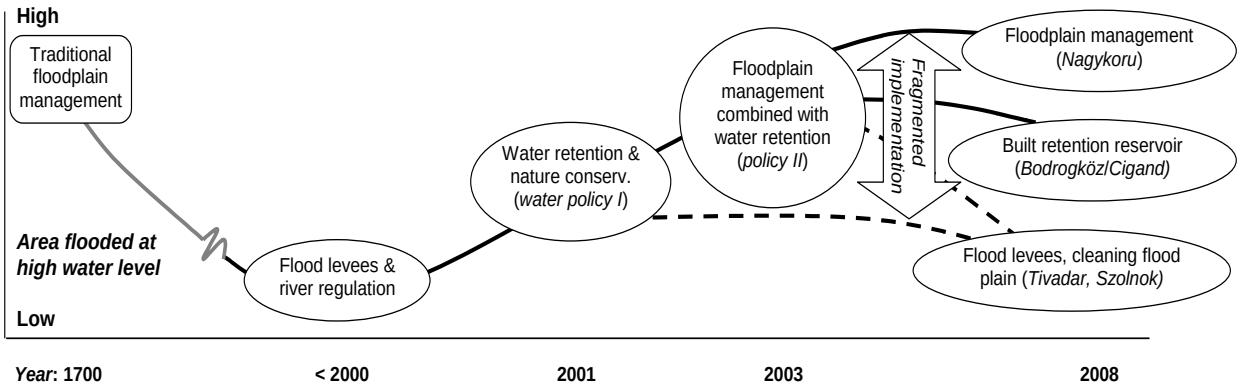
The 2001 flood and dike break highlighted the problem. The 2002 national elections brought to power a new coalition determined to prove itself different from the previous government. Water affairs were transferred to a new Ministry of Environment and Water, setting the scene for a change in procedures. The then upcoming accession to the European Union favoured a shift towards participatory and integral planning. In this way, 2002 brought convergence of the issue streams, opening a window of opportunity (Kingdon, 1995) for coupling a new policy idea, a relevant problem and political will. The key player to use this window came in the shape of the Head of Department entrusted with the development of the plan at the new Ministry of Environment and Water, Dr. Váradi. He swiftly took the lead in strategy to ensure advancement of the new water policy, taking the strategic alliance of the water authority,[7] its engineers and contractors by surprise. A government decree was passed in February 2003 that acknowledged the concept of floodplain rehabilitation and rural development and created two new venues for the further development of the water policy: a new inter-ministerial committee and a series of tenders to deliver support studies and a regional implementation plan.

The Bodrogköz area, which had not been one of the fourteen areas the national government had identified in the draft version of the built reservoirs plan, was added, as Bokartisz had suggested this territory for water retention (KöViM, 2002; Váradi, 2003). Bokartisz was active in the Bodrogköz area, where support from the water board and mayors inside and outside the Bokartisz coalition was high and opposition minimal. A planner for the national planning agency VÁTI successfully managed the network of research partners, NGOs and local representatives. Respecting regional representation and experience as well as national competencies, VÁTI used the tenders for policy development work to support a new interdisciplinary community in the creation of a body of evidence on floodplain rehabilitation in the Tisza region. In close cooperation with the inter-ministerial committee, VÁTI delivered the spatial plan for implementing the water policy, combining water retention in multifunctional reservoirs, floodplain revitalisation and rural development.

In the development of water policy for the Tisza, we observe a significant change in the substance of the policy and in the procedure applied in its design. The water policy endorsed in 2003 explicitly recognised rural development and nature conservation as important objectives alongside flood protection. Floodplain rehabilitation, retention areas and land-use change were introduced in parallel to replace or complement flood levees that had been the preferred solution in water management for 150 years. Government documents and actors involved talk about a paradigm shift or change in philosophy. Figure 2 illustrates the main policy ideas in Tisza water management.

[7] The National Water Authority (OVF) of Hungary implements water management under the control and supervision of the Ministry of Environment and Water Management. The regional water authorities (also called water boards) perform their duties under the control of the OVF.

Figure 2. Schematic overview of main ideas in the transition.



With the October 2003 government decree and the 2004 Tisza Law, the national government endorsed the implementation of the policy. Endorsement notwithstanding, since then only two of the first six retention reservoirs have been built, while the related floodplain rehabilitation and rural development have either not been attained or attained only after many delays. In 2005, a survey undertaken by the State Audit Office of Hungary confirmed that flood protection was favoured over rural development objectives in the implementation (Kovácz, 2005). Actors identified different reasons for the delays, including problems with land acquisition and the fragmentation of responsibilities and funding. Divergence in the objectives and mandates of institutions, as well as the complexity of national and European financial flows, slowed down the implementation of cross-sectoral initiatives (Werners et al., 2009). The network of civil servants, experts and regional representatives that prepared the implementation plan fell apart, and high-ranking civil servants that had engaged with the regional coalition resigned after budget cuts; their replacements never gained the same visibility and respect in the region.

Furthermore, cooperation between the Ministry of Environment and Water and the Ministry of Agriculture and Rural Development decreased. The Ministry of Environment and Water used available funds to move ahead with flood protection (Cselószki, 2006), not delivering on agri-environmental payments for affected farmers, which required support from the Ministry of Agriculture and Rural Development. It was suggested that, under pressure from large landowners, the Ministry of Agriculture favoured using European agricultural funds for direct agricultural output-based support rather than for agri-environmental schemes. As a central member of the Bokartisz coalition and Tisza Alliance put it: [8]

> In November 2003 it seemed that all parties were on the best way to make an integral implementation plan for the Vásárhelyi plan. (…) As I see it now, the water engineers did not change their opinion. Their goal was still only flood protection. They just said: "if the farmers want floodplain management and land use change, we shall give them the opportunity and support (…)". In a way, Váradi and Szlávik were pioneers in the water engineering field because they let new ideas come into the planning. (…) when they resigned the old school, water engineers came back into force.

The venues created for the development of the plan were not maintained. The inter-ministerial committee – the main coordination body of water policy – had neither an official legal position nor the mandate to allocate money for implementation. From the middle of 2004, the dialogue between regional and national parties declined, as did the frequency of the inter-ministerial committee sessions. Consequently, the transparency of the planning process declined and, for example, in the Bodrogköz area, the information flow to stakeholders and their consultation practically stopped (Cselószki, 2006).

[8] Interview: 29 August 2007, Budapest.

Application for EU support caused additional delays: the government decided to postpone reservoir building in 2005 to be able to apply for European funds in support of the implementation (Visnovitz, 2008). A new venue was explored when farmers went to court over perceived fraud in the expropriation; as one of the involved farmers expressed: [9] "the whole expropriation is sensitive, because for a highway they [the government] pay much more. And we don't even get a highway, we only get a reservoir".

Another sign of the deteriorating communication was that the interpretation of the policy idea of floodplain management started to diverge between actors during implementation. Key individuals in the water authority and the national water research institute began to question whether shallow flooding and floodplain revitalisation could attain the same flood protection levels as dry polders, and pressed for putting flood defence above the protection of natural values (Visnovitz, 2007). A floodplain management pilot area, managed by a key member of the Bokartisz coalition, was excluded from the water policy's implementation plan by the Ministry and Environment and Water, which contested the area's contribution to water level reduction during extreme floods (Visnovitz, 2007). Local mayors in the Bodrogköz area questioned whether the negotiations and expropriation were conducted in their best interest and started to express discomfort with the negotiated concept of floodplain management.[10] As more and more of the water management ideas of the Bokartisz coalition were given up or delayed at the implementation stage, Bokartisz' leader withdrew from active coordination. Key members started a new coalition – the Living Tisza Alliance – to pursue the objectives of floodplain revitalisation and sustainable rural development in another area close by.

By 2005, the 2003 window of opportunity for changing the water policy had closed. There had not been a major flood for some time and political priorities had changed. The main policy ideas were challenged. The concept of floodplain management, rural development and nature protection disappeared from government publications and the language of the concerned department in favour of floodwater retention and improvement of flood infrastructure (e.g. Visnovitz, 2008; www.vizugy.hu/vtt/sajtoanyag.html#37). The Living Tisza Alliance tried to use the 2006 elections to generate new momentum for the integral implementation of the water policy by soliciting support from potential coalition parties and initiating a memorandum to Ministers and political parties, which was signed by 120 concerned local governments, smallholders, civil organisations and researchers (Kajner, 2006). Although party representatives expressed their support, there was little effect on the implementation of the policy.

By 2009 two reservoirs had been built and negotiations at other locations continued. The implementation of the water policy illustrated that support – as well as opposition – had to be gained and maintained. Water policy planners, as well as politicians, witnessed that local leaders, farmers and residents of concerned settlements consistently laid down conditions for the acceptance of retention reservoirs, such as infrastructural investments, one-off compensation or warranted agri-environmental payments (Cselószki, 2006).

Figure 3 summarises the chronological narrative above, highlighting the actions of central individuals on which the discussion section builds. The figure focuses on the actions of and interaction between the network of the national water authority and the regional coalition Bokartisz.

[9] Interview: 22 August 2007, Nagyrozvágy/Bodrogköz region.
[10] Interview: 23 August 2007, Cígand.

Figure 3. Main actions and interactions between central actors in the network of the national water authority and the regional coalition Bokartisz in Hungary.

Time / context	**Actions of individuals in the network of water authority, water engineers (National)**	***Policy interaction***	**Actions of individuals in the regional coalition of municipalities, NGOs & scientists (Bokartisz)**
1990s Floods recurring. EU and NGOs promote 'living with water'	A few water experts challenge dike reinforcement and engage with national nature protection NGOs		Individuals carry out pilot studies on floodplain revitalisation and *build a network* of regional farmers, civil organisations and experts
2000 Flood and cyanide spill; EU accession negotiation	*Develop new water policy:* water retention in built reservoirs and widened riverbanks possibly combined with nature conservation		Led by Geza Molnár, municipalities and regional NGOs *create regional coalition Bokartisz* to promote floodplain revitalisation. The leader of Bokartisz invites the responsible government actor to present policy plans.
2001 Dike break	Present policy plans in the region. Try to secure funding (including EU pre-accession funds)	*Ideas conflict. Objectives differ*	NGO members in Bokartisz organise opposition in the region using media as a *venue*
2002	Responsible government actor invites Bokartisz	*Discuss mutual ideas*	Researchers in Bokartisz strengthen cooperation with (inter-)national partners
2003 Elections & new coalition government. Ministries and water authority reorganised	Responsible government actor uses *window of opportunity* for government approval of new policy ideas and to *create new venues*: inter-ministerial committee and five open tenders for background research.	*Intense cooperation; shared idea:* Water retention in multifunctional reservoirs. Shallow flooding in floodplain on demand regions	Mayors in Bokartisz coalition conditionally offer territory. Researchers in Bokartisz coalition secure Bokartisz' position in national water policy tenders and international projects
2004 EU accession	Key civil servants resign after budget cuts		NGOs train farmers (e.g. in applying for agri-environmental schemes)
	Start implementation. Cease inter-ministerial panel and interpersonal cooperation with region		Mayors protest in Budapest against limited information and lacking funds for, amongst others, land-use change
2006	Reduce regional project bureau; postpone implementation to apply for EU funds		NGO leaders start *new coalition* with supporters of floodplain management and develop plan for alternative region.
		Occasional workshops	NGOs cooperate in Europe-funded projects outside area water policy.
2008	Water Ministry starts national media campaign, highlighting technical aspects		Conditionally offer alternative region for implementation water policy. Press releases scorn media campaign

Flood policy, the Netherlands

Located in the delta of four European rivers – the Rhine, the Meuse, the Scheldt and the Ems – the Netherlands is crucially dependent on water management and effective flood protection. Water policy change in the Netherlands started with the new concept of 'nature creation', or green engineering. It emerged when, in the 1980s, a group of ecologically-minded, mid-ranking bureaucrats from the Ministry of Agriculture and from the Public Works Department (*Rijkswaterstaat*) got together with the Dutch branch of the World Wildlife Fund to come up with new ideas for countryside planning (Warner, 2003).[11] The discourse on green engineering developed out of many social interactions and cannot be attributed to anyone exclusively. However, successful discursive entrepreneurs can exploit the ambiguities of a discourse to promote their legitimacy (Van Hemert, 1999). The late 1980s were a

[11] The Dutch government organised the so-called Eo Wijers contest to elicit innovative policy ideas in town and country planning. The prize-winning project proposed bringing back the stork into the Dutch countryside by 'developing' natural values. Nature development seeks to increase the diversity and abundance of natural values through green engineering. (www.ecoplan.nl/inhoud/natuurontwikkeling/natuurontwikkeling.htm)

propitious time for green engineering. The once unassailable Public Works Department suffered legitimacy defeats after successful public protests against dike reinforcements that sought to preserve the environment and cultural landscape. The Department wanted to rid itself of its technocratic, solipsistic image. It also needed a new problem to solve and programme of work after the completion of the coastal protection works (Van Hemert, 1999). In addition, recurring agricultural surpluses (produce and manure) had made farming unpopular. Agricultural retrenchment through buyout would free up space for the river to meander and for more natural banks. Green engineering seemed to tie in well with the environmental consciousness peaking at the turn of the 1990s. Nature organisations such as the World Wildlife Fund, sceptical at first, bought into the concept with their Living Rivers publication (WWF, 1992), which introduced the idea of river bypasses to restore ecosystems.

The Public Works Department, spatial planners and the Ministry of Agriculture (now incorporating a nature branch) initiated landscape designs for the Border Meuse, and proposed restoration interventions for the Rhine where it enters Dutch territory. The green engineering plans, however, suffered a setback when the Rhine and Meuse came close to overflowing in 1993 and 1995. Protection became the first priority and supporters of flood levees were quick to rush a crash programme of revetments through Parliament. These supporters were often engineers who were formerly involved in the major coastal protection works and who were sceptical about climate change, sea level rise and about spending public money on non-security issues. They contested the often-heard claim that dikes could no longer guarantee safety and needed to be supplemented with river-widening interventions. They felt 'security' as a prime objective was watered down by the alliances of water managers and environmental conservationists.

Nevertheless, the green wave persisted among top officials in the Public Works Department. Their solution was to create 'Room for the River' with measures such as dike setbacks, widening and lowering the floodplain, and creating more natural river banks with less steep gradients. An important consequence of the high water periods was a growing awareness of the flipside of security provided by taming the rivers through dikes. Water experts from the national research institute RIZA and WL Delft Hydraulics, who also advised on water policy, started to research non-traditional insecurity elements, ranging from human factors in dike failure to climate change. This led to the public communication of a new message on flood security from the Public Works Department: dikes cannot guarantee total security and there will always be 'residual risk'. The question, then, became: How do we deal with the residual risk? A senior civil servant at the Public Works Department, Van den Hoek, advocated making a structural reservation for water retention, or 'calamity polders'.[12] The research institute Delft Hydraulics gave this idea technical and intellectual legitimacy by stressing that flooding land to save other areas had historic precedents. The Vice-Minister for Water[13] strongly welcomed the idea of retention areas. A window of opportunity for aligning green (nature), blue (water) and red (socio-economic) values opened when the Vice-Minister for Water got along well personally with the Spatial Planning Minister, whose public officers were developing a revolutionary White Paper (the Fifth National Policy Document on Spatial Planning (VROM, 2001)) in which they proposed spatial reservations for 'blue', 'green' and 'red' activities. This opportunity required maps of potential retention areas. To the surprise of key Public Works Department officers, these were appended hastily as an annex to the new water policy Room for the River, presented on 29 February 2000.

Given the still shaky legitimacy of the Public Works Department, its liberal Minister made the unusual move of partly decentralising the decision-making on Room for the River interventions. Provincial and local authorities were invited to take the lead and propose interventions, as long as the mandatory flood peak level reduction would be achieved. However, participation in this seemingly open

[12] Different terms were used, which created much confusion when the idea was introduced. 'Controlled flooding' and 'retention' were considered less sensitive than 'calamity polders'.

[13] In the late 1990s, water management was given its own Vice-Minister. Previously, the Dutch Minister of Public Works attended to both Traffic and Water Management issues.

decision-making processes was strongly orchestrated and the outcomes prejudged (Van Hemert, 1999), which raised tension with local parties and could eventually undermine the idea of the 'calamity polders' itself.

The case we explore here is that of the State Advisory Commission mandated to assess the benefits and suitability of emergency flood retention areas, as well as the opposition that met its advice on flood retention. The Commission had been instated by the Home Office and Public Works Department after local opposition to the flood retention areas concept that was included in the 2000 Room for the River policy document. The Commission was chaired by senior liberal senator Luteijn, a mentor of the Vice-Minister. It took a restrictive policy with respect to its informants, talking to nationally and regionally organised interest, including a mayor, but not to local people, claiming "*security is too important to subject it to national debate*".[14] A limited number of preselected 'stakeholders' were invited onto a consultative board (*klankbordgroep*) in the hope that this orchestration of 'allowed criticism' would reduce protests. The work of this board was not taken seriously, as evidence surfaced that the Commission report had already been finalised before the board could discuss the conclusions.

The Luteijn Commission focused on securing societal support rather than asking critical questions about the idea of establishing flood retention areas itself. Next to giving a positive recommendation about establishing flood retention polders, the Commission identified three potential areas: the Ooij polder and Rijnstrangen area along the river Rhine and the Beersche Overlaat along the river Meuse. As a result of its rich history of protest of well-informed inhabitants against a variety of government plans and interventions, the Ooij polder became the focal point of protests against all flood retention plans. We therefore focus on the case of opposition in the Ooij polder.

As uncertainty about the government plans spread among his clients, the director of the local branch of the Rabobank[15] started an information campaign. He invited Senator Luteijn, who happened to be on the bank's national Executive Board, to give a presentation during the annual meeting of the local Rabobank branch on 3 October 2002. The meeting room was filled with sceptical bank clients and members of the press. Outside the building, agriculturalists had put up straw dolls with protest slogans. These protest struck a chord with property owners and other citizens, several of whom had been involved in earlier protests against dike reinforcement and other unifying causes such as urban expansion of the nearby city of Nijmegen. The regional environmental conservation umbrella organisation, the Gelderland Environmental Federation, initially was in favour of the concept of uncontrolled flooding, as it would flush and regenerate the natural environment. However, this stance was reversed in the Ooij polder debate, when its members realised their own houses were on the line.[16]

The emerging coalition against flood retention polders was not formed around an overarching idea, aspiring to be an anti-hegemonic coalition, which needed a shared agenda and ideological coherence to be successful, as Antonio Gramsci teaches in his Prison Notebooks (1935). Rather, the opponents were a collection of individuals with divergent agendas that entered a marriage of convenience in the new civic coalition 'High Water Platform' (*Hoogwaterplatform*), consolidating scattered protests. The local Rabobank provided the platform with initial funding. At the insistence of Rabobank's director, a regionally well-recognised and active pensioner became chairman of the civic platform. The number of members and largely private sponsors increased rapidly, many of which were well-educated people working in education, private enterprise or administration rather than agriculture. Many originated from outside the Ooij polder, but felt a close connection with the polder after living there for years and, in some instances, decades. The platform was organised in three working groups – 'technical', 'action

[14] Interview with D. Luteijn, 6 July 2005, Nieuwegein.

[15] The Rabobank has a long history of cooperative banking and agricultural credit provision in the Netherlands. Most farmers have an account with the bank and show a high degree of trust in it. Trust was boosted by the supportive role played by officials of the local branch office in the Ooij polder during the 1995 evacuations (see Roth et al., 2006).

[16] Interview with R. van Loenen Martinet, 23 November 2005, Arnhem.

and communication' and 'legal' – and created a website presenting an overview of the latest developments, press comments and research reports.

Initially, the High Water Platform tried to enter into dialogue with the Ministry of Transport and Water Management and its Vice-Minister. However, its chairman soon concluded that this was not paying off, shifting the platform's target to the House of Representatives. Platform members fostered a network of relationships with representatives from several political parties, feeding it with customised information.

The genius of the chair of the coalition was to start an information 'guerrilla warfare' against flood retention whilst avoiding NIMBY-ism[17] (Roth et al., 2006). The platform teamed up with river engineering and hydrological experts, who could devise alternatives and ask critical questions about the assumptions on river discharge, the cost-benefit ratio and climate-change projections used in the debate on flood retention polders. The platform shared the opinions of these credible experts with policymakers and politicians to support the case against flood retention. While the High Water Platform's legal workgroup obtained a critical consultancy report withheld by the Water Department, the technical workgroup gathered information to challenge the economic and engineering assumptions of the Luteijn Commission's proposals for flood retention polders. Undermining the scientific legitimisation of flood retention polders was a smart move, as supporters had so far ignored the uncertainties associated with the scientific material presented.

There is strong evidence of venue shopping (cf. Baumgartner and Jones, 1993). Coming from different backgrounds, coalition members could access multiple venues such as the national press, Parliament, the Council of State (administrative judiciary), municipalities and the province. While coalition members guided politicians around in the area, the Mayor of Ubbergen and Beek, the main population centre of the Ooij polder, steered his own course and went via the national media. Through the contacts of the Province of Gelderland, platform members sought cross-border cooperation with the German state of Nordrhein-Westfalen, where similar policy measures were debated, and which was sensitive to the Dutch plans because of the trans-boundary character of the effects of using the Ooij polder for flood retention. The townspeople initially argued that they were willing to do their bit for national safety by agreeing to a flood retention Ooij polder. However, as coalition members fed them with counter-expertise, they found the case for flooding becoming progressively weaker.[18] Property owners joined the Chamber of Commerce, social partners and homeowners in demanding counter-expertise from the same institute that had put flood retention on the map: WL Delft Hydraulics.

Notwithstanding the huge amount of time, energy and money put into pushing the plan for flood retention polders, in 2005 the Vice-Minister abandoned the idea (WaterForum, 2005). It had been brought down by a combination of factors including the expert criticism of the technical assumptions behind the plan, the withheld cost-benefit analysis and the pressure put on the national political arena by the many activities of the High Water Platform.

Figure 4 summarises the chronological narrative of Dutch water policy change above, highlighting the actions of central individuals on which the discussion section builds. The figure focuses on the actions of and interaction between actors in the national water authority's network and the local citizens' High Water Platform coalition.

[17] NIMBY stands for Not In My BackYard.

[18] Interview with H.B.A.M. Sanders, 30 June 2005, Kekerdom. The High Water Platform attracted water experts who cast doubts on, among others, the accuracy of the Ministry's climate scenarios, the degree of flood-level reduction realised by the intervention and the cost-benefit ratio.

Figure 4. Main actions and interactions between central actors in the national government and the regional coalition in the Netherlands.

Time/context	**Actions of individuals in the network of water authority & water experts (National)**	***Policy interaction***	**Actions of individuals in the local coalition of citizens (High Water Platform Ooij)**
1980s	*Network:* after opposition to a technocratic water management approach, a few civil servants of Public Works Department engage with national nature protection NGOs and the Ministry of Agriculture. Together they design 'green rivers' for major rivers		Individuals participate in protests against dike reinforcement, favouring nature development (local)
1990s. Integrated water management increasingly recognised	Individual water experts advocate flood retention. Individual civil servants start to advocate the new policy concept 'living with rivers' within the Ministry responsible for water		
1995/98. Near floods	Advocates of the 'living with rivers' concept reframe their ideas to fit in with the recurred popularity of dike revetment		Ooij polder evacuated. Individuals build trust in the region by giving support in evacuation. Population divided about dike reinforcement
1999/2000	Civil servants advocate the *policy idea* Room for the River and use a *window of opportunity* to connect spatial policy and water policy. New *idea* of structural reservations for flood retention in annex water policy		
2001	*New venue:* Luteijn Commission, between politics and water experts		
2002 Provinces & municipalities protest	Luteijn presents policy idea in the region	*Idea conflicts*	Business leader *uses network* to invite Luteijn Commission to present in the region
2002/2003 Elections. Protests alarm national politics	Replacement of the Vice-Minister of Water	*Individual water experts offer counter-expertise*	Organised opposition in the region. *Build coalition.* Challenge appropriateness of flood retention. Coalition members lobby in media, internet & own networks. Coalition members strengthen network with (inter-)national water experts, municipalities & the private sector
2004/2005	New Vice-Minister drops spatial reservation for flood retention		Platform remains active in scanning policy plans and providing information

DISCUSSION – STRATEGIES USED BY SUPPORTERS AND OPPONENTS

This section discusses the strategies used by central individuals among the supporters and opponents of water policy change. Firstly, the chronological case descriptions in the previous sections are synthesised according to the fivefold distinction of strategies of individuals in Huitema and Meijerink (2009). Secondly, we reflect on the complementary roles of key individuals.

Developing and challenging ideas

In both cases, the transition idea started with discussions between mid-ranking civil servants from a department responsible for water safety, scientists from national water research institutes and people from nature conservation organisations. It is hard to pinpoint the origin of the new idea, as many worked on green engineering and 'living rivers' (e.g. Fokkens, 2001; Wolters et al., 2001; Huitema and Meijerink, 2009). It is, however, possible to pinpoint a small number of supporters in the national government who pushed the idea over a period of several elections, background studies and (near) flood events. In Hungary, at first, the idea was treated as rather technical, aiming at safety and nature

protection. After opposition from regional parties, regional interests and the more integral concept of floodplain management were embraced. The objectives of water management broadened from (flood) safety to include nature conservation and rural development. The adoption and implementation of this broadened concept was influenced strongly by a regional coalition, which developed its own ideas, separately from the national government. This coalition was supported by European funds and inspired by (inter-)national scholars. It is important to note that civil servants and their technical experts framed their new policy differently from the regional coalition in Hungary. Whereas civil servants described it as an effective response to new challenges in water management, coalition members stressed that it had its roots in history and tradition, and opposed prevailing water management.

In the Netherlands, the idea remained more confined to flood safety. After the near-floods of the 1990s, 'nature development' gave way to security as the primary focus. In the Ooij polder, a strong coalition against the regional implementation of the new water policy, and in particular the idea of flood retention polders, emerged. The government did not enter into dialogue with this coalition, nor did the coalition develop well-defined alternatives. In contrast with the Hungarian case, the opponents chose not to focus their protests on the consequences of the plan but rather on its assumptions and scientific underpinning. The supporters of the new idea were vulnerable to these attacks, as they had neglected being explicit about and validating underlying assumptions and uncertainties, using analysis primarily in an 'advocacy' mode, in other words to justify and elaborate their position on the policy issue of flood safety. In Hungary, opponents challenged the sustainability and legitimacy of the new idea, pointing to its strongly technical approach and referring to the problems that technical solutions in water management had caused so far. In both cases, opponents highlighted the unwanted (future) situation that the new idea would create.

Building coalitions for selling ideas

Following Huitema and Meijerink (2009), we define coalitions as groups of actors from more than one organisation with shared beliefs and explicit agreements on how to use resources to achieve common goals. In both regions, one person or a small group of people initiated a new coalition. Although these coalitions soon became associated with supporting or opposing a new idea, the members before entering these coalitions did not have a strong preference for a particular policy idea in water management, nor did they share core beliefs.[19] The coalitions were initiated by an individual that managed to link different core beliefs to a particular policy idea. The leader of the Bokartisz coalition in Hungary sold his idea explicitly as one that could serve regional development, nature protection, flood safety and drought control at the same time, in which case actors could join the coalition independently of their core belief. Although successful in its cooperation with the national government, this may have threatened the stability of the Hungarian coalition. Some time later, partners left the coalition and active members remained mostly confined to those that see floodplain revitalisation as the only appropriate regional solution for sustainable rural development and nature conservation, reducing the fragmentation of beliefs (cf. Sabatier, 1988). Within the existing coalitions and actor networks of the Netherlands and Hungary, individuals did not significantly change their policy objectives and main policy idea (cf. Sabatier, 1988); rather, they took turns in supporting or opposing policy (change), depending on the policy objective.

In both cases, the coalition entered the opposition *after* a meeting in the region, where a national figurehead of the water policy presented the state's new policy idea. The initiator of the coalition hosted this meeting and invited the figurehead through personal and historically grown networks. In the Netherlands, for example, the Commission chairman was on the Board of Directors of the Rabobank and was invited to speak by the director of its well-established local subsidiary. After debating the implications of the plan in the region, opposition started to grow, with the new coalition taking a key

[19] A set of basic values, causal assumptions and problem perceptions (Sabatier, 1988).

role. Interestingly, core members of the Hungarian and Dutch regional coalitions used the same words to describe the moment when the national government's policy idea was presented in the region: "*it was a great shock to see the plan (…)*".[20] This supports the impression that actors in the region at the time were not well-informed about the government's new policy ideas and had not yet formulated their critique or organised their opposition.

In effect, building coalitions and pooling resources under a common position was a crucial strategy for individuals in developing their own ideas as much as in opposing ideas of others. Our cases suggest this was particularly true for actors outside the national government. Whether national government actors had stronger networks to rely on, whether affiliation blocks coalition building or whether the Dutch 'state commissions', which became common for launching new ideas, were effectively the state-equivalent of coalition building needs further attention.

Recognising and exploiting windows of opportunity

In both cases, there were debates about new policy ideas in water management. The government commissioned studies and hosted working groups, after which various drivers of policy change were identified. Especially in Hungary, keen to enter the EU, European Directives, funding and accession negotiations favoured a shift towards participatory and integral planning, ecological concerns and the reduction of cropland. Although in both cases (near) floods and the growing recognition of climate risks carried the debate on the appropriateness of prevailing water management, their impact on the debate was different. In the Netherlands, supporters of both old and new water management paradigms stuck to their positions and secured the interventions that they had advocated for some time. As a result, the national government endorsed dike improvements and floodplain restoration alongside flood retention polders in the Room for the River policy. In Hungary, the supporters of water retention managed to gain funds and policy support to change prevailing water management practices. In both cases, the regional coalition was more active in mobilising people than in exploiting windows of opportunity. The exploitation of strategic opportunities seemed to be more confined to individuals in the administration in close proximity to the political arena. In Hungary, a key player at the Ministry of Environment and Water exploited the momentum for change created by national elections that brought to power a new coalition determined to prove itself different from the previous government.

More generally, our cases confirmed that elections and the changing of governing parties forced existing networks of civil servants and politicians to reconfigure, and could offer a window of opportunity to establish a new idea and kick-off a transition. However, elections after a new idea had started to take-off could also disrupt the fresh networks. In Hungary, key figures in the central administration withdrew or were replaced after the 2006 budget cuts and elections, while 'old-school' water engineers from before the transition returned to their positions. This changed the course of the water policy to more conventional solutions and frustrated many actors that believed in more fundamental changes in water management practice.

Using multiple venues

The previous subsections looked at the origins of the new ideas, the coalitions that were built to sell them and the opportunities for introducing new ideas into the water policy at a particular moment in time. Here, we ask whether individuals or groups of individuals sought out alternative venues to promote new ideas. We understand venues as the possible places where policy issues can be debated including various levels of government, the forums of scientists and legislatures, and the media (Baumgartner and Jones, 2002). We focus on the choice of venue of the individuals identified in previous sections – the central actors at the ministry responsible for water policy and in the new regional coalitions.

[20] Interview: 29 August 2007, Budapest; and 14 October 2005, by telephone in the Netherlands.

Both opponents and supporters of the new policy ideas actively created and used new venues including the national press, internet, Parliament, the Council of State (administrative judiciary) and cooperation with neighbouring countries. In the Netherlands, to boost the legitimacy of the new water policy Room for the River, the liberal Minister took the new initiative to partially decentralise decision-making on the implementation of the policy, using provincial and local authorities as a new venue. With varying degrees of success and sincerity in applying these new ideas, several Room for the River projects are now ongoing. In the Ooij polder, participation was largely orchestrated and regional protests sidestepped when a State Commission was instated to investigate the cost and benefits of the new policy idea of flood retention. With the creation of this new venue the national government aimed to strengthen the legitimacy of its policy idea. Failing to connect to local parties, the Commission triggered strong opposition, which itself successfully exploited new venues such as the media, political party meetings, the chamber of commerce and Parliament. In Hungary too, the national government met opposition from local authorities, civil organisations and national park authorities. In this case, however, a regional coalition and local authorities took the initiative to offer a location for water retention under their own conditions. The national government representative responded by initiating new venues for more participatory policy planning and trans-disciplinary background research.

In sum, actors from the new regional coalition stood out in using the media including the internet, issuing (public) communications to politicians and legal action. Governmental actors used organisational and financial instruments such as allocating, blocking or diverting funds and changing budget priorities to block or support the implementation of a new policy idea.

Orchestrating and managing networks

Turning to the last of the five strategies, this subsection discusses how actors cooperated, what networks played a role in the transition in water policy and whether (groups of) individuals actively influenced the operation of networks. In particular, this subsection asks whether individuals influenced the development of water policy by breaking up or providing alternative policy networks.

Water management in both Hungary and the Netherlands had been dominated by a strong network of water authority civil servants (for policy support), engineers at national research institutes (for technical underpinning) and the private sector (consultants, civil engineers and agriculturists). The idea of water retention and flood retention polders was established by a network of mid-ranking civil servants from a department responsible for water safety, experts from national research institutes and people from nature conservation organisations. Civil servants are strategic in exploiting their relations with politicians. For example, in the Dutch case, civil servants overruled politicians and exploited the good connections between the Ministers of Water, Spatial Planning and Agriculture. Conspicuous orchestration can also challenge the legitimacy of a network. In the Netherlands, for instance, the Luteijn Commission was criticised for orchestrating a consultation board, consisting of pre-selected stakeholders.

The leaders of the opposing coalitions also proved successful networkers, inasmuch that they used multiple affiliations to extend their network. In the Netherlands, for example, members of the opposing coalition lobbied their business networks through the Chamber of Commerce, and national and regional politicians through their membership of different political parties. To challenge the technical basis of new ideas, opponents connected to specialists operating in the background (civil engineers, ecologists, hydrologists, lawyers). In particular, the coalition hooked up with researchers in the national water institutes to gain counter-expertise, which led to the leaking of a critical report on the costs and rationality of flood retention in the Netherlands. Opponents also exploited trans-boundary networks. The Dutch coalition consulted stakeholders, civil society action platforms and local authorities in Germany, while in Hungary, opponents participated in internationally funded research and development projects with (inter-)national scientists and civil society groups.

Complementary strategies

Next to the strategies discussed above, we identified in our cases five roles of key individuals that deserve special attention: 1) translating the idea, 2) engaging with opponents, 3) managing information (cf. Olsson et al., 2004), 4) managing time (cf. Holling, 2004), and 5) managing spatial scales (cf. Born and Purcell, 2006).

An important role that individuals played was '*contextualising the idea*'; in both cases, we observed people who contextualised the new idea for regional use or implementation. These individuals acted similar to Litfin's (1995) knowledge brokers, but were not confined to the science policy interface – they were found among supporters as well as opponents. As supporters, they contextualised the plans of the national government and attached regional objectives and benefits to it. Among opponents they were found to transform the plan, which the national government promoted, into an idea with negative consequences for the region. Both in the Hungarian and Dutch cases, local people did not initially show a great deal of interest in the plans of the national government. In the Ooij polder, the inhabitants initially thought that the national government would not carry through its plans for water retention. Opposition started with an informed and trusted individual from the region, who brought home the message together with his critique of the plan, fuelling regional concern and, eventually, opposition.

In Hungary, national government actors successfully employed a strategy of *engaging with opponents, managing expectations* and, more specifically, *engaging with individuals that contextualised ideas in the region* between 2002 and 2003. They invited an opposing regional coalition to join the implementation planning process and bring in its ideas. In this case, the national government was able to realise its own policy ideas alongside some of those posited by the opposition. In the Ooij polder case, there was little engagement with opponents. The opposing Hoogwaterplatform attempted to engage directly with the responsible Vice-Minister. However, these attempts were abandoned after the opponents concluded that their arguments were not being paid serious attention to and a dialogue was impossible. Working in networks and engaging with opponents, the question had to be asked whether partners should compromise and change their objectives[21] or whether objectives were effectively combined and would have to be implemented alongside each other. In Hungary, neither the idea of a retention reservoir nor the capacity of the reservoir changed in the negotiations, so the national government got what it wanted from the start, whereas regional partners settled for a compromise. Engaging with opponents included the challenge to cope with individuals of the old paradigm. As a member of the Hungarian regional coalition pointed out:

> A paradigm change makes a lot of losers – all people whose life is built on intensive large-scale agriculture, all those who were water engineers for decades and learned that water has to go down as quickly as it can and that flood is an enemy. It is not easy to change for a person and to say 'what I said before was wrong', and to include new ideas. Very few people can do that. I am open to older people, but I know that as people get older it becomes even harder.

The role of *managing (scientific) information and knowledge* reports has a short lifespan in the administration, as people are replaced and reports get lost. A great deal depends on individuals and networks to keep (especially new) information alive. In both countries, researchers used the transition to secure significant research funds. With the protests and new policy ideas of the Hungarian coalition, research in Hungary was more trans-disciplinary than in the Netherlands. Yet in Hungary, distribution of the reports produced during the transition period to other ministries and parties was poor. Supporters of hard engineering (dry polders and dikes) did not trust the hydrologic or economic feasibility of floodplain management to reduce extreme flood levels. In the Netherlands, participation and decision-

[21] Or, as Sabatier (1988) hypothesises: when change in a governmental action programme cannot be restricted to secondary aspects, adherents will seek to modify the policy core in the following sequence: first, add a portion of the opposing coalition's core; second, delete a portion of the existing core; third, arrange a synthesis of the two cores; and, finally, acquiesce to a replacement of one's core by the challenger's, but try to get portions of it incorporated into the new secondary aspects.

making were more strongly orchestrated and limited to the network of water authorities and support research institutes. Research stayed confined to the familiar water research institutes. The Dutch institutes used the additional funding to attract experts from other disciplines and to become more interdisciplinary. Possibly as a result, information was more carefully managed in the Netherlands and new insights became better established throughout the government. At the same time, in the Dutch case, a background study report was withheld and only retrieved by the opposing regional coalition after threatening legal action. This incident itself became a weapon in the struggle for image, trust and legitimacy. Related to information management are the activities of both proponents and opponents to sidestep the good governance principles of transparency and accountability.

In terms of *time management,* parties used time differently. Regional coalitions were dependent on quick success to keep their coalition alive. The regional coalition in Hungary blamed the national government for selective implementation of the policy plans. In both cases election times guided politicians. Civil servants and scientists, on the other hand, could wait longer for the right time (and budget) to arrive. Civil organisations and coalitions had more autonomy in selecting a next generation of leaders, and were thereby less subjected to sudden changes of policy and ideology.

In *managing spatial scales*, national governments framed policy options as localised solutions for a national problem. Regional coalitions highlighted landscape and regional aspects and challenged the fairness of having to solve (suffer for) other people's problems. In the Ooij polder case, spatial-administrative scales played a key role. Flooding of the river Rhine was a trans-boundary problem, but the proposed solution was primarily a national issue, not taking heed of the impact of upstream conditions and policies nor of the sensitivities associated with the idea of flood retention polders. While the supporters created tension and unrest by underestimating this factor in the relationships with Germany, the opponents made optimal use of it in networking, coalition building, the research agenda and communication.

CONCLUSIONS

This paper aimed to examine the significance of individuals in supporting or opposing major water policy change, by analysing what happened in Hungary and the Netherlands when water retention and floodplain rehabilitation were introduced into water management to replace or complement flood levees and drainage.

When the new ideas (water retention, floodplain revitalisation, flood retention polder) emerged, people took turns in supporting or opposing policy (change), depending on the governing policy objective. In doing so, both supporters and opponents used the strategies identified in Huitema and Meijerink (2009): to develop ideas, to build coalitions to sell ideas, to use windows of opportunity, to play multiple venues and to orchestrate networks. Working together in coalitions, key members took complementary roles. With respect to the development of policy ideas, we observed two different opposition strategies: 1) discredit the new policy idea to block change and maintain the status quo, and 2) advocate change towards another policy idea. In both cases, opponents were successful in engaging with experts from the scientific community (aligned with the supporters) to challenge the legitimacy of (assumptions underlying) the new policy idea. Additional strategies that opponents pursued included changing budget priorities and timelines.

By selecting and describing two cases with a visible opposition to new water policy, we inevitably introduced a bias in our analysis. Areas for future research include looking at strategies and the interaction of opponents and supporters in relation to stages of major policy change; addressing what conclusions are specific for transitional policy change or for better understanding transition dynamics in general; and reflecting on the effect of the strategies of supporters *and* opponents on the outcome of major policy change in the context of other variables such as the role of ideologies, interests, institutions and path dependency.

Our cases evidenced the key roles of individuals and suggested that these roles become particularly prominent in the interaction between supporters and opponents of (parts of) major water policy change. A central difference between the Dutch and the Hungarian case analysed in this paper was that in the Netherlands a regional coalition blocked the implementation of an element (flood retention polders) of the national government's policy idea (Room for the River), whereas in Hungary cooperation with key opponents of the plan in the region allowed the national government to realise its objectives alongside recognising those of the opponents. The cases suggested that the choice of whether or not to engage with (potential) opponents influences the outcome of water policy change. A special role was that of individuals, who translated emerging water policy ideas to other actors. In the cases we analysed, each influential coalition had such an individual at its base. These individuals were also found to be successful networkers and creative in exploiting new venues. Whether or not government actors sought to involve these individuals in policy making influenced the realisation of the water policy. In the Dutch case, where this was omitted, the coalition could obstruct the new elements of the water policy. By engaging with opponents, negotiated solutions could give water policy change a new impetus, yet at the same time steer away from the original idea, alienating supporters that measured success by the realisation of the original idea.

ACKNOWLEDGEMENTS

Work on this paper has been kindly supported by a grant from the European Commission through the European research project ADAM (Project No. 018476-GOCE), from Wageningen University (Boundaries of Space) and from the Dutch Ministry of Agriculture, Nature Conservation and Food Quality. The authors would like to thank research partners for their support in the Tisza region and in the Netherlands, as well as all interviewees and participants of the regional workshops for sharing their experience. We are grateful for the valuable comments and suggestions of research partners, especially Zsuzsanna Flachner, Dave Huitema, Sander Meijerink, Rik Leemans and two anonymous reviewers.

REFERENCES

Andrásfalvy, B. 1973. Ancient floodplain and water management at Sarkoz and the surrounding area before the river regulations (in Hungarian). *Vízügyi történeti füzetek* 6.

Bálint, Z.; Haraszty, L.; Kalocs, B. and Seregélyes, T. 2000. *Mivel gazdagítjuk az Európai Uniót / Hungary enriches the European Union (bilingual)*. Budapest, Hungary: WWF Hungary.

Balogh, P. 2002. *Basics and method of floodplain management on middle-Tisza valley*. Budapest: VATI Kht.

Barta, K.; Bódis, K.; Boga, T.L.; Kiss, T.; Kiss, R.; Mezősi, G.; Pálfai, I.; Rakonczai, J.; Szlávik, L. and Török, I.G. 2000. *The hydrological risks influencing the development of the Tisza country; resources and opportunities (in Hungarian)*. Szeged, Hungary: University of Szeged, Natural Geography Department.

Baumgartner, F.R. and Jones, B.D. 1993. *Agendas and instabilities in American politics*. Chicago, US: University of Chicago Press.

Baumgartner, F.R. and Jones, B.D. (Eds). 2002. *Policy dynamics.* Chicago, US: University of Chicago Press.

Bellon, T. 1991. Floodplain husbandry along the Tisza in the XVIII-XIX century (in Hungarian). In Great Plain Research Institute (Ed), *Alföldi társadalom*, Volume II, pp. 109-124. Békéscsaba, Hungary : Centre for Regional Studies, Hungarian Academy of Sciences.

Bellon, T. 2004. Living together with nature. Farming on the river flats in the valley of the Tisza. *Acta Ethnographica Hungarica* 49(3): 243-256.

Born, B. and Purcell, M. 2006. Avoiding the local trap: Scale and food systems in planning research. *Journal of Planning Education and Research* 26(2): 195-207.

Botos, C.; Kajner, P.; Molnár, G. and Ungvári, G. 2002. *Floodplain landscape management: Concept and concrete steps at the Bodrogköz area. The 'Last Straw' program's ecological historical foundation and the synthesis of the environmental economics analysis (in Hungarian)*. Budapest-Karcsa-Nyíregyháza: Bokartisz. www.bokartisz.hu

Caniëls, M.C.J. and Romijn, H.A. 2008. Actor networks in strategic niche management: Insights from social network theory. *Futures* 40(7): 613-629.

Cselószki, T. 2006. *Civil sector thoughts on the further development of the Vásárhelyi Plan, specifically with respect to changes in land use*. Nagykörű, Hungary: Alliance for the Living Tisza Association.

Fenyo, K. 2001. Hungary struggles to control constantly worsening floods. *The Bulletin (Quarterly Magazine of the Regional Environmental Center for Central and Eastern Europe, Budapest)* 10(3).

Fokkens, B. 2001. Preface. In Proceedings of the Conference on River Restoration in Europe 2000, pp. 344. Wageningen, the Netherlands, Institute for Inland Water Management and Waste Water Treatment RIZA, Ministry of Transport, Public Works and Water Management.

Folke, C.; Hahn, T.; Olsson, P. and Norberg, J. 2005. Adaptive governance of social-ecological systems. *Annual Review of Environment and Resources* 30(1): 441-473.

Geels, F.W. and Schot, J. 2007. Typology of socio-technical transition pathways. *Research Policy* 36(3): 399-417.

Gere, C. 2007. The consequences of the Vásárhelyi Plan and reservoir construction for the Szabolcz-Szatmár-Bereg county (in Hungarian). Paper presented at the XXVth National Congress Hungarian Hydrological Society, Tata, Hungary, July 4-5 2007.

Glatz, F. 2003. Water use and lifestyle change on the plain (in Hungarian). *Jászkunság Almanac.* http://epa.oszk.hu/00100/00179/00001/002.html

Gramsci, A. 1935. *Prison notebooks (1929-1935)*. Marxist Internet Archive. www.marxists.org/archive/gramsci/prison_notebooks/, permission Quintin Hoare (translation from Italian), Lawrence & Wishart.

Hajer, M. 1995. *The politics of environmental discourse: Ecological modernisation and the policy process*. Oxford, UK: Clarendon Press.

Hartmann, T. 2010. Reframing polyrational floodplains: Land policy for large areas for temporary emergency retention. *Nature and Culture* 5(1): in press.

Holling, C.S. 2004. From complex regions to complex worlds. *Ecology and Society* 9(1): 11.

Huitema, D. and Meijerink, S. (Eds). 2009. *Water policy entrepreneurs: A research companion to water transitions around the globe.* Camberley, UK – Northampton, USA: Edward Elgar Publishing.

Kajner, P. 2006. From a curse the flood could be made a blessing (in Hungarian). www.elotisza.hu/bovebben.php?id=105

Kemp, R.; Schot, J. and Hoogma, R. 1998. Regime shifts to sustainability through processes of niche formation: The approach of strategic niche management. *Technology Analysis & Strategic Management* 10(2): 175-195.

Kingdon, J.W. 1995. *Agendas, alternatives and public policies*. New York: Harper Collins.

Kovácz, Á. 2005. *Summary of the Audit on the Preparations for the Prevention of Natural Disasters*. Budapest, Hungary: State Audit Office of Hungary.

KöViM. 2002. *The improved Vásárhelyi plan (Concept version) (in Hungarian)*. Budapest, Hungary: Department of Water Damage Prevention, Ministry of Transport and Water Management (KöViM).

Kundzewicz, Z.W. 2002. Non-structural flood protection and sustainability. *Water International* 27(1): 3-12.

Linnerooth-Bayer, J.; Vári, A. and Thompson, M. 2006. Floods and fairness and Hungary. In Verweij, M. and Thompson, M. (Eds), *Clumsy solutions for a complex world: Governance, politics and plural perceptions*, pp. 181-204. Houndmills, Basingstoke, UK: Palgrave-Macmillan.

Litfin, K.T. 1995. Framing science: Precautionary discourse and the ozone treaties. *Journal of International Studies* 24(2): 251-277.

Loorbach, D.A. 2007. Transition management – New mode of governance for sustainable development. Rotterdam, the Netherlands: Erasmus Universiteit Rotterdam.

Matczak, P.; Flachner, Z. and Werners, S.E. 2008. Institutions for adapting to climate change in the Tisza river basin. *"Klimá 21" Füzetek* 55: 87-100.

McGuinn, J. 2003. EU funds may favour expensive solutions. *The Bulletin (Quarterly Magazine of the Regional Environmental Center for Central and Eastern Europe)* 11(4), http://greenhorizon.rec.org/bulletin/bull114/default.html

Molle, F.; Mollinga, P.P. and Wester, P. 2009. Hydraulic bureaucracies and the hydraulic mission: Flows of water, flows of power. *Water Alternatives* 2(3): 328-349.

Olsson, P.; Folke, C. and Hahn, T. 2004. Social-ecological transformation for ecosystem management: The development of adaptive co-management of a wetland landscape in southern Sweden. *Ecology and Society* 9(4): 2.

Olsson, P.; Gunderson, L.H.; Carpenter, S.R.; Ryan, P.; Lebel, L.; Folke, C. and Holling, C.S. 2006. Shooting the rapids: Navigating transitions to adaptive governance of social-ecological systems. *Ecology and Society* 11(1): 18.

Pérez-Solórzano Borragán, N. 2005. The Europeanisation of interest representation in the new EU member states from ECE. NGOs and business interest associations in comparative perspective. Paper presented at 3rd ECPR Conference, Budapest, 8-10 September 2005.

Rhodius, R. 2008. The significance of contextual factors: An investigation into the planning of four retention areas on the German Rhine. Paper presented at Freude am Fluss Closing Conference, Nijmegen, the Netherlands, 22-24 October 2008.

Roth, D.; Warner, J. and Winnubst, M. 2006. *Een noodverband tegen hoog water. Waterkennis, beleid en politiek rond noodoverloopgebieden*. Wageningen, the Netherlands: Wageningen University and Research Centre.

Rotmans, J.; Loorbach, D. and Van der Brugge, R. 2005. Transitiemanagement en duurzame ontwikkeling: Co-evolutionaire sturing in het licht van complexiteit. *Beleidswetenschap* 19(2): 3-23.

Sabatier, P.A. 1988. An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences* 21(2): 129-168.

Schot, J. and Geels, F. 2007. Niches in evolutionary theories of technical change: A critical survey of the literature. *Journal of Evolutionary Economics* 17(5): 605-622.

Sendzimir, J.; Balogh, P.; Vári, A. and Lantos, T. 2004. The Tisza river basin: Slow change leads to sudden crisis. In Light, S. (Ed) *The role of biodiversity conservation in the transition to rural sustainability*, pp. 261-290. NATO Science Series – Sub-series V Science and Technology Policy, Volume 41. Amsterdam, the Netherlands: ISO Press.

Smith, A. 2003. *Alternative technology niches and sustainable development*. Working Paper Series No. 2003/2. Brighton, UK: Science & Technology Policy Research Unit (SPRU), University of Sussex.

Somlyódy, L. (Ed). 2002. *The strategic questions of domestic water management. Hungary at the turn of the millennium (in Hungarian).* Budapest, Hungary: Hungarian Academy of Sciences (MTA).

Szlávik, L. 2001. Flood protection development in the Tisza Valley (in Hungarian). Paper presented to the Geographical Conference/Földrajzi Konferencia, Szeged, Hungary.

Vámosi, S. 2002. The effect of excess waters on the development of the great plain regions (in Hungarian, summary in English). Debrecen: University of Debrecen.

Van der Brugge, R. and Rotmans, J. 2007. Towards transition management of European water resources. *Water Resources Management* 21(1): 249-267.

Van der Brugge, R.; Rotmans, J. and Loorbach, D. 2005. The transition in Dutch water management. *Regional Environmental Change* 5(4): 164-176.

Van Hemert, M. 1999. Space for the engineer. River management in the Netherlands in the nineties (in Dutch). *K&M: Tijdschrift voor Empirische Filosofie* 23(4): 361-387.

Váradi, J. 2003. For the blooming of the Tisza Region (in Hungarian). *Jászkunság Almanac* http://epa.oszk.hu/00100/00179/00001/pdf/02viragzo.pdf

Vári, A.; Linnerooth-Bayer, J. and Ferencz, Z. 2003. Stakeholder views on flood risk management in Hungary's Upper Tisza basin. *Risk Analysis* 23(3): 537-627.

Visnovitz, P. 2007. The floods of climate change threaten the dikes. *Origo Newspaper*, 23 March 2007, 18: 21 Last modification: 23 March 2007, 19: 25.

Visnovitz, P. 2008. Protecting 1.5 million people with imaginary giant wash tubs. *Origo Newspaper*, 11 Sept 2008, 11: 49.

VROM (Ministry of Housing, Spatial Planning and the Environment). 2001. *Making space, sharing space. Fifth National Policy Document on Spatial Planning 2000/2020*. The Hague: Ministry of Housing, Spatial Planning and the Environment.

Warner, J.F. 2003. Risk regime change and political entrepreneurship: River management in the Netherlands and Bangladesh. In Pelling, M. (Ed) *Natural disasters and development in a globalizing world*, pp. 185-198. London, UK: Routledge.

WaterForum. 2005. Vice-Minster Schultz drops plans for calamity areas (In Dutch). *WaterForum Online*. www.waterforum.net

Werners, S.E.; Flachner, Z.; Matczak, P.; Falaleeva, M. and Leemans, R. 2009. Exploring earth system governance: A case study of floodplain management along the Tisza River in Hungary. *Global Environmental Change* 19(4): 503-511.

Wolters, H.A.; Platteeuw, M. and Schoor, M.M. (Eds). 2001. *Guidelines for rehabilitation and management of floodplains; ecology and safety combined*. Lelystad, the Netherlands: Ministry of Transport, Public Works and Water Management, Institute for Inland Water Management and Waste Water Treatment RIZA.

WWF (World Wildlife Fund). 1992. *Living rivers (in Dutch)*. Zeist, the Netherlands: World Wildlife Fund Netherlands.