

Features of Good Territorial Governance in the Flood Management Along the Dutch-German Border

Full paper for track: International Planning, Cross-border and Inter-regional Cooperation

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1. Introduction

Due to hydrological and ecological conditions there are many intrinsic relationships within the catchment area of rivers. It is for this reason that river basins are conceived as the overall most important units for water planning and management (Meijerink & Wiering, 2009: 181-182). This is reflected by two important European Union directives: the European Water Framework Directive (WFD)¹ of 2000 and the so called Floods Directive² of 2007. Both directives – in fact the Floods Directive is closely linked to the WFD in terms of its underlying principles as well as its governance approach – are based on the river basin concept. According to the WFD a river basin is the area of land from which all surface water run-off flows through a series of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.³ This basically means that a territorial unit is underlying water management across the European Union as the objectives and required water management approach is mandatory across the EU.

The WFD as well as the Floods Directive go back to the 1992 Helsinki Convention brought about in the context of the United Nations Economic Commission for Europe (UNECE).⁴ This convention, in force from October 1996 onwards, was signed by a large number of countries, including the Rhine states, and the European Community. Due to this convention and the two EU water directives river basin management has grown in importance over recent years.

In the case of the Rhine the origins of such an approach go back to the immediate post-war period however. In 1950 the 'International Commission for the Protection of the Rhine against Pollution' was established which received its legal foundation with the conclusion of the Convention of Bern in 1963. As the original name of this commission suggests the early cooperation in the Rhine basin was targeted at water *quality* and the prevention of environmental disasters. As the location of for instance chemical plants, electrical power plants and sewage systems – at least in those days – was closely connected to the presence of water systems there was already a territorial dimension to these early years of transnational river basin management.

However, this dimension increased in importance when water management spilled over into flood control and became even more important when flood risk management was introduced, especially after the occurrence of high water discharges and even floods in many river areas across Europe in the 1990s. There are two main reasons for this. First land-use is

important in terms of the run-off of surface water. Hard surfaces to be found in urban areas but also for instance agricultural land-use – drainage systems, types of crop etcetera – influence the amount and speed of surface water entering streams and rivers. So territorial characteristics influence the behaviour of water systems. Second, is it increasingly recognised that there are limitations to a mere technical approach to flood control and that a new ‘discourse’ as well as practice is needed: water needs to be accommodated and flooding risks have to be managed accordingly (see for instance EEA, 2012). This means that rivers need more space in order for instance to naturally overflow so that water tables will be lowered downstream. This goes against a long term trend to curtail rivers in ever smaller areas. There is more however. Creating more space for rivers is often combined with policy objectives originating from other policy domains. One can think of the restructuring of rural areas, development of the ecological infrastructure, surface mineral extraction, land use and other area-specific projects such as housing schemes (Van Stokkoma et alia, 2005).

As water management – i.e. flood management – incorporates territorial objectives - ‘space for water’ – and flood management goals and approaches get intertwined with area specific goals and objectives one can conclude that a new type of *territorial governance* is emerging. This concept is not synonymous with spatial planning as this is in many countries a distinct policy domain in its own right often focusing on urbanization (for a more general discussion of territorial governance see Stead, 2013a,b). In this case what we see emerging is a kind of hybrid: a policy domain which sits between a number of sectoral domains and spatial planning itself, focusing on territorial and area specific themes with water quantity management as a joint issue.

This paper seeks to address important dimensions of territorial governance in a concrete case: the cross border region defined by the Dutch easterly province of Gelderland and the German state North Rhine-Westphalia (NRW) and within the sphere of influence of the river Rhine. We have chosen this particular area because this region is the object of a very active ‘Dutch-German Working Group on High Water’ which does work within the setting of the geographically and also thematically much wider International Commission for the Protection of the Rhine (ICPR) as it is currently known. This is in line with the observation, that in terms of practical actions and projects, cooperation across country borders does not address the entire Rhine river basin but smaller areas (Van Rijswijk et alia, 2010; Gilissen, 2009). What we are particularly interested in is the dimension of policy integration: if indeed ‘modern’ flood management sits between a number of sectoral domains and spatial planning, how are these different policy domains - including the involved actors in- and outside government – connected to each other?

This paper is based on research carried out as part of the ESPON TANGO project (ESPON: European Observation Network for Territorial Development and Cohesion; TANGO: Territorial Approaches for New Governance). In this project ten case studies across Europe have been carried out focussing on all sorts of different territorial governance practices, some more synonymous with spatial planning some rather different like the one in this paper. Each case study – so also the present one – is partly based on interviews. It is for this reason we refer to ‘respondents’ at several places in the text.

The structure of the paper is as follows. The next section discusses in more detail the territorialisation of water management in Germany and the Netherlands. Next, in section 3, we will discuss policy cooperation in the Rhine river basin. In section 4 we shift attention to our actual case by discussing cooperation in the German-Dutch border area. We do this by focussing on a number important dimensions of territorial governance in general: 1) policy

packing and cross sector synergies: how are different (public) policies that are generated at different levels of scale brought together?; 2) coordinating actions of actors and institutions: how are concrete actions being managed and how are competences distributed and connected across different territorial levels, 3) how is stakeholder participation is being managed and how adaptive the cross border cooperation was in relation to a changing context? In the final section we seek to assess aspect of good territorial governance in our case.

2. Territorialisation of water management

Above we have already addressed the relationships between spatial planning (as we will see this includes landscape planning in the German case) and water management, the main policy domains which are the object of this case study. First we look at the European Union (the two water directives) and after that at the situation in Germany and the Netherlands.

2.1. European Union and the Water Framework and Floods Directives

Apart from the EU treaties the European Union knows three types of legally binding tools: regulations, decisions and directives. Regulations and decisions are binding in their entirety, the difference is that the former have a general application while the latter specify those to whom they are addressed and shall be binding only on them. Directives bring with them the obligation to produce results but how to achieve this in a legal sense is up to member states. Article 288 of the (consolidated version of the) Treaty on the Functioning of the European Union describes this as follows:

‘A directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.’

EU (environmental) directives contain many procedural requirements, like the obligation to report and submit plans to the Commission or to involve the Commission in certain decisions which might be taken by member states but this does not relate to the legal transposition of the directive in question into national law.

October 2000 the European Water Framework Directive (WFD) came into force.⁵ Summarized the main objective is that the quality of surface water and groundwater throughout the European Union will be of good quality by the year 2015 or, in the words of the directive, will achieve ‘good status’.

With regard to surface water the directive is based upon the distinction of river basins and river basin districts. The latter forms the main unit for management of water quality. It is described as ‘the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters’. It is up to the EU member states to define the perimeters of river basin districts and the river basins within them. They also have the obligation to identify the ‘competent authority for the purposes of [the] Directive.’ The deadline for both was December 2003. So like the Bird and Habitat Directives – where the special protection areas are the main territorial unit – the WFD implies a kind of indirect territorial policy along a sectoral line, i.e. water.

The WFD and the measures which this directive requires can also contribute to mitigating the effects of floods. Nevertheless the WFD is primarily concerned with improving water quality: when the directive was adopted “...the time was not ripe for a truly integrated directive that would also regulate flood protection and water scarcity.” (Van Rijswick & Havekes, 2012: 254). The serious floods which occurred during the 1990s together with

growing awareness that the measures that needed to be adopted could best be coordinated and taken at river basin level eventually led to the adoption in 2007 of the (in full) 'Directive on the assessment and management of flood risks' (ibid).⁶ The Floods Directive is based on the river basin approach, like the WFD (see Figure 1). In fact both directives are to be applied and implemented as far as possible in a coordinated and integral manner:

...during the entire process it is therefore necessary to ensure coordination within river basin districts covering the territory of different Member States and/or third countries, coordinating between the Floods Directive and the WFD and public consultation. (ibid.: 255).

A basic principle is that of *solidarity*: countries and regions are not supposed to transfer the burden of flood risks downstream, to other countries and regions.

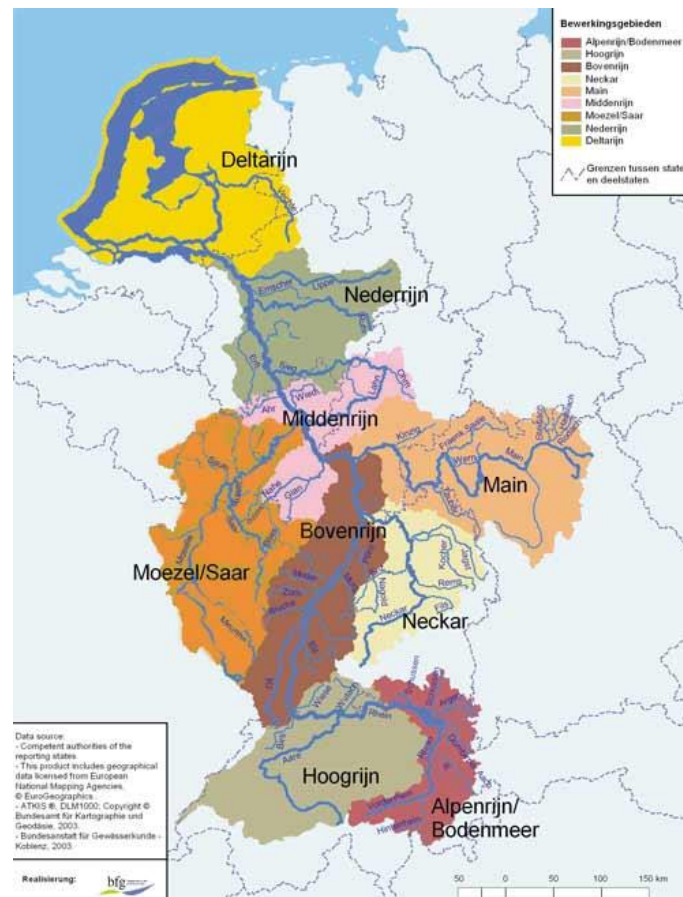


Figure 1. The sub-division of the Rhine river basin into sub-basins (Source: International Commission for the Protection of the Rhine).

The Floods Directive takes a phased approach (ibid: 255-258). The first phase consists of designating areas at risks of flooding (deadline for a preliminary flood risk assessment: 22 December 2011). In the second phase, flood hazard maps and flood risk maps are to be prepared for flood risk areas (deadline: 22 December 2013). Finally, in the third phase, coordinated flood risk management plans are to be established for each river basin district (deadline: 22 December 2015).

2.1. Germany

A major difference between Germany and the Netherlands is, that along the German part of the river Rhine, the mostly linear defence system only have a vital function during extreme

events, or seasonal high water, whereas in the Dutch situation water defence is vital from a day to day basis. Because of the general flatness of the country the areas prone to flooding in the Netherlands are much bigger compared with the German parts of the Rhine basin (Redeker, 2013: 41). This crucial difference influences policy fields that are integrated in high water risk management. In the Netherlands a stronger integration of water management and spatial planning can be observed, whereas on the German side the focus is on the integration of water management and environmental planning. Also the perception of 'risk' differs: how much water could flow in the future in peak situations as the result of climate change is a much more sensitive issue in the Netherlands compared with Germany simply because the areas which can flood and the damage which might occur are much bigger.

According to the 2006 changes of the German constitution the Bund (federal level) has a so called concurrent legislative power (*konkurrierende Gesetzgebung*) in relation to water management, meaning that there is a competence to adopt federal legislation going further than framing legislation. This competence has not been used though: the states (*Länder*) have been charged to elaborate the obligations of the two EU water directives. This means that the most important part of German legislation in relation to water management is to be found on the level of the sixteen states (Gilissen, 2009: 66-67).

Spatial planning has, since the adaptation of the federal spatial planning law (*Raumordnungsgesetz*) in 2008, a coordinating and management function of all spatial relevant sectors. This includes also explicitly flood protection and flood management measures. Those have to be integrated into spatial planning documents. Mostly this is achieved at the regional scale, by using regional development plans. This seems to contradict the communal planning autonomy which dominates German planning culture, but was confirmed by a 2006 verdict of the Federal Administrative Court of Germany (*Bundesverwaltungsgericht*). As a consequence all spatial regulations concerning flood protection, which are set at the regional scale, provide preconditions for municipal planning.

The implementation of the EU Floods Directive resulted in a number of changes of the federal Water Act (*Wasserhaushaltsgesetz*) as well as the federal Flood Protection Act (*Hochwasserschutzgesetz*) during the last decade.

These changes are the result of a decade long shift from a technical approach of high water protection starting roughly in the late 1970s towards an integrated approach in the 1990s and 2000s towards a risk management based approach since 2008 with the implementation of the EU Floods Directive (Hengstermann, 2011: 113). Each of the shifts mentioned above resulted in changes and adaptation of a number of laws and acts (see Figure 2).

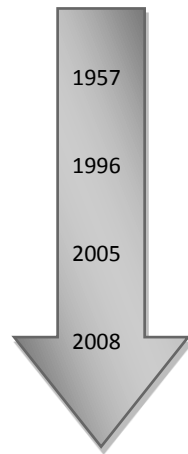
According to the federal structure of Germany those changes were implemented via the different States and their water acts (*Landeswassergesetze*). Furthermore the changes of the federal Flood Protection Act caused changes in other federal legislation among others the spatial planning act (*Raumordnungsgesetz*) and the building act (*Baugesetzbuch*). In both the principle of preventive flood protection was introduced.

Safety strategy

Engineering

Integrated

Risk management



Legislative Implementation

D – National Water Act
Wasserhaushaltsgesetz (WHG)

D- amendment of WHG

D- National Flood Control Act

EU – Flood Directive

Figure 2. Shift in flood management paradigms and related changes in German federal law (Source: Kern, Bucher 2010; adapted by the authors)

The administrative level of the implementation into spatial planning is the district government (*Bezirksregierung*), in our case the district of Düsseldorf. The spatial planning instrument used is the *Regionalplan*, which is an integrated regional development plan (see Figure 3).

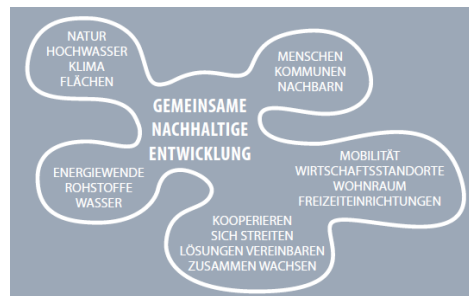


Figure 3. Scheme of policy fields and subjects to be integrated into the sustainable development of the district of Dusseldorf (Source: Bezirksregierung Duesseldorf) ⁷

In this plan three major aspects concerning water management have to be considered:⁸

- the spatial indication of floodplains;
- the flood risk management in areas behind the dikes;
- the water retention in the catchment areas of rivers.

By the time of writing the regional plan for the district of Düsseldorf (BRD, 2012) is under revision. In the latest working version two shifts concerning water management can be observed: 1) the integration of climate change mitigation measures, where flood management should play a crucial role; 2) flood zones should not only be graphically presented in the plan, but development goals should be formulated that go beyond keeping these areas free from buildings (ibid).

The process of the implementation of the WFD as well as the Floods Directive is not managed by spatial planning authorities, but fall within the competences of environmental

planning. In NRW the responsible administrative body is the Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection.

On the operational level again the district government plays a crucial role, as this is the administrative level that is in charge to produce and monitor instruments like flood risk maps and river management plans. This secures that spatial planning and water management and flood risk management are integrated on the regional level. The German respondents all agreed that this is working well and that the directives only strengthened structures and mechanisms of integration, which were already in place beforehand. Nevertheless stakeholders, like departments for the protection of cultural heritage, which in the past only had minor interest in participation were stimulated to join the negotiation table.

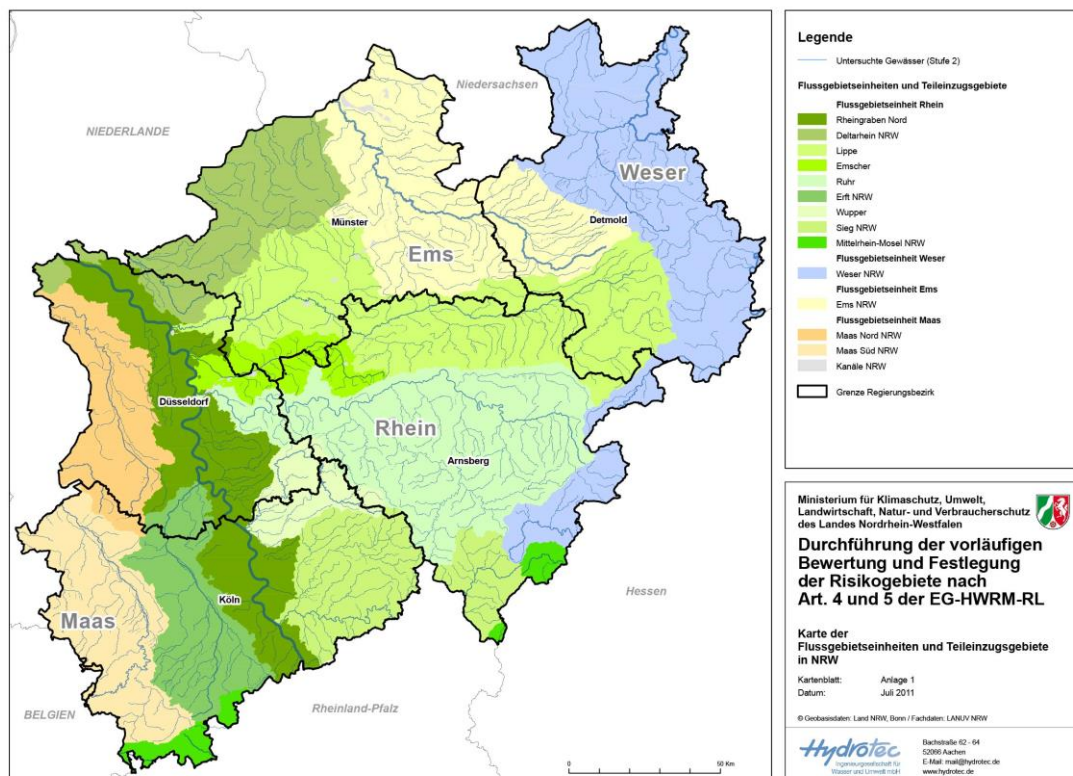


Figure 4. The difference between the sub basins (coloured areas) and administrative boundaries (black outlines) within NRW.

One crucial novelty is, that with the implementation of the WFD a set of new territorial management units was introduced: river basins and river sub basins. These are also used for the implementation of the Floods Directive. As figure 4 shows these basins do not match existing administrative boundaries and made adjustments in the governing structure necessary.⁹ This worked as follows:

- To ensure the integration of on-site knowledge, in NRW the river basin areas again are further divided into 14 sub-basins.
- The boundaries of the sub-basins do not meet the administrative boundaries of North Rhine-Westphalia, therefore, lead districts for the coordination and integration of the work between all the sub-basins we assigned. These were installed at the district governments (BR).

- For the implementation of the water management plans the sub basins were too big, therefore, they were subdivided in management areas. Within each management area a round table coordinates the work.

2.3. The Netherlands

Up until the 1980s water quantity management was strongly focused on meeting the needs arising from spatial planning. Water management ensured 'dry feet' and good conditions for the use of land. Critical periods (near floods) in 1993 and 1995, and regular problems due to excessive local rainfall, have led to important developments in the discourse about water management. This new discourse is generally known as room for water (*ruimte voor water*).

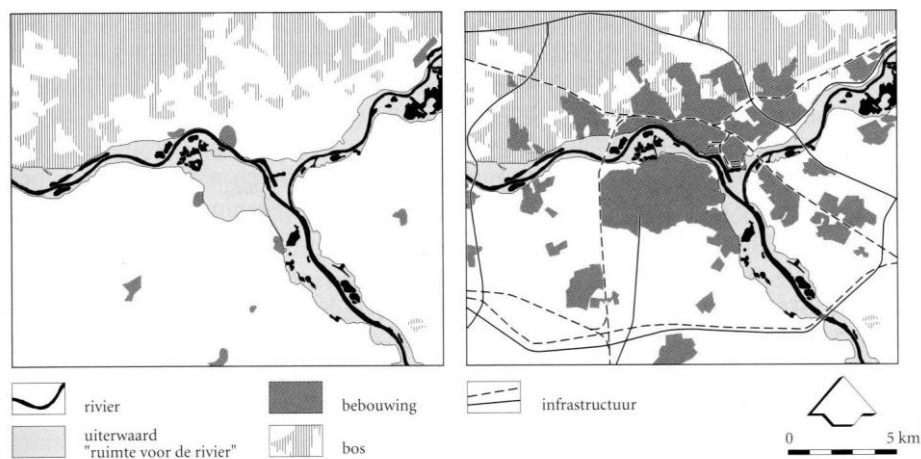


Figure 5: The curtailment of territory available for the Rhine and IJssel as the result of the growth of Arnhem: left situation around 1830 and right 2000 (light grey areas are river fore lands; source: Hidding & Van der Vlist, 2009)

Historically the land available for water in the Netherlands has sharply decreased over time, especially since the middle of the 19th century due to land reclamation and factors such as building urban areas in the forelands of rivers (see Figure 5) (Van Stokkoma, Smits & Leuven, 2005). The room for water approach as a general approach has also led to a major revision of policies toward the management of the Dutch river system. This became known as *Room for the River*, an approach which started with a directive in 1996 as a reaction upon the near floods during the preceding year. This directive contains regulations concerning the use of riverbeds and presents the goal of removing vulnerable land uses from the flood plains (Wolsink, 2006: 477; Silva et alia, 2004). The main components – which in themselves can be seen as an integration of the 'sectors' water management and spatial planning/development – of this directive are (ibid.):

- New developments like housing, buildings or flow obstructing infrastructure in the floodplains are no longer allowed; this also holds for expanding existing buildings.
- Water embankments and the zones they are protecting will be assigned a land use. Land that is part of a winter bed will be assigned to 'public works'. In the case of more than one land use assignment, the principal land use is to protect against high water. So this gets priority.
- A system of construction permits is needed for all activities that may hinder the draining of water or may cause a decrease in water storage capacity.

Compared with standard practice during many decades this new approach constitutes a clear paradigm shift. The fact that it became possible to get such an approach politically

accepted and also in a binding form can only be explained as making use of a window of opportunity opened by the events of 1993 and 1995 (Wolsink, 2006; see also Woltjer & Al, 2007).

The components of the Room for River directive made their way into the statutory 2005 National Spatial Strategy and finally into a dedicated statutory national planning document – Room for the River – which January 2007 came into force as well as a policy programme which is still being carried out. At 39 locations, measures have been or will be taken that give the river space to flood safely. Such measures include depoldering, lowering of groynes, water storage (the retention areas mentioned above), dike relocation and the construction of secondary channels. Moreover, measures will be designed in such a way that they improve the quality of the immediate surroundings.

Especially the link with urban development objectives is important here: the enlargement of river beds near urban areas can contribute to a renewal of urban water fronts or new recreational areas (Redeker, 2013). Also such measures can contribute to more room for nature although it is not the case that the Room for the River approach and the objective to develop ecological values never clash or always lead to cross-sectoral synergy. For instance, the objective to develop an ecological main structure combined with Natura 2000 policies has led to overgrown areas in the flood plains of Dutch rivers at several locations. In some cases this had and has negative effects on the flow of water. A possible way out is dike relocation so there is room for water as well as for nature. Costs are very high though and there might also be negative effects in terms of cultural values i.e. changes in the cultural landscape as the result of dike enlargement and the accompanying demolition of buildings along the older dike. The resulting spatial claim itself might also raise opposition.¹⁰ Apart from this the Room for the River programme can be seen as an integrative strategy trying to link water management goals with policy objectives relating to urban, nature and recreational development. The programme is expected to be completed by 2015. Figure 6 shows projects close to the Dutch-German border.

So on the level of the Room for the River programme water management policies and projects aim to link with spatial planning objectives where possible and feasible. In addition one can also say that spatial planning has taken a water management turn. Roughly from the late 1980 and early 1990s onwards a large number of smaller scale projects mostly in urban areas have been realized, for instance aiming at holding precipitation instead of disposing as quickly as possible to drainage and sewage systems (Tjallingii, 1996).

In order to prevent conflict between new spatial developments and the water system a new instrument has also been introduced: the Water Assessment (WA). The objectives of WA are to guarantee that water interests are taken into account in spatial and land use planning, so that negative effects on the water system are prevented or compensated for elsewhere. This integration of water in spatial planning works in two ways: a plan is assessed on its implications for the water system and the restraints that the water system puts on land use are made explicit.¹¹ WA was introduced as an experiment in 2001 but became mandatory from 2003. There was initial opposition from the Union of Municipalities (VNG) against the legal establishment though. A main reason was that the test would become mandatory for municipalities and provinces and just voluntary for national government (Wolsink, 2006: 478-479).



Figure 6. Room for the River projects in the vicinity of the Dutch-German border (Source: Ruimte voor de Rivier, 2006)

3. Rhine river basin cooperation: the ICPR

Cooperation in the Rhine basin requires the establishment of cooperation bodies. In general such bodies – although they sometimes start informally – are based upon a formal basis, either in terms of treaties or conventions or in terms of some kind of political agreement signed by administrators. Table 1 identifies the most important treaties/conventions and (political) agreements and the relationship with relevant organisations: the bodies from which cooperation departs. The table shows the various organisations and platforms which have been involved in transnational and cross border cooperation in the Rhine basin. The most important frameworks for cross border cooperation are the ICPR, the International Commission for the Protection of the Rhine, and the German-Dutch Working Group on High Water, or shortly Working Group (the latter will be discussed in the next section).

Table 1: International conventions, declarations and involved organisations

Treaties, Conventions, Declarations	Organisations/Operationalisation
<i>Multilateral</i>	
1963 Bern convention ¹	1950: International Commission for the Protection of the Rhine against Pollution (formal status from 1963 onwards)
1992 Helsinki Convention (in force: 1996) ²	EU Water Framework Directive and Floods Directive River (sub) basin cooperation bodies (Rhine, Meuse, Scheldt Danube etc.)
1999 Rhine Convention (NL, D, F, L, CH & EU)	ICPR: International Commission for the Protection of the Rhine (working domain: WFD & Floods Directive) - Ministerial Meetings - Working groups
<i>Bilateral</i>	
1960 Border Convention (D, NL) ³	1963: Permanent German-Dutch Border Water Commission - sub-committees on 7 sub basins Commission and sub-committees dormant since about 2000
<i>Cross-border</i>	
2007 Common Agreement ('Gemeinsame Erklärung') on Flood Protection (Province of Gelderland; Ministry of Transport, Public Works and Water Management (NL); Ministerium für Umwelt und Naturschutz, Landwirtschaft und Verbraucherschutz des Landes Nordrhein-Westfalen); time frame: 2007-2012	German-Dutch Working Group on High Water

¹ Convention on the Protection of the River Rhine; ² Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE Water Convention); ³ Verdrag tussen het Koninkrijk der Nederlanden en de Bondsrepubliek Duitsland nopens het verloop van de gemeenschappelijke landgrens, de grenswateren, het grondbezit in de nabijheid van de grens, het grensoverschrijdende verkeer over land en via de binnenwateren en andere met de grens verband houdende vraagstukken, met Bijlagen en Slotprotocol (Grensverdrag)

As already said in the introduction the ICPR was established in 1950 but the so called Bern convention (in full: Convention on the Protection of the River Rhine), signed in 1963, gave it a legal status (Van Rijswick & Havekes, 2012: 229). Other treaties followed like the 1976 'International Convention on the Prevention of Chemical Pollution of the Rhine'. This convention resulted amongst other in action plans concerning the Rhine as well as – in a later stage – the North Sea (Van Rijswick & Havekes, 2012: 22). The Bern convention was renewed in 1999 (see table 1) but now also included the European Union as one of the undersigning parties.¹² In fact this convention was a follow up of the 1992 Helsinki Water Convention, generally considered as of great importance for Europe.

It requires riparian states of transboundary waters to cooperate on the basis of agreements aimed at the prevention, control and reduction of transboundary impact. Among other things, the agreements must provide for the establishment of joint bodies to achieve these aims for each catchment area. International law is thus [...] based on a river basin approach (Van Rijswick & Havekes, 2012: 229).

The ICPR is responsible for the development of the strategic goals on the international level and the integration of its core policy fields: flood management, water quality and water ecology. It is responsible for international agreements and reports in relation to both EU water directives. The organisational structure of the ICPR is presented in Figure 7.

A broad outline of how the ICPR functions can be found on its (multilingual) website.¹³ The Conferences of Rhine Ministers decides on important political issues. Their decisions are binding for the Governments concerned. The presidency of the Commission alternates every three years. The Plenary Assembly is staged annually together with the

Coordination Committee Rhine. Decisions are taken in the Plenary Assembly. Technical questions are dealt with in working and expert groups with permanent or fixed-term mandates and passed on to the Strategy Group preparing the Plenary Assembly. Problems related to water quality and emissions, groundwater, ecology and floods are discussed. Expert groups support the working groups. Furthermore, work in the international working groups is prepared by national committees. Although the next section primarily focuses on the cross border level we will also evaluate to a certain degree the importance of the ICPR.

4. Cooperation in the Dutch-German border area

4.1. Integrating policy sectors

Integrating policy sectors means how linkage are made among different policy sectors (in our case spatial planning and water management) and how potential synergies are developed among public, private and civil society actors. There are two indicators: public policy packing and cross-sector synergy.

Policy packing

Public policy packing is about bringing together public policies that are generated at different governmental levels (European/international, national, regional and local) and that benefit places and territories. It is about collaboration to avoid conflicting and competing public policies where for example planning policies are promoting a compact city development while taxation policies are promoting sprawl and transportation policies are focusing on road building.¹⁴

What is the picture in our case study area looking at flood control management. We can conclude that there is a clear tendency towards *policy packing*, and that spatial planning plays a crucial role here. This role differs in Germany and The Netherlands though, according to the planning tradition. In Germany the regional level plays a more important role in bringing together policies, which are generated at different administrative levels. In the Netherlands the national scale plays such a role. In both countries it is clear that water management interests in general prevail. The Dutch 2006 statutory planning document Room for the Rivers contains the following disclaimer:

“In the event that the main objective of this [planning document] (achieving the required safety levels) conflicts with its secondary objective (spatial quality), the main objective will prevail.”

Comparable is a 2006 decision of the German High Court, which prioritized regional high water protection measures over local spatial planning goals. This is about what happens *within* country borders. There is a significant limit to policy packaging at the cross national level though, because spatial planning is *not* included in cross-border water management.

Cross sector synergies

When we look at *cross-sector synergies* then it is clear that these are addressed at the cross-border level. First via the ICPR which specifically also includes the public sector as well as the civil society. Second on the regional cross border level where the German-Dutch Working Group on High Water is the driving force to seek cross-fertilisation between different administrative actors, as well as the broader public and civil society. Within the two states, cross-sector synergies are again achieved differently according to the different traditions, with a focus on integration of high water management and spatial development in the

Netherlands on the one hand, and a focus on the integration of environmental planning and high water management on the German side.

4.2. Coordinating actions of actors and institutions

This dimension reflects how coordination of action is managed and how competences are distributed across different territorial levels. There are several indicators possible but we are especially interested in governing capacity as this is a key pre-requisite for effective coordination of the actions of multiple and diverse actors in particular places/territories. It is about the ability to: a) organise, deliver and accomplish; b) review, audit, check and balance; and c) integrate additional platforms/forums. It therefore requires access to human, financial and intellectual resources.

As table 2 shows the situation in Germany (NRW) involves more governance levels than in the Netherlands (Redeker, 2013). So connecting these two different government system into an effective cooperation structure has been quite a challenge.

Table 1: The structure of the water management administration in Germany and The Netherlands (adapted from Van der Molen, 2011)

<i>Nordrhein-Westfalen</i>	<i>The Netherlands</i>
Bund: concurrent legislative power (not used)	Min. IM & Min. EA ² : legislation
NRW: MUNLV & LANUV ¹	
Bezirk	Province
Kreis	
Deichverbände & municipalities	Water boards & municipalities

¹ Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection; Agency for Nature, Environment and Consumer Protection

² Ministry of Infrastructure and the Environment; Ministry of Economic Affairs

The Dutch-German Working Group on High Water became an important agent in this respect. The initiative to start the Working Group in the mid-1990s – so after the main flood incidents in 1992 and 1995 – came from the Dutch province of Gelderland, in the east of the Netherlands, on the basis of several arguments (Wiering *et alia*, 2010). First existing cooperation in the Rhine basin was until then too much focused on water quality and did not pay much attention to implementation. Second, existing initiatives were at state-level and cooperation between regional bodies was lacking.

The province of Gelderland contacted North Rhine-Westphalia in order to establish some form of cooperation in flooding policies in their border area. Together with the eastern, regional office of the Directorate General for Public Works and Water Management these two became the lead participants in the Working Group which started its activities in 1997 with the water board Rivierenland as another important member. Since 2007 the activities of the Working Group are politically embedded in a so-called Shared Declaration (*Gemeinsame Erklärung*) which lasted until 2012. The signing of a follow-up declaration is delayed as the result of elections at both sides of the border. Although the Working Group is still active this hinders the implementation of concrete projects (Wiering *et alia*, 2010).

As Wiering *et alia* (2010) state the flooding issue is both a classical asymmetrical ‘upstream–downstream’ problem but contains symmetrical elements too, because flood measures taking downstream can have a limited, but substantial impact upstream or are of importance for the region as a whole. Moreover, protecting polders from flooding and regulating the water household in the whole regional area are clearly featured by cross border mutual interdependencies (Wiering *et alia*, 2010: 2664). In fact in the Gelderland-

North Rhine-Westphalia border area there are two shared so called dike rings, areas of land that are protected from flooding by an individual dike. So that means that if at one side of the border a dike breaks also land at the other side of the border will be flooded.

According to eye witnesses members of the Working Group gradually started to develop a shared understanding about flood control in the sense of addressing the entire cross-border water system.¹⁵ The first period of activities was dominated by joint research projects, mostly modelling of flood risks. Techniques have been used developed for the Dutch 'Room for the River' policy document. An important high light so far has been the finalization of the so called Lower Rhine Study (*Niederrheinstudie*) in 2004. So although the relationship between both sides of the border may be regarded as asymmetrical Dutch participants in the Working Group had something to offer to their German counterparts namely knowledge and expertise.

The Working Group consists of civil servant and researchers. Politicians are not closely involved in the activities. In fact members of the Working Group regard this as an asset as they would probably have been pressured into getting (quick) results. Also, regional (policy) actors, simply because they are more rooted in concrete areas and locations, tend to have a greater sense of the urgency of problems and also more local/regional knowledge than national state actors (Wiering *et alia*, 2010: 2665).

A key issue discussed in the Working Group is the level of flood risk. Of a general nature are differences in terms of attitudes towards possible long term developments. Dutch respondents generally think the German attitude can be characterized as somewhat laid back while in the Netherlands a policy culture has developed in recent years which pays more attention to the likelihood of developments like climate change and possible effects and scenario's in this respect. How much water could pass the Rhine at the town of Lobith – which is located right at the border – in cases of high water is the most important issue here. The Dutch policy document 'Room for the River' departs from 16.000 m³ per second while for the more distant future the expectation in the Netherlands is that this could become 18.000 m³ or even more. The Lower Rhine Study accepts 16.500 m³ per second. In Germany the idea is that this figure will not be reached because upstream – in German – so many areas will already be flooded that such a high figure at Lobith will not be reached.

One important area where Dutch respondents think Germany is clearly ahead of the Netherlands is the so called object protection (*Objektschutz*). First areas and objects which could be affected by flooding are very well mapped in the context of Area Development Plans (*Gebietsentwicklungspläne* or GEP). Second in Germany the responsibility for the effects of building in a flood prone areas is for the initiator. So the feeling amongst Dutch respondents is that in terms of actual spatial layout German policies are more sophisticated. This has changed somewhat in recent years thanks to the so called three-layer approach of the 2008 National Water Plan (Redeker, 2013: 97). The first layer is prevention by reducing the probability of floods through flood retaining structures and preserving space for their future improvements. The second layer is a sustainable spatial layout, reducing the amount of damage and number of casualties. The third layer is disaster mitigation through evacuation, information systems et cetera.

Although there is a General Agreement and a German-Dutch Working group cooperation – above all: active cooperation – is not self-evident due to asymmetrical upstream-downstream relations. From the perspective of the interests of North Rhine-Westphalia co-operation with the Dutch may not look very obvious, although flood measures taken in The Netherlands may affect part of the water system in Germany

(Wiering et alia, 2010: 2665). The availability and accessibility of Dutch knowledge especially, might improve the position of North Rhine-Westphalia vis-à-vis other German states (Wiering et alia, 2010: 2666). There is also an important discourse dimension here: the story line of transboundary co-operation. North Rhine-Westphalia is itself largely dependent on measures taken in upstream German states. As a result, it is greatly in the interest of North Rhine-Westphalia to stress the storyline (or discourse) of 'solidarity between people upstream and downstream' which in itself is enshrined in the EU Flood Directive. The consequence of stressing this storyline is that co-operation with actors in the area downstream of North Rhine-Westphalia, i.e. actors in the Netherlands, also becomes important and in a sense even inevitable (Wiering et alia, 2010: 2666). In this sense cross-border cooperation shows (or might show) a spillover pattern.

We can conclude that the 2007 EU Flood Directive, preceded by 2000 Water Framework Directive, landed in a context of well-functioning governing organisational structures, with sufficient personal and funding. Or like one responded named it, we do what we did already for decades, but now with a stronger legal framework, that provides us with a stronger position to take initiatives. National and regional government structures were supported by well-established transnational and cross-border governance bodies that actually were instrumental in the setup of both EU directives.

Clearly the Working Group – politically embedded via an agreement and a steering group¹⁶ – as well as the ICPR – politically embedded via a transnational treaty – have developed institutional capacity in relation to water management. It should be emphasized though that actions are not directed towards actual spatial interventions. The Working Group is so far carrying out preparatory technical projects mainly on the level of research. There is no shift yet towards joint policy and implementation projects (Wiering et alia, 2010: 2666). These are still the responsibility of the present territorial administrative units, including the province, water board and the Directorate General for Public Works and Water Management (Rijkswaterstaat) add the Dutch side and the Deichverbände, municipalities and districts at the German side.

4.3. Mobilising stakeholder participation

Mobilising stakeholder participation includes how stakeholders are given insight into the design of territorial governance processes and/or opportunity for shaping them. In this case study water management meets spatial planning at different levels of scale. As a 'new generation' Directive, the WFD and the Flood Directive ask for public involvement in the implementation process. This is generally interpreted as involving important stakeholders and the broader public in formulating the river basin management plans. The implementations of both directives was a challenge on both sides of the border as in both countries, spatial planning has an extensive tradition in stakeholder involvement, whereas in water management this used to far less the case: the organisation of participation in what used to be a very technical domain is not self-evident. We will now look how stakeholder participation is organised at different levels of scale.

International level: the ICPR

The involvement of civil society within the ICPR takes place at the level of the working groups. See Figure 7. Meetings of these as well as the plenary meetings are open to NGOs and intergovernmental organisations. According to the respondents the NGOs play a crucial role in integrating the different working groups, as they have often less compartmentalized

interests and ways of working. Other instruments used by the ICPR to involve and inform a broader public are the organisation of (expert) workshops, the provision of information material both in form of brochures and interactive online content.

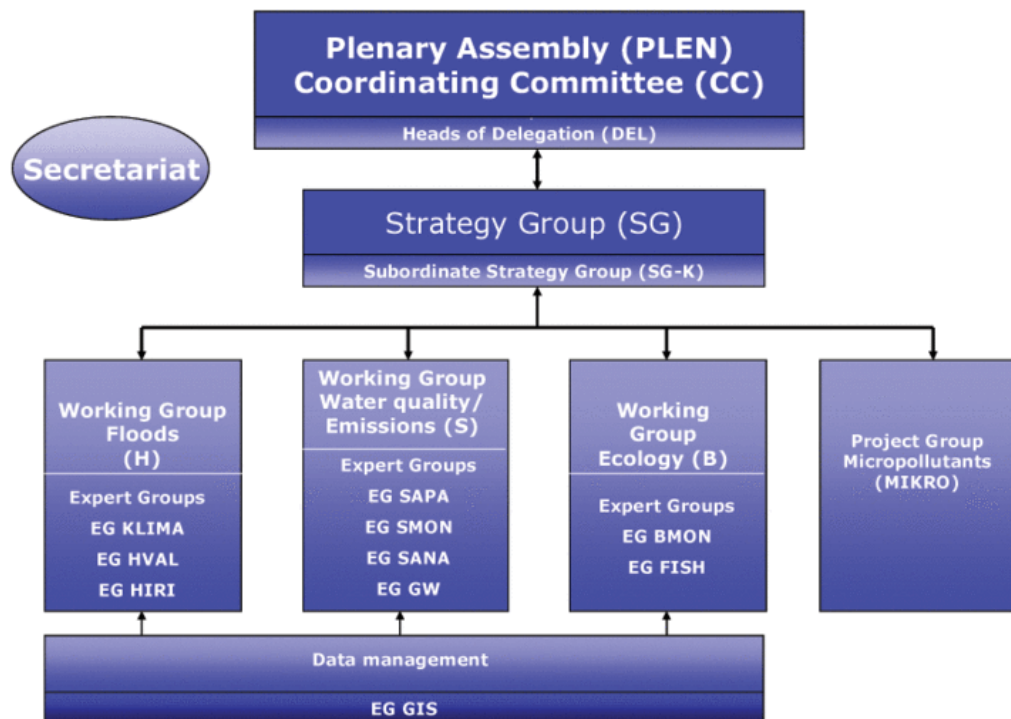


Figure 7. The organisational structure of the ICPR (Source: ICPR)

Cross border level: the German-Dutch Working Group

The working group focuses primarily on technical and administrative aspects of the cooperation, but plays also an important role in the information of the concerned public. It publishes an annual bilingual magazine, the *Hoogwatermagazin/Hochwassermagazin* and organises the bi-annual conferences as already mentioned above.

Reaching a shared understanding of such a complex issue as flood control needs time though. Because so far much emphasis has been put on technical issues there is less need and also less interest from them to involve societal stakeholders like NGOs active in for instance landscape ecology.¹⁷ Parties like these however participate in the bi-annual High Water Conference (*Hochwasserkonferenz Rheinzugsgebiet*) organized within the framework of the Shared Agreement.

As discussed in the previous chapter, municipalities and other local actors send representatives to the working group. Therefore, when concrete projects at the local level are planned, they are involved from the beginning and also play a crucial role concerning the integration of this projects into local planning documents and processes.

Different interviewees emphasised, that it is crucial under which heading concrete measures are put forward. High water protection measures are in general accepted and lead to a constructive way of working together between the public, the private sector and civil society. If concrete projects are put forward under the heading of river ecology or improving environmental qualities, strong opposition especially from agricultural lobbies often takes place, which makes stakeholder participation more difficult. Therefore, the public sector sometimes uses the topic of high water protection as the prime project aim to implement other more conflict bearing topics in the shadow of the flood protection measure.

The legal necessity of the involvement of the public and other stakeholders, stipulated by the two EU directives, was seen by most respondents as one of the most important aspects in the implementation process: public actors which in the past would not be concerned with high water issues, are forced to take part in the process of developing flood management plans and measures. Therefore, all concerned parties sit on the same table from the beginning. In Germany the fact that institutions in charge of the protection of historic buildings and cultural heritage are now involved was one example named by respondents. Considering that the Rhine is the artery of one of Europe's most urbanised areas, this aspect streamlined the process.

4.4. Being adaptive to changing context

This dimension takes into account how the responsiveness of territorial governance to changing contexts is implemented by various learning and feedback mechanisms. The management of the Rhine in the cross border region of Germany and the Netherlands had to deal with several changing contexts. Above all the legal context changed with the implementation of two EU directives. Both directives themselves are the result of societal and political changes, partly in relation to changing risks:

- The increasing flood risk, both in terms of frequency and intensity.
- Increasing ecological awareness of the population and therefore higher public demand concerning the ecological and landscape quality of flood protection measures.
- A paradigmatic shift concerning flood management away from an engineering approach towards sustainable flood protection.

As a result of the above mentioned changes in the context, integrated approaches towards river management are put in place, which are grounded in the understanding that only a combination of the improvement of the ecosystem of the Rhine, the protection and improvement of the water quality as well as integration of the adjacent territories into the flood management can deliver a sustainable flood risk and water management. Crucial to that were specifically two aspects: Institutional learning and flexibility.

Institutional learning

An important issue here is formed by differences in geography. In Germany the Rhine has cut itself much more deep in the landscape than at the Dutch side of the border. Thanks to changes in relief areas which could flood are smaller while higher grounds are on the whole much more nearby when compared with the Netherlands. This also influences attitudes towards risk. But to allow a well-functioning cooperation across the borders, a common understanding of the problem and how this problem could be addressed was essential. This aspect was often stressed by the respondents.

To have a common understanding of the problem was achieved by commissioning research about the water capacity of the rivers, expected rain and flood amounts as well as the capacity of technical and other measure to manage risk and damages. Funded on the result of this research jointly accepted tools, methods and norms were formulated. In this sense knowledge was coproduced by the main actors involved in water management along the river Rhine. And as one respondent called although speaking different languages we developed a common one.

Institutional flexibility

The most important body of gross border collaboration is the Dutch German working group on high water in the Rhine river basin. Its foundation alone is a sign for a high flexibility and adaptability of the local and regional institutions involved in the river management: It was initiated by the province of Gelderland, which was unsatisfied with the existing situation, which focused too much on water quality and was too bureaucratic.

Two examples of institutional flexibility and adaptability were specifically named by respondents. The first, was the situation that within an INTERREG B project, measures on the German side of the border were financed with a budget that was originally reserved for Dutch projects. The second one concerns the present situation. The recent elections and changes in governments on both sides of the border, led to a temporary vacuum of political responsibility. As a result the joint agreement – which is the legal basis for cross border collaboration – was not prolonged. According to the respondents this does not influence the daily operations and collaboration, as during the last years enough trust between partners on the personal level was developed. Nevertheless, the situation brings difficulties concerning the information of the public, as events like the bi-annual high water conference have to be funded and this requires a new agreement.

5. Key aspects of (good) territorial governance

Due to hydrological and ecological conditions there are many intrinsic relationships within the catchment area of rivers. It is for this reason that **river basins** are conceived as the overall most important units for water planning and management as is reflected by two European Union environmental directives: the European Water Framework Directive (WFD) focusing on water quality and the directive on the assessment and management of flood risks, focussing on water quantity.

In case of the Rhine the origins of a cross-border or even transnational approach towards water management go back to the immediate post-war period. The nature and focus of cooperation changed drastically through the floods of 1993 and 1995. Through these floods there was a sudden **awareness that there are limitations** to a mere technical approach to flood control. Dikes and dams and other works of civil engineering cannot fully exclude risks of flooding especially as over a period of many decades such works have made the overall territory available for water flows ever smaller while pumping installations and land-use have increased the speed with which surface water enters into these flows. So a new 'discourse' emerged basically implying that water needs to be accommodated.

In 1999 a new Rhine convention came into force and on a lower level of scale – Netherlands and North Rhine Westphalia – a **political agreement** signed in 2007 formed the framework for a productive process of cross-border cooperation in the so called Dutch German Working Group on High-water. 'Productive' does **not imply actual joint territorial interventions** or joint water management works but necessary preparatory activities. These activities focussed on research on risks and how to measure these risks. **Coproduction of knowledge** and **knowledge transfer** across the border have been taken place in the years following the agreement. Due to differences in the division of competences across administrative levels and across policy sector the integration of water management and spatial planning has not been dealt with at the cross-border level but via different trajectories at both sides of the German-Dutch borders.

The room for the rivers approach in the Netherlands and similar approaches in Germany have resulted in a territorialisation of water management and the incorporation of

water management frameworks in spatial planning. There is a clear tendency towards policy packing, and that spatial planning plays a crucial role within. This role differs, according to the planning tradition in Germany and The Netherlands. In Germany the regional level plays a more important role in bringing together policies, which are generated at different administrative levels. In the Netherlands the national scale plays a more important role. In both countries it is clear that high water risk management interests on the whole will prevail. There is a significant limit to policy packaging at the cross national level though, because spatial planning is not included in cross-border water management.

Looking at **cross-sector synergies** then it is clear that these are addressed at the cross-border level. First via the ICPR which specifically also includes the public sector as well as the civil society. Second, on the regional cross border level where the German-Dutch Working Group on High Water is the driving force of seeking cross-fertilisation between different administrative actors, as well as the broader public and civil society. Within the two states, cross- sector synergies are again achieved differently according to the different traditions, with a focus on integration high water management and spatial development in the Netherlands and the focus on the integration of environmental planning and high water management on the German side

The 2007 EU Flood Directive, preceded by 2000 Water Framework Directive, landed in a context of **well-functioning governing organisational structures**, with sufficient personal and funding. National and regional government structures were supported by **well-established transnational and cross-border governance** bodies that actually were instrumental in the setup of both EU directives. But the 2007 political agreement on cross national cooperation ended in 2012. This did not lead to an end towards cross-border cooperation but it continued albeit with a different speed and impact. Really effective cooperation though, does need a political framework for the maintenance of a sense of urgency.

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¹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ L327/1.

² Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, OJ L 288/27.

³ Article 2.13 WFD; see also Van Rijswick et alia, 2010: 130.

⁴ The Convention on the Protection and Use of Transboundary Watercourses and International Lakes, done at Helsinki on 17 March 1992. In force on 6 October 1996; 31 ILM 1312 (1992).

⁵ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, Official Journal of the European Union, L 327, pp. 1-72.

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⁷ www.brd.nrw.de/planen_bauen/regionalplan/pdf/Leitlinien_Arbeitsentwurf_Januar2012_4c.pdf

⁸ Handlungsempfehlungen der Ministerkonferenz für Raumordnung zum vorbeugenden Hochwasserschutz (GMBI. 2000 Nr. 27 S. 514).

⁹ Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection of the German State of North Rhine-Westphalia

¹⁰ Information from a Dutch respondent.

¹¹ www.espace-project.org/publications/library/English%20version%20of%20Water%20Test.pdf; accessed 24 May 2012.

¹² The convention can be found on an EU website: <http://ec.europa.eu/world/agreements/prepareCreateTreatiesWorkspace/treatiesGeneralData.do?step=0&redirect=true&treatyId=634> (accessed 29 May 2013).

¹³ <http://www.iksr.org/index.php?id=58>

¹⁴ This definition is taken from the ESPON TANGO project.

¹⁵ Information from Dutch and German respondents.

¹⁶ A follow up of the General Agreement covering the period 2007-2012 has not been decided yet as the result of elections at both sides of the border. The steering group is temporarily not active.

¹⁷ Information from a Dutch respondent.