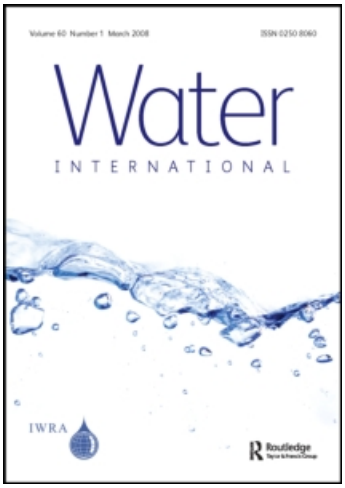

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'Trade-offs' Versus 'Safety First': How National Differences in Flood Policy Can Be Bridged.

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Abstract: *This article compares flood policy in Germany and The Netherlands. Narrative analysis of policies in both countries illuminates profound differences in national approaches to flood prevention. Surprisingly, these conflicts do not seem to hamper international policy making between the two countries, in light of the widely acknowledged success of co-operation on the River Rhine. This analysis helps to deepen our understanding of the advantages and the pitfalls of international co-operation. Narrative analysis shows how ambiguous principles succeed in matching and bridging the two conflicting national policy narratives. However, differences resurface in the implementation of the policy.*

Key words: *International co-operation, Rhine, flood management, policy narratives*

Introduction

Crime, environmental issues and economic crises have at least one thing in common: they do not confine themselves to national boundaries (e.g. Reinicke 1998). Addressing these policy issues always involves international, transboundary or even global co-operation.

Water management is an example of such a policy issue. Even in those cases where the consequences are local or national, the cause can often only be addressed at an international level when water travels through different countries.

Indeed, water management is a complex task, with flood policy as an excellent illustration. As rivers possess the stubborn tendency not to care about national boundaries, international co-operation is essential for flood policy. This article focuses on a particular case of flood protection: German-Dutch co-operation on the River Rhine. Traditionally, the major challenge for international flood policy is to overcome the one-sided dependence of downstream countries on upstream countries not to shift their problems downstream. The major challenge in this conventional approach is to trigger solidarity between upstream and downstream countries.

This article takes a different route. Instead of conventional lists of interests for multiple actors, narrative analysis studies perceptions. These policy narratives help to clarify that it is not just a matter of different national interests, but also of the way these interests are framed and perceived.

Our analysis shows that the national perceptions on flood defense differ to such a degree that they

seem irreconcilable. The German approach to flood protection, on the one hand, is to balance all different interests at stake, such as safety, ecology, economy and agriculture. On the other hand, Dutch policy equates flood protection more exclusively with 'safety'. Given these fundamentally different approaches, how can these countries co-operate on flood protection? Where do they differ and why?

Despite the profound national differences, there *is* international (and transboundary) co-operation. First, we analyze how national perceptions differ and how they correspond. Second, we examine how these national perceptions influence international co-operation from abstract principles to the operational level. Examples of practice will show how these national perspectives seep through into the implementation of international policy.

This article shows the national approaches on flood protection by means of a narrative analysis. As others have pointed out (e.g. Hajer, 1997; van Eeten, 1999; Dryzek, 1998; MacDonald, 2003), narrative analysis is growing in popularity as a conceptual tool. We argue for the use of narrative analysis not only as a conceptual tool, but also as a tool through which policy making can be improved. Our main conclusion is that language both creates differences that make co-operation difficult and, *at the same time*, can help to overcome these deeply felt differences.

The article proceeds in the following way. First, we set out the flood policy in the Rhine, during which we explain briefly the Dutch and German approach to flood protection. In the second part, the concept of narrative analysis is introduced. The third part contains an analysis of the dominant German and Dutch narratives on flood protection. The fourth section discusses a conundrum: despite all the differences discussed in the previous parts, there *is* international co-operation. How do policy makers succeed in incorporating these different points of view into one approach? Our concluding remarks recap the findings and reflect on a way forward for improved international co-operation.

Flood policy with regard to the river Rhine

Figure 1: The Rhine in Europe (source: Goutam et al. 2006)

The Rhine

The Rhine is a major river in Europe (see figure 1). Relative to other European rivers, the population density and economic importance of the river basin is very high, with areas like Rotterdam in The Netherlands and the Ruhr area in Germany nearby. Germany and The Netherlands share the river with five other European countries. The German state of Nordrhein-Westfalen is particularly active in co-operation with The Netherlands, as the two adjoin.

The physical and geographical outline of the river basin of the Rhine contains many faces (see e.g. IRC, 2001:2). The Rhine starts as a mountain river in the Alps. Next, the 'Upper Rhine' in Germany runs through a relatively flat landscape from Basel to Bingen (see figure 1). This river section has a rich history of flood problems. Next, the 'Middle Rhine' up to Bonn flows in a valley with little flood measures. In this section, tributaries, such as the Mosel and the Neckar, join the Rhine. This is a potential cause for flooding downstream. From Bonn, the river flows through Nordrhein-Westfalen (NRW), the German federal state neighboring The Netherlands. From Cologne, the 'Lower Rhine' flows through a relatively flat surrounding country again. Finally, the 'Delta area' starts approximately at the Dutch-German border. In this area, the water level is for the most part higher than in the surrounding country. Here, the Rhine splits into the Waal, the IJssel and the Nederrijn.

Flood policy in Germany and The Netherlands

Both countries strive to implement an acceptable safety level, based on chances of flood occurrence. In The Netherlands, general safety norms are fixed by law and imposed by the central government, whereas in Germany, safety norms can differ locally depending on historical water levels and local implementation.

Generally, the flood policy of both countries differs in two ways. First, the urgency to prevent flooding is less pressing in Germany. By contrast, safety norms in The Netherlands are up to thirty times higher than in Germany (Tweede kamer, 1995b; NRW, 1999:9; IRC, 2001:2). Second, the Dutch approach is *resistance* which means reducing the *likelihood* of a flood by raising dikes and creating retention areas. Yet, there are more possible strategies besides resistance (see e.g. Davar, 2001). De Bruijn divides flood policy into resilience and resistance strategies (2003:53). The German approach also aims for *resilience* strategies by reducing the *potential damage* of a flood. This can be accomplished, for example, by promoting smart adaptations in and around houses (i.e. NRW, 1999).

These differences can be explained by different risk perceptions. Dutch policy makers perceive floods of the Rhine as calamities with severe impacts on social and economical damage (Cabinet, 2000). German policy makers perceive floods more or less as a normal event. Chief of the 'Hochwasserschutzzentrale' in Cologne claims that floods are not merely disasters, but also blessings, because floods make citizens more aware (Flut ist normal, 2003).

In turn, different risk perceptions can be explained by way of inundation. Striking differences between Germany and The Netherlands include the percentage of the population living in flood endangered areas, which is 50% in The Netherlands compared to 3% in Nordrhein-Westfalen. Accordingly, the potential material damage of floods in The Netherlands is 130 billion euros, which is very high compared to 34 billion euros in the whole of Germany (IRC, 2001:8).

Both countries differ with regards to the allocation of responsibilities for flood protection. In The Netherlands, the Ministry of Transport, Public Works and Water Management oversees flood protection for the major rivers. In Germany, each federal state has its own policy and its own law for which the environmental ministries are responsible. In both countries, the responsible bodies co-operate with organizations on a local level in order to implement flood policy. In Germany, the state level is more dependent on the local level and the national level, whereas in The Netherlands the central government is sovereign in implementing flood policy. Thus, both countries generally differ in flood policy, risk perceptions, risks of inundation and institutional settings.

International co-operation for flood policy

International co-operation on flood policy has multiple rationales. The European commissioner for the Environment, Margot Wallström, uses the following argument for a European dimension for flood policy (EU, 2004): "Catastrophic floods endanger human lives and cause human tragedy. They also affect economic life and undermine Europe's progress towards sustainable development."

Both countries have their reasons to care about solidarity. First of all, The Netherlands, a downstream country, can be harmed or helped with German flood policy. Higher dikes in Germany can enlarge the amount of water flowing across the border. Systems to retain water in Germany can also diminish the amount of water. Incidentally, The Netherlands has provided financial contributions to flood measures in Germany. Solidarity, however, is not absolutely necessary for The Netherlands, as Dutch flood policy is able to secure safety levels independent of German flood policy. But international co-operation does bring in new and more efficient physical measures to protect against floods. Since The Netherlands is a Delta area, policy makers occasionally use the metaphor of being the sink of Europe (also in case of water quantity), a rhetorical device to express their high urgency (TAW, 2002; Schultz-Van Haegen, 2003).

In turn, Germany depends on Dutch flood policy on a much smaller scale. Floods caused in The Netherlands near the border may flow behind the dikes back to Germany. In particular, the federal state Nordrhein-Westfalen cares about solidarity, as they depend on the flood policy of the other federal states upstream.

Another rationale for international co-operation is that multilateral forums serve in coordinating information, exchanging best practices and connecting different fields of policy contributing to flood protection. The European Union (EU) also brings in the financial possibility of European funds.

International co-operation for flood policy took off in the last decade between Germany and The Netherlands. Two major floods damaged property in the German city of Cologne in 1993 and 1995. In The Netherlands, 200,000 people were evacuated as a flood precaution in 1995.

Since 1997, The Netherlands and Germany have also co-operated bilaterally on a regional level in an 'Arbeitsgruppe'. The concerned parties in The Netherlands are the province of Gelderland, the water board Rivierenland, a regional department of Rijkswaterstaat and the technical support agency, RIZA. The delegation in Germany consists of the Ministry of Environment of Nordrhein-Westfalen, the Bezirksregierung Düsseldorf and a technical support agency.

In parallel, the International Rhine Commission (IRC) began carrying out a long term Action Plan on Floods initiated by the EU for the period 1998 to 2020 (IRC, 1998). The IRC already existed as a body for water quality since 1963 (see Dieperink, 2000). The Action Plan on Floods has four aims by 2020:

- reducing damage potentials (25%)
- lowering water levels during peaks (70 centimeter)
- drawing up risk maps indicating risks in specific areas (increasing public awareness)
- improving flood forecast (100%)

In the following years, other international initiatives further developed common principles and guidelines for flood policy. Germany led an initiative in the United Nations Economic Commission for Europe (2000). The Netherlands led a similar initiative in the informal meeting of EU Water Directors and the International Rhine Commission (2003). Common principles have been agreed upon, including the importance of sustainability, 'room for the river' and addressing the problem as far upstream as possible.

Since these developments are fairly recent,

these plans and principles have not yet fully endured the tests of implementation. Some early results show that the devil can be in the details. As yet, international co-operation seems well established, though mainly on the level of principles.

Figure 2 presents an overview of the institutional relations between the governments of both countries, specifically for flood policy in the River Rhine area.

Narrative analysis

As previous authors on international water issues have already claimed, the fundamental challenge of international co-operation is incorporating different views into one approach (Sadoff *et al.*, 2002:390). Narrative analysis enables us to study these different national perceptions and, in turn, how they can be bridged.

'As [policymakers] know only too well but social scientists too often forget, public policy is made of language' (after Majone, 1989:1). This article analyses the language and the stories used to underpin a policy. We call these stories policy narratives.

Simply put, a narrative is a story. However, "stories have a clear chronological structure, with a beginning and an end" (Czarniawska-Joerges, 1997: 78). This characteristic is not always immediately clear in policy narratives, which "are taken by one or more parties to the controversy as underwriting and stabilizing the assumptions for policymaking in the face of the issue's uncertainty, complexity or polarization" (Roe, 1994:3).

Whereas narratives can feature normative elements, policy narratives *always* feature a normative element. After all, policy narratives are not just accounts about a changing world: they prescribe the direction in which the world should change. They also incorporate both a description of a problematic situation and a potential solution (see van Eeten, 1999 :6).

We have used the following method for the analysis of policy narratives, which simplifies the method suggested by Dryzek (1997) and Dicke (2001:5-14). A policy narrative incorporates a line of reasoning "that connects a description of the problem situation with an answer to the question of what, if anything,

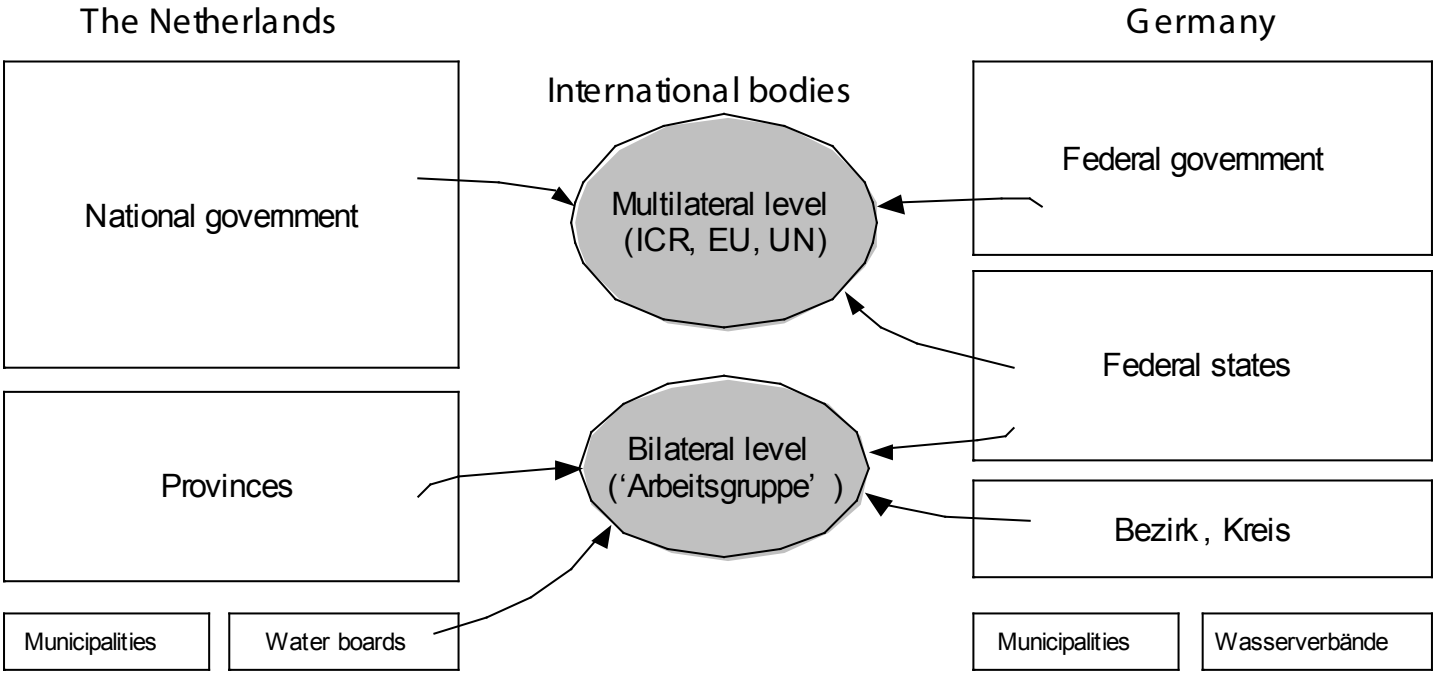

Figure 2: **Institutional relations for international flood policy between Germany and the Netherlands (simplified)**

needs to be done" (van Eeten, 1999:6). More than just listing problem perceptions, narrative analysis embeds policies in a narrative of cause-means solution. First, we identify the problem embedded in the narrative. We then distinguish two key elements: the cause and the urgency of the problem. Finally, strategies and measures inform the solution.

Themes are another element of policy narratives. These are the recurrent issues that are continually repeated or are developed throughout the narrative. Key metaphors and other rhetorical devices are often used to express these themes (Dryzek, 1997:17).

The last element of narrative analysis is a description of its dominance in the discourse of water management. As social constructivists, we take narratives seriously, without leaping into the relativist standpoint that "there is nothing outside text". Indeed, not all narratives are influential in a policy area. Only if narratives have been translated into concrete policies and institutions, in other words, if they have been institutionalized (Hajer, 1997:61), we do call a narrative dominant.

We have traced the policy narrative by analyzing 'little stories', such as press clippings and official reports from 1995 to 2004. Moreover, in the fall of 2003, we conducted 12 narrative interviews with the main narrators in both countries. These accounts are analyzed along the following narrative elements: who are the *narrators* of the story; what is designated as the *problem*; what are the *solution strategies*; what are the *main themes* discussed in the account; and, finally, is the account dominant or minor in the policy field?

With the help of these narrative elements, we grouped accounts together depending on whether they belong to a similar, grander story. After all, these separate accounts will usually not contain the complete line of reasoning of a policy narrative, including all the events, themes and metaphors that constitute the narrative. But we will find policy narratives woven into those accounts. Officials will use the same line of reasoning or they may refer to the same key events that characterize the policy narrative. Only when those accounts share the same theme and line of reasoning, they are part of a single policy narrative.

Policy narratives: 'Trade-off' versus 'Safety first'

Though Germany and The Netherlands are reasonably likely-minded countries (Hofstede, 1997; De Jong, 1999:105), their perceptions with regard to flood policy differ deeply. The narrators in Germany are governments and Ministries of Environment at the federal states and at the national level. The dominant German policy narrative makes a trade-off between safety, ecology and other interests. In The Netherlands, the Ministry of Transport, Public Works and Water Management shapes the policy narrative, which is designed to prioritize safety. A narrative analysis shows two dominant policy narratives in both countries with different problem perceptions, strategies and themes.

'Ecological trade-off' in Germany

"*Floods are part of the natural water cycle*." (LAWA, 1995:2)

The most important theme of the German story is that it focuses on a trade-off that balances multiple interests. Flood policy is not just about safety or ecology, but about prioritizing and balancing those interests. Accordingly, strategies are preferred which also serve other values besides safety. Underlying the story is a second theme of resilience: human influence should at best be avoided, and otherwise minimized. Let's see how the story develops.

In Germany, plans need to be balanced with other rules and procedures. A policymaker from Nordrhein-Westfalen states: "[making plans] takes some time, which we can afford" (Werkgroep Hoogwater, 2002b:28). Competences for flood policy are divided between the state and the local level. A legal basis for imposing a safety level is absent at the state level (NRW, 2003). The government does not principally safeguard private buildings and pieces of land from flood damage. Instead, "each individual concerned must take their own precautionary measures" (NRW, 1999:7). Flood policy at the state level is based on the voluntary co-operation

with the local citizens (NRW, 2003). Thus, the driving force behind flood policy is not the urgency of safety in Germany. Local level interests are treated as equally as safety on a river basin level.

The German policy narrative identifies human influence as the major cause of floods (BMUNR & UBA, 2001:18). "It is indisputable that man has intervened in the eco-balance and has aggravated the flood situation" (LAWA, 1995:i). A frequently mentioned fact is that human settlement converted 85% of the land that originally 'belonged' to the river. This narrative also explains how inland shipping measures exacerbated damage caused by the Elbe flood of 2002 (BMUNR & BFN, 2002:1). Consequently, the national German government temporarily stopped further measures for inland shipping in rivers (Bundesregierung, 2002c). Policy makers also reject an enhancement of safety by means of increasing the human influence. "Imaginary safety" behind a higher dike inevitably leads to an increased damage potential (BMUNR *et al*., 2001:18). The commonly held view is that controlling floods by human intervention becomes part of the problem rather than a part of the solution.

German policy makers strongly prefer 'resilience' as a strategy, following De Bruijn's terminology. "We will have to live with floods – they cannot be abolished" (LAWA, 1995:ii). There is an aversion to conceptualizing rivers as controllable objects. "Rivers should not be imagined as merely manageable waterways. The violence of nature can not be controlled by reinforced concrete" (Bundesregierung, 2002b:3-5). Resistance strategies only protect up to a threshold level, which becomes worthless once it is exceeded (BMUNR *et al*., 2001:18). Reducing or avoiding potential flood damage, however, is feasible, regardless of the situation (NRW, 1999:4). Therefore, Nordrhein-Westfalen started an information campaign involving citizens and building managers designed to reduce potential damage. These resilience measures "have the highest potential to reduce damage of flood events in a sustainable way and on a short term" (NRW, 1999:6).

Policy makers disregarded technical alternatives in interviews with the researchers of this article, using as an example the management of weirs in the tributaries of the Oder. These weirs were designed to keep water upstream. In practice, however, local managers decided to open the weirs in response to the large amounts of water coming in the reservoir during the floods of 1999. This resulted in an enlarged discharge. Therefore, the investment in the weirs turned out to have an adverse effect on the damage of the flood downstream. German policy makers drew the following lesson: humans and technical solutions are the weakest link. Human decisions always risk being counterproductive, even though the technical solution initially appeared optimal (BMUNR, 2003).

A second strategy of the German government is the ecological prevention of floods (Bundesregierung, 2002d). This is institutionalized, for example, in the financing policy of Nordrhein-Westfalen. In spite of its troubled economic situation, the state government compensates local parties for the costs of ecological measures designed to equal the less ecological, cheaper alternative (NRW, 2003).

A preferred solution is creating more uninhabited floodplains by moving dikes away from the river (LAWA, 1995:10). This measure serves ecology, as well as safety, because it respects the natural course of the river. The ecological value of floodplains increasingly inspires nature conservationists (WWF Deutschland, 2002). Again, the theme of man versus nature is recognizable. An outsider might argue that moving dikes is not as effective as creating retention basins. For this narrative, however, this is not particularly salient. The German narrative propagates a trade-off, wherein effectiveness is not the main argument. As one policy maker states it: "It is not useful to philosophize about centimeters. Consider the ecological gains instead" (BMUNR, 2003).

In sum, the German government seeks a *trade-off* among many interests. On principle, safety is treated the same as other factors involved in river basin management. A second recurring theme is *man versus nature*. Human influence on the river is, on this account, the core of the problem. Nature is the victim of floods, as well as the solution for safety in the long run.

These two themes merge in one narrative, except for the shipping interests. As measures for inland shipping are seen as causing floods, the shipping interests are strictly left out of the trade-off.

'Safety first' in The Netherlands

"*Every drop needs to be transported safely*." State Secretary De Vries, Ministry of Transport, Public Works and Water management (Werkgroep Hoogwater, 2002a:6)

The sea level rises, the land drops and the discharges will increase (Cabinet, 2000:11). Dutch policy makers conceive of floods as a "safety problem" (Cabinet, 2000:11). Water board Rivierenland uses the slogan "Safety above all" in a folder (2005:11). Institutionalization of this urgency is illustrated by, for example, the emergency law to raise dikes in 1995 (Dutch Parliament, 1995a). Also, preconditioned safety standards specified in the Dutch River Law prohibit trade-offs with other interests (Dutch Parliament, 1995b:11). "The aimed level of safety for floods should be assured permanently. Existing rules of law are deviated from, because the interest of safety is concerned." (Teulings, 1996:vii). The central government temporarily receives expropriation rights to meet these safety standards. Critics label this as "wartime legislation" (Wiering & Driessen, 2001:294).

Dutch policy makers identify climate change as the cause of flood problems in near future (Cabinet, 2000:11). Because climate change can hardly be influenced, the aim of Dutch flood policy is restricted to coping with these higher water levels. Shipping, for example, is not seen as a cause in The Netherlands. Instead, as a precondition, flood policy should not change the flow patterns of the river for shipping (RIZA *et al.,* 2000:115).

In The Netherlands, the main solution is realizing safety norms or "resistance," in De Bruijn's terminology (2004:63). Flood policy changed considerably since the events of the rivers Rhine and Meuse in 1993, 1995 and 1998 (see Van Stokkom *et al.*, 2005), though the only strategy is still resistance. One of these changes is the "Room for the River" policy, which aims for spatial quality, next to safety, with measures that include lowering floodplains or retention basins (Ministry of Transport, 2000:17). A trade-off, however, between spatial quality and safety is not the case. The advantages of spatial measures are acknowledged compared to technical measures. Essentially, however, this spatial approach is used as additional resistance to support technical measures in lowering the water level (Cabinet, 2000:15). The effectiveness of these solutions is measured in terms of water levels, sometimes with an accuracy of centimeters (Luteijn, 2002:37).

Of course, the national emergency plan for the country's major rivers, which was established in response to the floods of 1995, calls for an "integral perspective". Safety, landscape, and ecological interests should be integrated (Dutch Parliament, 1995a:2). However, although Commissioner Boertien previously recommended environmental impact assessment, this procedure was temporarily suspended, because The Netherlands was in a "state of emergency". Safety could not be delayed in this state of immediate risk (Wiering *et al.*, 2001:288). This tendency to put water-related interests before all other interests is common in Dutch water management. Policy makers use the motto: "water as an ordering principle" (Cabinet, 2004:3), which gives a special priority to the water issues. Thus, although the Dutch policy makers are "beyond the art of diking" (Wiering *et al.*, 2001), a true trade-off between safety and other interests is hard to find.

Dutch flood policy distinguishes immediate and future measures. In the short-term, dikes are strengthened. In the longer term, spatial measures will complement technical measures. This policy is considered sustainable, as it enables Dutch authorities to cope with higher discharges in the future due to climate change. Again, the ultimate goal is long-term safety (Ministry of Transport & Ministry of Environment, 1997).

To summarize, flood policy in The Netherlands needs to tackle a *safety problem*. The theme of trade-off is hardly developed. Ecological values and spatial quality are thus of secondary importance. Existing

safety norms are not balanced with these values in practice. The accepted water level is the ultimate norm for measures to meet. Controlling floods is the only solution.

Comparative summary

In sum, the Dutch and German narratives on flood protection differ strongly. They present different problem definitions and different solutions. Each story has its own continuous themes and its own internal consistency. A summary of the differences is exhibited in Table 1, highlighting the narrative structure.

The key causal factors are different in the two narratives. In Germany, flooding is the agency of human influence. This cause is not emphasized in The Netherlands. Prominently, trade-offs among multiple interests is salient in Germany, whereas in The Netherlands safety has priority. Furthermore, policy strategies and measures differ. German measures are not aimed exclusively on safety, and have a broad orientation on other interests, including damage reduction. In fact, the term 'differences' is rather an understatement. The two policy narratives seem irreconcilable and represent two different worlds.

Bridging the Dutch and German policy narratives

The general challenge of international co-operation is incorporating different views into one approach (Sadoff *et al*., 2002:390). In the light of two very different policy narratives, it is surprising to see that international co-operation between the two countries exists. Dutch-German flood policy co-operation has developed in the last decade. Similar international guiding principles and collective action programs bridge the diverging policy narratives. Policy makers in both countries are able to accommodate the common principles and plans within their own

Narratives elements		**Germany**	**The Netherlands**
Main narrators		Environmental Ministries on the federal state and national level	Ministry of Transport, Public Works and Water Management
Problem	**Urgency**	Low	High
	Cause	Human influence	Climate change
Solution strategies		Resilience -preventing floods ecologically -reducing damage potential	Resistance -technical measures -spatial measures
Theme	**Trade-off**	Trade-off balancing values	Safety conditions trade-offs
	Man vs. nature	Do not control river flow, but re-establish natural river	Controlling floods is the only solution (now and for the future)
Dominance in flood policy		-Bundesregierung 2002a -Bundesregierung 2002d -Nordrhein-Westfalen 1999 -LAWA 1995	-Cabinet 2000 -Ministry of Transport 2000 -Dutch Parliament 1995b -Dutch Parliament 1995a

Table 1. Comparison of flood policy narratives in Germany and The Netherlands

narrative. This results in an ambiguous situation: they apply similar principles to very different approaches of flood policy. We claim that this ambiguity both enables and limits the successful implementation of these plans and principles.

Common principles and action plans

Germany and The Netherlands have drawn up similar guiding principles and action plans in numerous multilateral bodies since the floods of the Rhine in 1993 and 1995 (IRC, 1998; UN ECE, 2000; EU Water directors, 2003; EU, 2004). The two countries embrace three main principles: make room for the river, sustainability and address the problem as far upstream as possible. "Room for the River" is about spatial alternatives for raising dikes. Sustainability is about flood policy with regard to long-term ecological values. The third principle prioritizes different strategies. Upstream areas should decide to discharge water only if it cannot be stored in the river basin or alongside the river.

Besides general principles both countries have drawn up several action plans in multilateral bodies. The European Union Environmental Commission took the initiative and started an investment plan, called Interreg Rhine-Meuse Activities (IRMA), for flood protection in the Rhine basin for the period 1997 to 2003. In parallel, the International Rhine Commission (1998) began carrying out a long-term Action plan on Floods for the period 1998 to 2020. In July 2004, the EU Commission of Environment (2004) decided to initiate a new action plan for flood protection.

Accommodation of common principles and plans in national approaches

The Action Plan on Floods (IRC, 1998), for example, bridges the different narratives for Germany and The Netherlands by using the concept of ecology, as well as that of extreme safety. This bridging perspective, however, is toned down in the national approaches. For the German narrative, ecology has a dominant position in the action plan. The agreed on Action Plan on Floods for the Rhine, states "unacceptable risks for the environment" (p.7). The main goal of the Action Plan on Floods is "to regard the objective of ecological improvement" (p.10). The Dutch related "Room for the River" policy announces their ambition of keeping an eye open for possible environmental gains (Ministry of Transport, 2000:12). Thus, in the Dutch approach, ecology becomes a less crucial part of the trade-off than the Action Plan on Floods suggests.

Next, the Action Plan on Floods accounts for extreme and less extreme safety norms, because acceptance of inundation risks differs among nations (IRC, 1998). For the Dutch narrative, their safety norms are labeled "extreme" in the Action Plan. Although German policy makers acknowledge the Dutch emphasis on safety, they do not recognize the Dutch calculation of the inundation risks from a scientific perspective (BfG, 2003; NRW, 2003). Therefore, the operationalization of "extreme" risk may cause trouble. An operationalization of "extreme" accepted in Germany will still not match the Dutch policy narrative in practice.

Although policy makers frame their common principles as a mutual understanding, they lead to two different practical interpretations. The principle of sustainability has two opposite conceptions in the narratives. In a recent international best-practices document an important issue is whether "long term sustainable solutions to water-related problems should be enhanced" (EU Water directors, 2003:2). In Germany, sustainability means re-establishing the natural river: the river basin should function as a sponge and floodplains should be able to flood. Sustainability is an ecological kind of safety in the German narrative. The Dutch narrative interprets sustainability as safety for the long-term. Sustainable safety is a system with sufficient discharge capacity with regards to possible climate change (Ministry of Transport & Ministry of Environment, 1997). The ecological meaning of sustainability can evaporate in the Dutch context.

The same goes for the "Room for the River" principle. In the Dutch narrative, technical measures enlarge the discharge capacity of a river, as well as its spatial measures breadthways. In the German narrative, spatial measures do not enlarge discharge capacity, but store the water alongside the river. In Germany,

technical measures are opposite to spatial measures within the theme man versus nature. Thus, in this case both countries favour the same measures but interpret them differently.

The third common principle is addressing the flood problem as far upstream as possible (in Dutch: vasthouden-bergen-afvoeren). Both countries agree on the principle, though measures match with different categories in practice. Germany and The Netherlands classify storing and discharging measures differently. In the Dutch view, the measure of enlarging floodplains results in a larger discharge capacity and has no positive downstream effect (Cabinet, 2000:34, RIZA *et al.*, 2000:90). In the German view, larger floodplains are able to store water, slow down the flood peak and thus lower the water level for residents downstream (LAWA, 1995:10). As this difference between storing and discharging water is essential for protecting downstream areas, the use of this common principle is undermined. An example is probably the implementation in Bislicher Insel, which caused some confusion. Dutch money of the IRMA program financed a flood protection measure in Germany. After realization, however, it was difficult to determine the effect downstream. Moreover, Dutch policy makers are not clear about which measure was actually implemented: a moved dike or a retention measure (Ministry of Environment, 2003). Interviews confirm this confusion. Thus, this common principle does not yet ensure the positive effects of international co-operation, because implementation shows two interpretations of this principle that rule out each other.

In sum, common principles and joint action plans have been able to bridge different national approaches to flood policy, because they were formulated in an abstract and ambiguous sense. These differences provided room for interpretation. Policy makers have thus been able to translate these principles and plans to fit into the logic of their national policy narrative. Pitfalls resurface on an operational level. The bridging principles appear to be partly symbolic and the major differences between the policy narratives do eventually resurface.

We are of the opinion that insight into the differences and similarities in narratives may help (international) water managers to reach their goals in two ways. First, it increases their tolerance towards ambiguity. The conflict between different parties on precise definitions and detailed guidelines on the strategic level can slow down or even prevent the co-operation process altogether. In those cases, strategic use of ambiguity can move forward the execution of the plans on the operational level. Second, knowledge of narratives may help to discover commonalities that are behind the norms and the procedures. Sometimes, the issues about the precise implementation conceal the fact that the two parties believe in the same big picture.

Concluding remarks

In this article, narrative analysis has brought together two irreconcilable (substantive) policy narratives, which could not have been traced back by merely listing the different interests or different physical conditions. The German trade-off story contrasts fundamentally with that of the Dutch safety-first story. Stories disagree on causes of the flood problem, and hence on the urgency to act. As a result, the two countries propose different measures of flood management.

Still, international co-operation on flood policy between the two countries does exist. Within less than a decade, the pair has been able to develop an increased number of international consultations for flood policy resulting in common principles and action plans.

However, closer analysis taught that pitfalls lie in the technical details, which hamper a broader common understanding. Common principles, such as "Room for the River," sustainability and addressing the problem as far upstream as possible, are interpreted freely by the two nations in order to accommodate principles according to the national policy narrative. In some cases, this led to different applications of the policy without hampering its general objective. In a few cases, however, the different technical assumptions, together with diverging interpretations, undermined principles.

Some might blame the story and the storytellers: apparently, there is so much ambiguity in the agreed-upon principles and obligations that different interpretations

jeopardize relatively vulnerable co-operation. Some might argue that harder data and better definitions will prevent future misunderstandings.

We hold a different view. In one way, ambiguity in the principles hinders international co-operation, but *simultaneously*, ambiguity *enables* co-operation. If all definitions and all principles had been clear beforehand, it would take much more effort and time for co-operation to have started, if at all. With the help of ambiguity in the principles, the two countries actually start co-operating. As they co-operate, they establish common knowledge.

We are therefore not pessimistic about international co-operation on flood policy. Flood policy is very young, especially compared to water quality management in Europe. At this stage, we see a willingness to co-operate and therefore a basis for mutual understanding.

The present difficulties in implementing similar principles indicate the fragility of the current development of an international regime for flood policy. Policy makers should be aware of new guidelines and frameworks, and wake up to the fact that it is only by practicing the principles that these words gain meaning.

Abbreviations

BfG, Bundesanstalt für Gewässerkunde (Federal Institute of Hydrology)
BFN, Bundesamt für Naturschutz (Federal Agency for Nature Conservation)
BMUNR, Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)
EU, European Union
IRC, International Rhine Commission
LAWA, Länderarbeitsgemeinschaft Wasser (German Working Group of the Federal States on water issues)
NRW, Nordrhein-Westfalen (German Federal State)
RIZA, Rijksinstituut voor Integraal Waterbeheer en Afvalwaterbehandeling (Institute for Inland Water Management and Waste Water Treatment)
UBA, Umweltbundesamt (Federal Agency for the Environment)

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