EU Regulatory Framework on Flood Management for Transboundary Rivers

LLM Paper
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Für meine Schwester,
weil Erinnerungen
sind wasserdicht.

Für meinen besten Freund,
der auf alles steht
was fließt und strömt.
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### D. EU Legislation
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## I. Table of Abbreviations

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<td>Art</td>
<td>Article</td>
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<tr>
<td>ECJ</td>
<td>Court of Justice of the European Union</td>
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<td>Eg</td>
<td>for example</td>
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<tr>
<td>ERDF</td>
<td>European Regional Development Fund</td>
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<td>EU</td>
<td>European Union</td>
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<td>EEC</td>
<td>European Economic Community</td>
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<td>EC</td>
<td>European Community</td>
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<td>ICPDR</td>
<td>International Commission for the Protection of the Danube River</td>
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<td>IPPC</td>
<td>Integrated Pollution Prevention and Control</td>
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<td>OJ</td>
<td>Official Journal</td>
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<td>SEA</td>
<td>Strategic Environmental Impact Assessment</td>
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<td>TEC</td>
<td>Treaty establishing the European Community</td>
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<td>TEU</td>
<td>Treaty on European Union</td>
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<td>TFEU</td>
<td>Treaty on the Functioning of the European Union</td>
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<tr>
<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>WFD</td>
<td>Water Framework Directive</td>
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II. Introduction

The countless mayor flood events that struck Europe between 1998 and 2002 left the population of vast regions with their homes and businesses destroyed, injured physically as well as psychologically and hundreds lost their lives. The sheer extend of the damages triggered initiatives on all levels, local, national and international. New co-operations between riparian states were launched and existing ones were upgraded to improve the way floods are managed, incorporating the painful experiences of the past. At the same time, a policy on European Union (EU) level was launched to meet the challenges of transboundary flood management.

The year 2013 has shown once again that even areas where governments worked hard on improving flood management, big flood disasters can still occur. The flooding of the Danube beginning of July so severe that it was compared to the 2002 flooding.\(^1\) In December, the southwest of England was hit by severe storms that left large areas of the country under water for months.\(^2\)

The causes of river floods are complex. They are influenced by the climate, topography of a region, seasons, run-off capacity of the ground, changes made to the natural river basin, land use etc. But most importantly, it is in the nature of a river and of water in general that it does not respect political borders. Any attempt to manage water can only be successful if the states who share a river cooperate across borders.\(^3\) This is true for any kind of river management, whether it concerns environmental policy, commercial usage or the management of natural disasters like floods.

This paper aims to analyse and evaluate the EU’s effort to create regulatory framework that will help the Member States to effectively manage flood risk together. The evaluation of the EU regulatory framework will happen by means of comparison with its original aim, other EU and non-EU instruments and policies introduced in this paper and examining concrete points of critique voiced in literature.

To create a picture of flood policy in Europe before the EU took an initiative, the paper first gives an overview of the History of EU and non-EU instruments related to Flood Management. The development of EU water in general from regulating and controlling the emission of dangerous substances into the water to the more holistic approach of river basin management will be illustrated. Also the EU competence in environmental issues and the legal basis of the Floods Directive will be explained. Then a description of the elements of the Floods Directive itself follows, put into context of the Water Framework Directive.

The Floods Directive of 2007 is the most prominent but not the only EU instrument that concerns flood management. Especially important for the Member States are funding possibilities for concrete preventive measures, research and of course immediate help in case of a flood disaster. Therefore an overview of other EU policies and instrument in relation to flood management will be given. To give concrete examples of cooperation between several Member States, the Danube and the Rhine river basin as well as their flood management policies and the responsible authorities will be introduced.


Being able to compare the Floods Directive with the Danube and Rhine flood management measures can show two things. On one side it gives an idea of how far international cooperation on flood management can go. On the other side it will show the contribution that the Floods Directive can have to pre-existing regional conventions.

The evaluation itself will follow the development of key elements from the first proposal to the final version of the Floods Directive. Knowing the original aims and targets of the policy makers provides a framework to evaluate if the Floods Directive can live up to what was expected from it from the beginning on or if other EU policies and instruments can help to complete the setting. This method is applied to the different sections of the evaluation.

The question whether the Floods Directive will bring an added value to flood management in Europe will be examined from different angles. First, critique voiced in literature about the adherence of general principles of EU law in the decision making process and the implementation will be examined. Then the thematic scope of the Floods Directive in key areas will be evaluated. It will be examined whether the targets set up by the Floods Directive have the potential to make a difference to current flood management in the Member States and whether they are a creating clear obligation for the Member States or are merely a procedural instrument. From this, the question necessarily follows if and how the Commission can track and enforce implementation and compliance of these targets.

After the evaluation of the legal value, it will be considered whether the Floods Directive cannot trigger a positive change, not by providing a strong regulatory framework but by triggering a fundamental change in the approach towards Floods Directive in the Member States.

III. Definitions

A. The Term ‘Flood’ in EU Law:

The Floods Directive\(^4\) refers to the definitions given in the Water Framework Directive (WFD)\(^5\) but it adds two definitions in Art 2:

1. ‘flood’ means the temporary covering by water of land not normally covered by water. This shall include floods from rivers, mountain torrents, Mediterranean ephemeral water courses, and floods from the sea in coastal areas, and may exclude floods from sewerage systems;

2. ‘flood risk’ means the combination of the probability of a flood event and of the potential adverse consequences for human health, the environment, cultural heritage and economic activity associated with a flood event.

In their essence, these definitions have already been used in the first proposal for the Floods Directive\(^6\); however the definition of floods is more extensive in its final version, including examples of what shall certainly be considered as floods. Other types of floods like floods from sewerage systems, torrential rain or ground water were not included. One explanation given in literature for

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this is that the methodology of the Floods Directive which relies on mapping the risks cannot be easily applied to them as they can appear almost everywhere and do not show historic patterns.\(^7\)

The Water Framework Directive itself does not contain any definition of the concept ‘flood’\(^8\). Since also other EU instruments related to water management do not contain any substantial provisions on floods\(^9\), they naturally do not contain any definitions connected to them. The definition of the Floods Directive will therefore be considered as valid definition in EU law and for the purpose of this paper.

\[B.\] Other Regional Agreements

In this paper, a series of other regional agreements predating the Floods Directive of 2007 are introduced, but none of them contains a definition of floods as such. They are however all based on the same basic assumption concerning floods – that they are an inevitable part of nature and cannot be prevented, its effects can only be managed in the best possible way.

The United Nations Economic Commission for Europe (UNECE) guidelines state: ‘Flood events are part of nature [...] society has become more vulnerable to natural hazards’.\(^10\)

Danube Flood Action Programme:

‘Although floods are natural phenomena, human activities and human interventions into the processes of nature, such as alterations in the drainage patterns from urbanisation, agricultural practices and deforestation, development of land on the floodplain area, have considerably changed the situation in entire river basins. At the same time, exposure to risk and vulnerability in flood-prone areas has been growing constantly.’\(^11\)

A guiding principles of flood risk management of the Rhine Action Plan on Floods:

‘Water is part of the whole, meaning that we have to accept floods as a natural event.’\(^12\)

This understanding of this basic law of nature influenced the policy choices throughout the development of flood management policy in Europe.

\[IV.\] History of EU and non-EU instruments related to Flood Management

The first initiatives on transboundary water management developed through conventional intergovernmental treaties, non-binding instruments of regional international organizations and the

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\(^7\) Marc Daniel Heintz, Maria Hagemeier-Klose, Klaus Wagner, ‘Towards a Risk Governance Culture in Flood Policy – Findings from the Implementation of the “Floods Directive” in Germany’ (2012) 4 Water p 145

\(^8\) For definitions see Art 2 WFD


\(^12\) International Commission for the Protection of the Rhine (ICPR), ‘The Rhine and its Catchment: an Overview’ (Koblenz, 2013) p 24
codification of customary law. They were mainly concerned with sharing the use of a river between sovereign states and bearing the burden of pollution.\textsuperscript{13} The most relevant intergovernmental convention for this paper is the Helsinki Convention. It influenced the development and structure of EU water law in general and within its framework, the basis for an EU policy on flood management was created.

### A. The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention)

The Helsinki Convention’s aim is ‘to support the creation of frameworks fostering transboundary cooperation.’\textsuperscript{14} It is an international agreement signed in 1992 under which the signatory states are obliged to prevent, control and reduce any transboundary impact of pollution, ensure an ecologically sound and rational water management, and reasonable and equitable use of transboundary waters.\textsuperscript{15} It codifies the idea that it is necessary to tackle water-related problems through international cooperation and on the level of the watercourse.\textsuperscript{16}

In the convention itself, floods are only mentioned as one of several risks that need to be monitored and assessed jointly.\textsuperscript{17} Nevertheless, a task force on flood prevention and protection was created in the framework of the ‘Working Group on Water Management’. It prepared a set of Draft Guidelines on Sustainable Flood Prevention. They were presented to the Meeting of the Parties to the convention in 2000. ‘These guidelines aim to recommend measures and best practices to prevent, control and reduce the adverse impact of flood events on human health and safety, on valuable goods and property, and on the aquatic and terrestrial environment.’\textsuperscript{18}

They are non-binding, strategic guidelines\textsuperscript{19} that provide basic principles and approaches and suggest policies and strategies. They emphasize the importance of joint and coordinated action. The task force that drew up the guidelines strongly recommends a holistic approach to water management, using the river basin approach including trans-boundary cooperation and involvement of different disciplines and all level of administrative entities of a state. The two appendices contain quite detailed good practices for flood prevention and protection including water retention measures, land use and zoning related issues, structural measures and warning-systems.\textsuperscript{20} The second appendix gives recommendations to a wide range of stake holders involved in flood management ranging from policy makers to public authorities and the scientific community.

\begin{itemize}
\item \textsuperscript{13} Philippe Sands, Jaqueline Peel, \textit{Principles of International Environmental Law} (Cambridge University Press 2012) p 303 ff
\item \textsuperscript{14} United Nations Economic Commission for Europe, \textit{Transboundary flood risk management: Experience from the UNECE region} (United Nations Publications, 2009) iii
\item \textsuperscript{15} Art 2 United Nations Economic Commission for Europe, ‘Convention on the Protection and Use of Transboundary Watercourses and International Lakes’ (Helsinki, 1992)
\item \textsuperscript{16} Keessen, Kempen, van Rijswick p 35
\item \textsuperscript{17} Art 11 Helsinki Convention
\item \textsuperscript{18} UNECE guidelines p 3
\item \textsuperscript{19} Ibid p 2
\item \textsuperscript{20} Appendix I, UNECE guidelines
\end{itemize}
The Floods Directive refers to this document as inspiration\textsuperscript{21}, to what extent the ideas and recommendations given were taken up and incorporated into the Floods Directive will be assessed in the conclusion of this paper.

In 2009, the UNECE also published a document on transboundary flood risk management and the experiences from the UNECE region analysing concrete situations, problems encountered and progress made, as well as of remaining challenges and possible solutions.\textsuperscript{22}

\section*{B. EU Water Law}

EU water law developed since the 1970ies. In its beginnings, it was concerned mainly with water quality, using emission control (eg Dangerous Substances Directive\textsuperscript{23}, Nitrates Directive\textsuperscript{24}, Urban Wastewater Directive\textsuperscript{25}) and standard setting for the quality of freshwater bodies used for certain purposes (eg bathing water\textsuperscript{26}, fishing water\textsuperscript{27}, drinking water\textsuperscript{28}.) Except for the Nitrates Directive and the Urban Wastewater Directive, these directives have all been replaced by the WFD.\textsuperscript{29}

In 2000 the Water Framework Directive was adopted. It is intended to provide a frame for common ‘action in the field of water policy’. It consolidates several individual directives concerned with water quality but in the end does not live up to the expectations that the title might raise. It is still first and foremost concerned with water quality. Other aspects of water policy are only considered as far as that is necessary for implementing the environmental objective of the WFD.\textsuperscript{30} This objective is to achieve good ecological and chemical\textsuperscript{31} surface water status and good quantitative and chemical\textsuperscript{32} ground water status by 2015 at the latest.\textsuperscript{33} Floods (and droughts) are otherwise also mentioned as a possible justification to deteriorate temporarily from the quality requirements of the WFD\textsuperscript{34}.

\section*{C. Best Practices on Flood Prevention, Protection and Mitigation\textsuperscript{35}}

With the 2002 floods along the Danube and the Elbe the sense of urgency significantly increased among national and EU institutions as well as decision makers to create a common framework for

\begin{footnotesize}
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\item\textsuperscript{21} Consideration 6 Floods Directive
\item\textsuperscript{22} UNECE, \textit{Transboundary flood risk management} p 3
\item\textsuperscript{26} Council Directive 76/160/EEC concerning the quality of bathing water [1976] OJ L31/1
\item\textsuperscript{27} Council Directive 78/659/EEC on the quality of freshwaters needing protection or improvement in order to support fish life [1978] OJ L222/1
\item\textsuperscript{29} Art 22 WFD
\item\textsuperscript{30} Reinhardt p 468, Art 1 (e) WFD
\item\textsuperscript{31} Art 4(18) WFD
\item\textsuperscript{32} Art 4(20) WFD
\item\textsuperscript{33} Art 4 WFD
\item\textsuperscript{34} Consideration 32, Art 4(6) WFD
\item\textsuperscript{35} EU Water Directors Meeting, ‘Best Practices on Flood prevention, Protection and Mitigation’ (Athens, 2003) (Best Practices on Flood)
\end{itemize}
\end{footnotesize}
action and provided a sort of catalyst for the upcoming legislation.\textsuperscript{36} In 2003 a core group of EU Water Directors endeavoured to update the UNECE Guidelines on Sustainable Flood Prevention of 2000. This can be considered as the starting point of an EU wide ‘initiative on flood prediction, prevention and mitigation’. The result of the effort was a collection of best practices, covering river and flash floods. The document claims to be rather a strategic than a technical one. In its introduction, the document adds an explicit reference to climate change and describes the influence on the probability of floods. A stronger focus is put on emergency and disaster planning. The environment as a good to be protected becomes more important. The possible negative effect of measures on down-stream regions is pointed out in the context of solidarity between the Member States. The update of the UNECE guidelines is more explicit in demanding changes to current water policies and land-use practices as well as the integration of other EU policies into water risk management.\textsuperscript{37}

Efforts to avoid flooding should be focused on areas with a higher population density, while in other areas structural measures to deal with a remaining risk are to be prioritized. The precautionary principle is explicitly mentioned as a base for any measure. An entirely new section about ‘Joint and Coordinated Action’ was inserted. It sums up existing efforts such as international and bilateral agreements, conventions and contracts and admits that the role of the EU so far has been limited to funding projects related to flood prevention and defence.\textsuperscript{38} The actual best practices in part two of the document are structured in the following sections: Integrated river basin approach; public awareness, public participation and insurance; retention of water and non-structural measures; land use, zoning and risk assessment; structural measures and their impact; early warning and forecast systems; flood emergency; prevention of pollution\textsuperscript{39,40}

\textbf{D. Commission Communication}

The first concrete step towards an EU legislative instrument specifically dealing with flood risk was the Commission Communication ‘Flood risk management — Flood prevention, protection and mitigation\textsuperscript{41} of 2004. The communication takes note of the enormous adverse effects that floods have had throughout Europe in recent past and emphasizes the necessity of a transboundary effort. It takes up the river basin approach recommend in the UNECE guidelines and the Best Practice Document.\textsuperscript{42} The analysis of the Commission is based on the premises that ‘floods are natural phenomena which cannot be prevented. However, human activity is contributing to an increase in the likelihood and adverse impacts of extreme flood events’.\textsuperscript{43} This basic assumption determines the approach that was chosen in the development of the directive. A common action should focus on

\begin{thebibliography}{99}
\bibitem{37} Best Practices on Flood p 3 ff
\bibitem{38} Ibid p 5 ff
\bibitem{39} Ibid p 14-28
\bibitem{40} Thomas Dworak, Benjamin Görlich, ‘Flood risk management in Europe @ the development of a common EU policy’ (2005) 3(2) International Journal of River Basin Management p 97, 99
\bibitem{41} Commission, ‘Communication to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Flood risk management – Flood prevention, protection and mitigation’ COM (2004) 472 final
\bibitem{42} Ibid p 8
\bibitem{43} Ibid p 2
\end{thebibliography}
'managing the risk of floods' instead of only trying to protect against them. The necessary elements of a management cycle are described as follows:

- **Prevention**: preventing damage caused by floods by avoiding construction of houses and industries in present and future flood-prone areas; by adapting future developments to the risk of flooding; and by promoting appropriate land-use, agricultural and forestry practices;

- **Protection**: taking measures, both structural and non-structural, to reduce the likelihood of floods and/or the impact of floods in a specific location;

- **Preparedness**: informing the population about flood risks and what to do in the event of a flood;

- **Emergency response**: developing emergency response plans in the case of a flood;

- **Recovery and lessons learned**: returning to normal conditions as soon as possible and mitigating both the social and economic impacts on the affected population.

The Commission calls for ‘a concerted EU action programme for flood protection’ which would include improving co-operation and coordination, developing of flood risk maps, improved information exchange etc. and gives a set of principles that should be followed in the process.

The proposal for a legislative instrument was presented by the Commission in 2006. It came in shape of a directive exclusively dealing with floods and flood risk management. The Member States were eager to quickly accept this concerted EU effort.

### V. Floods Directive

#### A. EU competence in Environmental Issues and Legal Basis of the Floods Directive

Environmental policy is an area of shared competence between the Member States and the Union. In an area of shared competence, both the EU and the Member States may legislate and adopt legally binding acts. But the Member States may only exercise their competence to the extent that the Union has not exercised its competence or has ceased doing so. Furthermore, the principles of subsidiarity and proportionality need to be considered when adopting new legislation. The principle of subsidiarity means that the EU shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, but can be better achieved at Union level.
level. According to the principle of proportionality, the content and form of such action shall not exceed what is necessary to achieve the objectives of the Treaties.

Consequently, it was stressed often in the development process of the Floods Directive is that ‘Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union.’ It was an important argument in the policy choice towards giving an administrative framework rather than very detailed regulations that could never reflect the regional diversity of flood related problems.

The area of environmental policy is regulated in Title XX of the TFEU. Art 191 (ex Art 174 TEC) sets out the objectives and principles of the EU policy on environment. According to Art 191 (1) the objectives are:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

Other principles set out in Art 191 (2) TFEU are the precautionary principle, the principles of preventive action, rectification of a damage at source and the polluter-pays principle.

The Commission’s thorough assessment of the problem, the policy options and impact of the proposed directive was based on Art 191 (3) TFEU. When developing a new legal instrument, it demands the EU to take account ‘available scientific and technical data, environmental conditions in the various regions of the Union, the potential benefits and costs of action or lack of action, the economic and social development of the Union as a whole and the balanced development of its regions’.

Art 192 TFEU (ex Art 175 TEC) provides that the ordinary legislative procedure is the standard procedure to be used in the area of environment. This means, the European Parliament and the Council decides on an action after consulting the Economic and Social Committee and the Committee of the Region. A qualified majority is necessary in the Council for a proposal to pass.

However, in specific areas, unanimity is required in the Council. In Art 192(2), the exceptions from the general rule to use the ordinary legislative procedure are listed. They concern

(a) provisions primarily of a fiscal nature and
(b) measures affecting:
- town and country planning,

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53 Art 5(3) TEU
54 Art 5(4) TEU
55 Art 191(2) TFEU
57 Annex COM (2006) 15 final: The staff working document illustrates the assessment process
58 Art 294 TFEU (ex Art 251 TEC)
- quantitative management of water resources or affecting, directly or indirectly, the availability of those resources,
- land use, with the exception of waste management and (c) measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply.

Unanimity in the Council means that a political consensus among all Member States is necessary to decide on a binding instrument in one of these policy areas. Such a requirement is entered into the Treaty because of the sensitivity of the concerned topics. The higher threshold for such measures may influence the choice of legal basis or instruments chosen to reach their goals.\textsuperscript{59} It is important to note that measures taken by the EU do not prevent any Member State from maintaining or introducing more stringent protective measures as long as they are compatible with the Treaties.\textsuperscript{60}

In the proposal, Article 192(1) TFEU (ex Art 175(1) TEC) is considered being the appropriate legal basis for the Floods Directive because similar instruments addressing risk prevention and river basin management, notably the Seveso Directive\textsuperscript{61} and the WFD are based on the same provision.\textsuperscript{62} However, this argument can be questioned since the Seveso Directive and the WFD have clear environmental objectives. The first is aiming at prevention and control of accidents involving dangerous substances and the second provides for a good environmental status of certain water bodies. The Floods Directive however has the assessment and management of a risk as its proclaimed aim. Art 1 of the Floods Directive declares its purpose: ‘to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community.’

The risk may be posed by a natural phenomenon but the environment itself is – next to human health, cultural heritage and economic activity – only one of the goods that should be protected by the directive.\textsuperscript{63} The Council has however accepted Art 192(1) TFEU as legal basis for the Floods Directive.

\textbf{B. Context: Water Framework Directive}

Although the Water Framework Directive (WFD) itself is only concerned with floods as they negatively impact the water quality,\textsuperscript{64} the Floods Directive was set in the context of the WFD, both thematically and structurally. In the Proposal for the Floods Directive the Commission states:

\begin{quote}
Flood risk management and water quality management are part of integrated river basin management. They involve the same river basins and regions and the same local communities and stakeholders. Consequently, there is a very strong linkage between the
\end{quote}

\textsuperscript{60} Art 193 TFEU (ex Art 176 TEC)
\textsuperscript{62} Annex COM (2006) 15 final p 6
\textsuperscript{63} Reinhardt p 468; COM (2006) 15 final p 8; Art 1 Floods Directive
\textsuperscript{64} Consideration 2, 4 Floods Directive
water quality management already in progress under the WFD and the flood risk management measures envisaged under this proposal.\textsuperscript{65}

It was also within the bodies set up by the WFD that the wish to jointly work on flood protection was first expressed.\textsuperscript{66}

One of the most obvious links is that the Floods Directive builds upon the administrative setup of the ‘river basin districts’ created by the WFD.\textsuperscript{67} It obliges the Member States to cooperate across borders to achieve the goals of both directives.\textsuperscript{68} In practice this happens through international treaties for big river basins, and through more informal means of cooperation under the wing of the EU institutions like Euregions or the INTERREG funds, treaties for bodies of private law or other types of administrative cooperation for smaller rivers.\textsuperscript{69}

The two directives also share the committee established by the WFD which assists the Commission with the management of the WFD and the Floods Directive.\textsuperscript{70} The Member States are encouraged to use the structures created for achieving the goals of the WFD also for the purposes of the Floods Directive eg integrating flood risk management plans into river basin management plans. They are also meant to be implemented ideally with a synchronized timing as well as a coordinated consultation and reporting process.\textsuperscript{71} Furthermore the Floods Directive relies to a great extent on definitions given in the WFD.\textsuperscript{72}

\section*{C. Elements of the Floods Directive}

\subsection*{1. Preliminary Flood Risk Assessment}

The Member States are required to assess potential risks for each river basin district in the form of maps, descriptions of past flood and potential adverse consequences of future floods.\textsuperscript{73} On the basis of this information, areas need to be identified for which ‘potential significant flood risks exist or might be considered likely to occur’.\textsuperscript{74} The deadline for this step was 22 December 2011\textsuperscript{75} but no progress report has been published yet.

\subsection*{2. Flood Hazard Maps and Flood Risk Maps}

According to Art 6 Floods Directive, flood hazard maps and flood risk maps need to be drawn up for the areas defined as being at potential significant risk of flooding. For other areas, no further steps are necessary. The preliminary flood risk assessment therefore serves as a kind of filter to eliminate areas where either floods are unlikely or unlikely to have a significant negative impact.

\begin{thebibliography}{9}
\bibitem{65} COM (2006) 15 final p 7
\bibitem{66} Eg COM (2004) 472 final p 6; COM (2006) 15 final p 3,
\bibitem{67} Art 2 Floods Directive
\bibitem{68} ‘The WFD introduced the principle of cross-border coordination within river basins, with the objective of achieving good quality for all waters, but it set no objective on flood risk management.’ COM (2006) 15 final p 3
\bibitem{69} Keessen, Kempen, van Rijswick p 37 ff
\bibitem{70} Art 21 WFD
\bibitem{71} COM (2006) 15 final p 5, Reinhardt p 472
\bibitem{72} Art 2 Floods Directive
\bibitem{73} Ibid Art 4
\bibitem{74} Ibid Art 5
\bibitem{75} Ibid Art 4
\end{thebibliography}
Flood hazard maps show the probability of different flood events. They have to be drawn up for three different scenarios that could appear within a geographical area:

(a) floods with a low probability, or extreme event scenarios;
(b) floods with a medium probability (likely return period ≥ 100 years);
(c) floods with a high probability, where appropriate.

Each of the three scenarios have to be described through the following elements:

(a) the flood extend
(b) the water depths or water level
(c) where appropriate, the flow velocity or the relevant water flow.

Flood risk maps are meant to show potential adverse consequences of the three different flood scenarios. This means, they display the values that are protected by the directive present within a certain area. They include

(a) the indicative number of inhabitants potentially affected;
(b) type of economic activity of the area potentially affected;
(c) installations covered by the Integrated Pollution Prevention and Control (IPPC) Directive;\(^\text{76}\)
(d) other information which the Member State considers useful.

The deadline for completing those two types of maps was 22 December 2013 but the reports had not been published yet by the date of submission of this paper.\(^\text{77}\)

3. Flood Risk Management Plans

The flood hazard maps and flood risk maps serve as a basis for establishing flood risk management plans. These consist of ‘appropriate objectives’ and ‘measures for achieving the objectives’. The focus should be on the reduction of potential adverse consequences of floods through mainly non-structural initiatives and/or on the reduction of the likelihood of flooding. (Making more space for the river\(^\text{78}\))

‘Flood risk management plans shall take into account relevant aspects such as costs and benefits, flood extent and flood conveyance routes and areas which have the potential to retain flood water, such as natural floodplains, the environmental objectives of Article 4 of [the WFD], soil and water management, spatial planning, land use, nature conservation, navigation and port infrastructure. Flood risk management plans shall address all aspects of flood risk management focusing on prevention, protection, preparedness, including flood forecasts and early warning systems and taking into account the characteristics of the particular river basin or sub-basin. Flood risk management plans may also include the promotion of sustainable land use practices,

\(^{78}\) Reinhardt 471; Annex COM (2006) 15 final p 8, 10
improvement of water retention as well as the controlled flooding of certain areas in the case of a flood event.'

The deadline to submit the flood risk management plans is 22 December 2015. The annex to the Floods Directive contains ‘Guidelines for the development and implementation of flood risk management plans and flood risk maps’.

The preliminary flood risk assessment, the flood hazard and risk maps as well as the flood risk management plans all need to be revised and, if necessary updated every six years. In this process, the impact of climate change on the occurrence of floods needs to be taken into account. This gives the Member States the opportunity to constantly improve their flood management, even after the first versions of all instruments are completed. If Member States already have developed equivalent tools in the past, they do not need to draw up new instruments but can use them for the purposes of the Floods Directive.

4. River Basin Approach

The river basin district is the main unit for management of river basins under the WFD and the Floods Directive. It is defined by the WFD as the area of land and sea, made up of one or more neighbouring river basins together with their associated ground waters and coastal waters, which is identified by the Member States.

Ideally, the tools of the Floods Directive (the preliminary flood risk assessment, flood hazard and risk maps and flood risk management plans) should be developed on the level of the river basin district but the Member States also have the possibility to assign different authorities than those set up by the WFD and they can create new units of management, meaning divide the river basins differently. If such a unit of management or river basin district is shared between two or more Member States, they are obliged to ensure exchange of relevant information and coordination between the competent authorities when assessing the flood risk.

Art 8(2) Floods Directive provides concerning flood risk management plans:

‘Where an international river basin district, or unit of [...] falls entirely within the Community, Member States shall ensure coordination with the aim of producing one single international flood risk management plan, or a set of flood risk management plans coordinated at the level of the international river basin district. Where such plans are not produced, Member States shall produce flood risk management plans covering at least the parts of the international river basin district falling within their territory, as far as possible coordinated at the level of the international river basin district.’

79 Art 7(3) Floods Directive
80 Ibid Art 14
81 Heintz, Hagemeier-Klose, Wagner p 153
82 Art 13 Floods Directive; Heintz, Hagemeier-Klose, Wagner p 146
83 Art 2(15) WFD
84 Art 3 Floods Directive
85 Ibid Art 4(3), S(2)
This means in practice that there is no strict obligation to cooperate across boundaries, not even if all states of the river basin are Member States of the EU.86

5. Public Participation

The Member States need to make the preliminary flood risk assessment, the flood risk and hazard maps and the flood risk management plans available to the public and also encourage active involvement of interested parties in the production, review and updating of the flood risk management plans.87 This active involvement is supposed to be coordinated in the framework of the WFD.88 Neither the Floods Directive nor the WFD define ‘active involvement’ nor ‘interested parties’ but a Commission’s guidance document offers ample information on definitions, possible processes and a wide range of examples. It includes references to the Aarhus Convention89 and the Environmental Information Directive and lends definitions and concepts from them.90

6. Strategic Environmental Impact Assessment

The Floods Directive provides in its annex that flood risk management plans should contain among others ‘a summary of the measures and their prioritisation aiming to achieve the appropriate objectives of flood risk management, including [...] flood related measures taken under other Community acts’. These acts include among others the Environmental Impact Assessment Directive91, the Seveso II Directive92, the Strategic Environmental Impact Assessment Directive (SEA Directive)93 and the WFD.94

The SEA directive is aiming at the protection of the environment. It provides for a mandatory environmental assessment when preparing and adopting plans and programmes which are likely to have significant effects on the environment.95 This applies to a set of activities, regardless whether they are private or public, eg agriculture, forestry, fisheries, water management, town and country planning or land use and such plans and programmes which set the framework for future development consent of projects in these activities.96 Some of these types of measures like water management, town and country planning and land use will typically be included in flood risk management plans. This opens the question, whether measures carried out in the framework of the

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86 Keessen, Kempen, van Rijswick p 40
87 Ibid Art 9
88 Ibid Art 9(3)
94 Annex A I(4) Floods Directive
95 Art 1 SEA Directive
96 Ibid Art 2
Floods Directive, especially the flood risk management plans are subject to the SEA Directive and therefore need to undergo an environmental impact assessment.

The SEA Directive itself provides in Art 11(1) that an environmental assessment carried out under this Directive shall be without prejudice to any requirements under any other Community law requirement. The relationship between the Floods Directive and the SEA Directive is however not explicitly clarified. Some conclusions can be drawn from the Commission’s Guidance Document on the implementation of the SEA directive. It does not refer to the Floods Directive, but to the WFD. It looks at the programme of measures and the river basin management plan. The programme of measures can be regarded as the equivalent of a flood risk management plan under the Floods Directive. They should ideally be integrated in the river basin management plans. Therefore an analogy can be drawn from the Commission’s assessment for the WFD in the context of the SEA Directive:

‘It is not possible to state categorically whether or not the River Basin Management Plan [...] and the Programme of Measures [...] are within the scope of the SEA Directive. Such an assessment should be done on a case by case basis. [...] Since the [river basin management plan] and the [programme of measures] are both required (by the WFD) and have to be prepared by authorities, the main question is whether they set the framework for the future development consent of projects. The answer will depend on the contents in each case. It will also be necessary to consider how far the element of planning is present in a [river basin management plan] if this does no more than summarise what has already been set out in [programme of measures].’

In other words, when drawing up a flood risk management plan, in each case an assessment will have to be made to decide whether a strategic environmental impact assessment has to be made or not. And if a river basin management plan is more than just a summary of national or river basin wide measures that were assessed separately, then it might have to be assessed as a whole, too. The flood risk management plans can in any case not be excluded from the scope of the SEA Directive merely on the grounds that they are based on an obligation arising from an EU instrument.

VI. Other EU Policies and Instruments

Without evaluating every instrument in detail, this section should serve to give an overview over the different types of instruments available to member states in the different phases of managing flood events (prevention, protection, preparedness, emergency response, recovery and lessons learned). It should be kept in mind, they were (at least in similar form) already available before the entering into force of the Floods Directive. Therefore, listing these instrument with each a rather narrow field of application is bound to underline the necessity of additional holistic measures that led to the development of the Floods Directive. On the other hand, programmes like INTERREG and Euregios

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97 European Commission, ‘Guidance on the implementation of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment’
98 Art 11 WFD
99 Ibid Art 13
100 Reinhardt p 471
101 Art 9(2) Floods Directive
can and do provide a framework and financial resources for implementing the objectives of both, the WFD and the Floods Directive, especially in a transboundary context.  

A. The European Regional Development Fund (ERDF)

The ERDF is an investment tool that finances regional or interregional projects as part of the European Union cohesion policy. The new programme period lasts from 2014-2020, which makes the cohesion policy especially important for achieving the Europe 2020 goals. The cohesion policy includes the following funding systems: The European Social Fund, the Cohesion Fund and the ERDF. The setting up of these funds is based on Art 175 TFEU and it aims at reducing disparities between the levels of development of the various regions, in order to strengthen the EU's economic, social and territorial cohesion.

One of the objectives of the previous programme period for 2005-2013 was regional competitiveness and employment which provided amongst others for measures concerning environment and risk prevention, and in particular: developing plans and measures to prevent and cope with natural risks (e.g. desertification, droughts, fires and floods) and technological risks. Under this and earlier programme periods, numerous regional and interregional projects for flood control and defence were financed under the theme 'environment'. Some examples are the Hungarian projects ‘Controlling floods in the Danube Valley’ or ‘Turning back the tide in flood-threatened regions’ which was a project of 15 countries, including non-member states, ‘Stopping Athens floods’ or ‘Fighting floods in Malta’. Especially the INTERREG funds have been a useful tool for transboundary cooperation on flood and water management in smaller river basin districts.

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103 Dworak, Görlach p 98
111 Keessen, Kempen, van Rijswick p 39
combating floods’. The INTERREG programme also financed flood mapping projects for the rivers Elbe and Oder.

Although the priorities of the ERDF for 2014-2020 are clearly seen elsewhere, protection against flood risks is included in the header ‘promoting climate change adaptation, risk prevention and management’. It will therefore also in the future be able to help regions in the implementation of the objectives of the Floods Directive. Also the header ‘preserving and protecting the environment and promoting resource efficiency’ might leave some room for flood related measures if they are integrated into a environmental wider objective and consist of measures that integrate floods into the environment, but probably not for flood defence measures as such.

**B. Programme for the Environment and Climate Action (LIFE)**

The LIFE programme is the funding instrument that supports the implementation of the EU environmental policy. The programme exists in various forms and with different focus areas since 1992. It supports projects by a wide range of beneficiaries like non-governmental organisations, governmental organisations, research institutions, nature reserve authorities etc.

A simple search shows that in the past a total of 39 projects were dedicated to the topic of flood or flood protection. Of course mostly embedded in a wider ecological or water policy objective. 446 projects are about water in general. Looking at the total number of 3945 projects since the start of the LIFE programme, 1% of them are connected to floods. This might not seem much but certainly shows that there is a possibility to have projects around the topic funded by the Commission.

The programme phase 2014-2020 has two focus areas or ‘sub-programmes’: Environment and Climate Action. Climate Action has three priorities: mitigation, adaptation and information. These priorities should offer ample opportunity for potential beneficiaries to receive funding for projects that follow an integrated approach towards flood management.

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117 Ibid Art 5(6)
C. The European Solidarity Fund

The European Solidarity Fund is an emergency grant for member states in case of a ‘major disaster’. According to Art 1 the Fund was established to enable the Community to respond in a rapid, efficient and flexible manner to emergency situations. A ‘major disaster’ is defined by Art 2(2) as any disaster resulting, in at least one of the states concerned, in damage estimated either at over EUR 3 billion in 2002 prices, or more than 0,6% of its Gross National Income.

Art 3(2) provides for financial aid to public authorities in form of following essential emergency operations, depending on the type of disaster:

(a) immediate restoration to working order of infrastructure and plants in the fields of energy, water and waste water, telecommunications, transport, health and education;

(b) providing temporary accommodation and funding rescue services to meet the immediate needs of the population concerned;

(c) immediate securing of preventive infrastructures and measures of immediate protection of the cultural heritage;

(d) immediate cleaning up of disaster-stricken areas, including natural zones

Although it was created as an immediate reaction to the 2002 flooding, it is not only available for damages created by flooding but also other natural catastrophes. Its origin is however still visible in the statistics. Of the 55 interventions between November 2002 and October 2013, 34 were caused by floods. Other disasters were mainly storms but also draughts, fires, earth quakes and a volcano eruption.

The Solidarity Fund is not meant for flood-prevention measures and does finance measures that are or possibly could be covered by the European cohesion policy. It is only available in the recovery phase of flood management.

D. Research

The Commission is very active in research around floods and flood management, notably through the ‘Floods Portal’ created by the Joint Research Centre’s Institute for Environment and Sustainability. Through a website it provides information on ongoing floods and flood forecasts as well as flood risk maps for the EU as a whole. This is supposed to help Member States reduce their administrative costs in setting up their own flood risk maps. Through the Framework Programmes for Research, the Commission provides large scale funding to research institutions. It is set up together with the

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121 Reinhardt p 468
125 Annex COM (2006) 15 final p 21
multiannual financial framework of the EU and covers a period of seven years. According to the Commission, research will play an important role in adaptation to climate change.126

Through the 6th and 7th Framework Programme, the Commission has funded a number of projects that are brought together under the header ‘A European Flood Action programme’. Examples are a project that has created the ‘FLOODsite’, a website for ‘Integrated Flood Risk Analysis and Management Methodologies’.127 The findings of the FLOODsite contributed to the development of the methodology and central concepts for the Floods Directive.128 Another example is the ERA-NET CRUE project which coordinates national research programmes in twelve member states.129

The Framework Programme for 2014-2020 carries the name ‘Horizon 2020’ and calls for projects are opened in 22 areas, Environment and Climate Action being one of them.130

VII. Regional River Conventions

The Danube Convention and the Rhine Convention are two examples for long-standing regional cooperation. The Danube and the Rhine are two of the major international rivers in the EU and their catchments cover a significant part of the EU territory.131 As these agreements were in force before the adoption of the WFD and Floods Directive, they are more mature and more progressive than the latter. They also served as examples in the Commissions assessment of policy options and the development of the Floods Directive and their respective international commissions were involved in the consultation process.132 The Commission on one hand names these river basins as examples where action is most needed and uses them as a justification for action on EU level. On the other hand it takes the same rivers as examples where measures are already been taken successfully.133 This creates an interesting interaction between the Floods Directive and initiatives started up before its entering into force.

A. The Danube River

The International Commission for the Protection of the Danube River (Danube Commission) was established in 1998.134 The 14 contracting parties are Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Slovakia, Slovenia, Serbia, Ukraine and the European Union and thus includes Member States and non-Member States of the EU. Under the WFD they also cooperate with Italy, Switzerland, Poland, Albania and Macedonia.135 The Commission was founded to implement the Convention on Cooperation for the

126 COM (2004) 472 final p 4
127 www.floodsite.net
128 Klijn, Samuels, Van Os p 207
129 CRUE Flooding ERA-NET <www.crue-eranet.net> accessed 12 May 2014
Protection and Sustainable use of the Danube River (Danube Convention) of 1994 that aims to achieve ‘a sustainable and equitable water management, including the conservation, improvement and the rational use of surface waters and ground water’ in the Danube catchment.\(^{136}\) The cooperation under the Danube Convention consists of consultations, joint activities and information exchange.\(^{137}\)

The Danube Commission deals with a wide range of issues including agriculture, dams & structures, droughts, ecosystems, floods, groundwater, industry, invasive species, nature protection, navigation, pollution and water quality.\(^{138}\) It was entrusted with coordinating the transboundary aspects of the WFD and subsequently the Floods Directive in the Danube River Basin.\(^{139}\)

Their Flood Action Programme ‘is based on the sustainable flood protection programmes developed in the various Danube countries as well as on networking existing structures and using the future-oriented knowledge base accumulated through a wide range of activities over the past decade’, more specifically ‘on UNECE Guidelines on Sustainable Flood Prevention, EU Best Practices on Flood Prevention, Protection and Mitigation and on EU Communication on flood risk management’.\(^{140}\) On the other hand the Danube Commission was part of the consultation process of the Floods Directive.\(^{141}\) It is therefore at the same time basis for and consequence of the EU policy making on flood management. The Flood Action Programme itself was set up in 2004 and naturally includes no reference to the Floods Directive. On the website of the Danube Commission however, it is clear that the methodology of the Floods Directive is used. Furthermore it states that ‘The implementation of the [Floods Directive] in the Danube River Basin District can be looked upon as a follow-up to the activities which were carried out under the (...) Action Programme on Sustainable Flood Protection in the Danube River Basin.’\(^{142}\)

**B. Action Programme for Sustainable Flood Protection in the Danube River Basin**

The Flood Action Programme represented a shift in the approach ‘from dominating nature to coexistence with the floods’ that started a decade ago.\(^{143}\)

It sets up general targets and categories of measures and action plans that were then specified for sub-basins. The four major basin-wide targets are:

- Improvement of flood forecasting and early flood warning systems; interlinking national or regional systems.

- Support for the preparation of and coordination between sub-basin wide flood action plans.

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\(^{137}\) Ibid Art 4


\(^{141}\) Annex COM (2006) 15 final p 21, Annex 1 p 29


\(^{143}\) Danube Flood Action Programme p 1
- Creating forums for exchange of expert knowledge.

- Recommendation for a common approach in assessment of flood prone areas and evaluation of flood risk.\(^{144}\)

By 2009, 17 (often transboundary) flood action plans were produced for the sub-basins.\(^{145}\) Taking the Sub-Report on the Danube Sub-basin of the Inn as an example, an interesting statement about the relationship of the action plans and the Floods Directive can be found:

‘As the [Danube Flood Action Programme] was designed in full coherence with the [Floods Directive] the flood action plans for sub-basins are an important part of implementation of the [Floods Directive] and they summarize the key actions towards preparation of the flood risk management plans. Therefore, the preparation of the flood action plans for sub-basins can be considered as an interim step in implementation of [Floods Directive].’\(^{146}\)

Claiming that the programme of 2004 was designed in coherence with the Floods Directive of 2007 might not reflect reality but certainly shows eagerness to fit the pre-existing structures into the obligations set out by the Directive. It is also not clear as which step of the Floods Directive these action plans are to be considered. The sub-basin actions plan themselves contain very detailed targets and measures including binding acts of law, like eg a long-term flood protection strategy; regulations on land use and spatial planning; reactivation and creation of new natural flood retention capacities and prevention and mitigation of water pollution due to floods.\(^{147}\) Due to their level of detail, they do look like what might be expected from flood risk management plans but they lack the previous steps (preliminary flood risk assessment, flood hazard and flood risk maps) required by the Floods Directive.

About the relationship between the flood action plans and the Floods Directive, the Danube Commission only states in their two reports on the coordinated implementation of the Floods Directive:

At the Danube Commission Ministerial Meeting in 2010 the Danube Declaration was adopted in which the Danube Ministers […] committed themselves to make all efforts to implement the EU Floods Directive throughout the whole Danube River Basin and to develop one single international Flood Risk Management Plan or a set of flood risk management plans, based upon the […] Action Programme for Sustainable Flood Protection and the sub-basin plans, coordinated at the level of the international river basin district by 2015 making full use of the existing synergies with the [Danube River Basin Management] Plan.\(^{148}\)

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\(^{144}\) Ibid p 17 f


\(^{147}\) As an example: Inn Sub-basin p 10 ff

Then both reports summarize the national implementation measures and provide links to the related national websites.

C. The Rhine River

The International Commission for the Protection of the Rhine (Rhine Commission) was originally founded in 1963 by the Treaty of Bern with Switzerland, France, Germany, Luxemburg, Netherlands and the European Commission as signatories. The aim of the treaty and subsequent agreements were to fight the contamination of the Rhine River through diffuse and point sources and a direct reaction to an accident in a factory of the pharmaceutical company Sandoz.\textsuperscript{149} The Rhine Commission regularly cooperates with Austria, Liechtenstein, the Belgian region of Wallonia and Italy and includes them in their Conferences of Ministers.\textsuperscript{150}

The enhanced Rhine Convention signed in 1999 broadened the scope of activity to include sustainable development, drinking water production, sediment quality and also flood prevention. The Rhine Commission operates on the basis of multiannual programmes, the most recent one being the ‘Rhine 2020’ programme. It is noteworthy that the Rhine Commission can take binding decision by a majority vote\textsuperscript{151} and ‘the Commission may decide that measures will be taken to assist the implementation of the decisions.’\textsuperscript{152}

The Rhine Commission was already in the past involved in the making of European water policy, notably as part of the UNECE guidelines working group\textsuperscript{153} and in the consultation process for the Floods Directive.\textsuperscript{154} In 2007 the Rhine Commission was charged with the coordination of the implementation of the Floods Directive in the Rhine catchment international river basin district by the Ministerial Conference, building up on the structure implemented on the basis of the WFD.\textsuperscript{155} The Rhine Commission’s working areas consequently are structured in ‘Ecological Improvement’, ‘Chemical Water Quality’ and ‘Action Plan on Floods’.\textsuperscript{156} As part of the reporting obligations under the Floods Directive, the Rhine Commission collected the national preliminary flood risk assessment\textsuperscript{157} and flood hazard and risk maps\textsuperscript{158} for the Rhine river basin and published links to them. The reports also include summaries and overview maps.

The Rhine Convention being older than the Floods Directive and the WFD considers the directives as ‘essential tools for the implementation of the programme “Rhine 2020”’. They imply a joint obligation of the EU states to take measures and emphasize the necessity of integrated management of rivers in

\textsuperscript{149} The Rhine and its Catchment p 3
\textsuperscript{150} Collection of the Communiqués of the Conferences of Ministers: <www.iksr.org/index.php?id=27&L=3>
\textsuperscript{152} Ibid Art 11(4)
\textsuperscript{153} UNECE guidelines para 2
\textsuperscript{154} Annex COM (2006) 15 final p 21, Annex 1 p 29
\textsuperscript{155} International Commission for the Protection of the Rhine, ‘Rhein-Ministerkonferenz’ (Bonn, 2007) p 8
\textsuperscript{156} The Rhine and its Catchment p 3
\textsuperscript{157} International Commission for the Protection of the Rhine, Report on the identification of potential significant flood risk areas in the international river basin district Rhine (Koblenz, 2012) (First Rhine Report)
\textsuperscript{158} International Commission for the Protection of the Rhine, Report on the drafting of Flood Hazard Maps and Flood Risk Maps in the International River Basin District ,Rhine’ (catchment > 2,500 km², Part A) and the exchange of information according to Article 6, Par. 2 of the EC Directive on the Assessment and Management of Flood Risks (FD) - Final Report (State: 22 March 2014) (Koblenz, 2013) (Second Rhine Report)
river basin districts’. It is interesting to see that apparently the directives are considered as serving the aims of the river basin and not the other way around, the river basin as a framework for implementing the goals of the directives. This perception is understandable in a way when looking at the first Report of the Rhine Commission on the identification of potential significant flood risk areas in the international river basin district Rhine.

It gives among other a good overview of the extent to which Member States and regions used pre-existing preliminary flood risk assessments taking recourse to Art 13(1) a and b, to Art 13(2) flood for hazard and flood risk maps and to Art 13(3) flood risk management plans. It shows that, while there are already some existing tools that satisfy the requirement for preliminary flood risk assessments, only one of the more than 25 regions already has adequate flood hazard and flood risk maps and one other has a flood risk management plan. Interestingly, the one region/country invoking Art 13(2) is Luxemburg and Art 13(3) is invoked by one region of several of Germany. Therefore the Floods Directive clearly widens the geographical scope of the good practices within the Rhine basin and even within the Member States.

The Action Plan was set up following a series of winter floods in the Rhine catchment in 1993 and 1995. ‘The target of the Action Plan on Floods to be achieved by 2020 is to improve the flood protection of man and goods along the Rhine and its tributaries and, at the same time, to ecologically improve the river and its floodplain.’ Although the subjects of protection are not described very specifically, the targets set by the plan are remarkably precise:

1. Reduce flood damage risks by 25 % by 2020
2. Reduction of flood levels - Reduction of extreme flood levels by up to 70 cm by 2020 downstream the impounded section (60 cm due to water retention along the Rhine and approximately 10 cm due to water retention in the Rhine catchment)
3. Increasing flood awareness by drafting and spreading flood risk maps for 100 % of flood hazard areas
4. Improve the flood forecasting system - short term improvement of flood forecasting systems due to international cooperation. Prolong forecasting periods by 100 % by 2005

The achievement of the results is being closely monitored and the follow up of the individual targets includes a budget tracking scheme.

Part of the overall target was the creation of a so called ‘Atlas of the Rhine’, an interactive online map which shows the ‘flood danger and potential damage due to extreme floods of the Rhine’. As it was already completed in 2001 it naturally does not reflect the language and classifications of the Floods Directive. It will consequently be updated in 2014 with the coordinated results of the national

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159 Annex 1 First Rhine Report: Survey map on the use of Article 4 and Article 13 of FD in the states or federal states / regions
160 The Rhine and its Catchment p 25
161 Ibid p 26
162 International Commission for the Protection of the Rhine, Atlas of flood danger and potential damage due to extreme floods of the Rhine (Koblenz, 2001); available online: www.iksr.org/index.php?id=212&L=3
flood hazard maps and flood risk maps for the main stream of the Rhine. The Floods Directive has been integrated over time into the flood policy of the Rhine Commission and the concrete targets of the Rhine Action Plan on Floods and the river basin approach of the Floods Directive certainly are a promising combination.

VIII. Evaluation of the EU Regulatory Framework

A. General Principles of EU Law

1. Subsidiarity Principle

The adoption of the Floods Directive is based on the premise that Floods are a transboundary problem and need to be tackled through coordination among all Member States. An argument against this general observation is, that first of all not all Member States are facing problems with floods. Second, for some states, especially island states, floods are certainly not a transboundary issue and they could achieve the objectives of flood management without cooperation on EU level. This lead the Danish, Maltese, Swedish and British delegations in the negotiations to consider that such a wide scope is not in conformity with the principle of subsidiarity, and they suggested to limit it to trans-boundary (shared) river basins and coastal areas where flood risk management actions by one Member State could have an impact on neighbouring countries.

In the end, these objections did not have an influence on the scope of the Floods Directive, as can be seen in consideration 23 of the Floods Directive. It states without further analysis that the objective of the directive cannot be sufficiently achieved by the Member States and can by reason of scale and effects of actions be better achieved at Community level.

2. Solidarity Upstream and Downstream

The fact that water and floods do not respect political borders is generally acknowledged and is the basis of the Commission’s ‘diagnosis of the problem’ when ‘dealing with floods’. This applies to local and regional boarders within a Member States as well as to boarders between two Member States. In water management in general and equally concerning floods, this rises the problem of upstream-downstream relations. Flood management measures taken in one region may influence (negatively) the nature of a flood in a downstream region. The question in this chapter is, whether the Floods Directive sufficiently considers this aspect and offers an effective solution to it.

The Commission Communication summarizes the basic problem very well:

‘Experience has shown that local flood protection measures taken in one place will have a knock-on effect for upstream/downstream areas. For example, if one area implements

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163 International Commission for the Protection of the Rhine, Report on the drafting of Flood Hazard Maps and Flood Risk Maps in the International River Basin District, Rhine’ (catchment > 2,500 km², Part A) and the exchange of information according to Article 6, Par. 2 of the EC Directive on the Assessment and Management of Flood Risks (FD) - Final Report (State: 22 March 2014) (Koblenz, 2013) p 2

164 International Commission for the Protection of the Rhine, ‘Communiqué of Ministers’ (Basel, 2013) para 5, 36

165 Council of the European Union, Interinstitutional File 2006/0005 (COD), 10456/06, ENV 357 in Reinhardt p 469

166 COM (2004) 472 final p 2
engineering solutions to evacuate the water from its stretch of the river as quickly as possible, this simply means that the water arrives faster to their downstream neighbours. Therefore it is imperative that flood protection is dealt with in a concerted and co-ordinated manner along the whole length of the river.\textsuperscript{167}

It also states, that the practice in the past of shifting problems from area to area must be overcome and that existing international agreements that manage a river basin jointly must be taken as an example to overcome this problem.\textsuperscript{168}

In the annex, the Commission Communication already mentions the solidarity principle as basis for developing flood risk management plans, stating, that ‘flood protection measures should not compromise the ability of other, upstream or downstream regions/Member States to achieve the level of protection the regions/Member States themselves consider to be appropriate.’\textsuperscript{169}

In the staff working paper, an analysis is made to decide between two policy options or no further action. Option A being a ‘strictly voluntary approach in the form of a Communication with non-binding recommendations’ and option B being a ‘Combination of cooperation between Commission, Member States and other involved parties plus a flexible legislative instrument’.\textsuperscript{170} The first conclusion is, that taking no action would mean that ‘measures adopted to manage flood risks could just pass on problems to upstream or downstream regions, using resources inefficiently and ineffectively’.\textsuperscript{171} Consequently, the Commission argues heavily for option B, setting up a mandatory framework of the river basin including flood risk management plans. This is sketched as the only possibility to prevent Member States or regions from ‘passing on problems to upstream or downstream regions and preferably contributing to reduction of flood risks in upstream and downstream regions.’\textsuperscript{172} Also for the sake of effectiveness of resources and measures and the increased awareness and coordination a strictly voluntary approach is argued to be insufficient to protect interest along the entire river basin.\textsuperscript{173}

The final proposal for the Floods Directive then included two direct references to the upstream/downstream topic. First of all, preliminary flood risk assessment should include a description of certain development plans that would increase the flood risk in the area itself but also in upstream or downstream regions.\textsuperscript{174} Secondly and most importantly Art 9(4) of the proposal explicitly states that ‘flood risk management measures taken in one Member State must not increase flood risks in neighbouring countries’.\textsuperscript{175}

Of this imperative of the Commission’s proposal and the categorisation as a fundamental underlying problem in the Commission’s communication and staff working document all that remains is a reference to the solidarity principle. It is written down in the Floods Directive in Art 7(4) as part of the chapter on flood risk management plans:

\textsuperscript{167} COM (2004) 472 final p 2; the wording is repeated in Annex COM (2006) 15 final p 7
\textsuperscript{168} COM (2004) 472 final p 7
\textsuperscript{169} Ibid Annex A (1) e
\textsuperscript{170} Annex COM (2006) 15 final p 17f
\textsuperscript{171} Ibid p 16
\textsuperscript{172} Ibid 19
\textsuperscript{173} Ibid 20, 25
\textsuperscript{174} Art 4(2)d Floods Directive
\textsuperscript{175} Emphasis added
‘In the interests of solidarity, flood risk management plans established in one Member State shall not include measures which, by their extent and impact, significantly increase flood risks upstream or downstream of other countries in the same river basin or sub-basin, unless these measures have been coordinated and an agreed solution has been found among the Member States concerned in the framework of [an international river basin district].’

The reference to development plans that might influence downstream regions was taken out entirely, instead Art 4(3) creates an obligation merely to exchange information between competent authorities.

The protection of upstream and downstream interest is left to the overall setting of the (transboundary) river basin management and a general principle. This raises the question if there are any effective remedies available for damages that might occur to a region or Member States due to flood management measures taken upstream. The vague formulation certainly does not call for direct applicability of the solidarity provision to be able to grant individuals or regional authorities direct access to the Court of Justice of the European Union (ECJ). Although the political reasoning behind the withdrawal of an explicit obligation to protect the interests of the neighbouring states is comprehensible, the legal value of Art 7(4) can be doubted and will be assessed further in the chapter on binding targets and legal value.

Originally the solidarity principle was developed in the framework of European social policy and can be found today in the TEU in Art 2. However, it developed over time into a general principle of EU law which is applicable to the relation between the Member States. It therefore needs to be distinguished from the principle of sincere/loyal cooperation of Art 4(3) TEU (ex Art 10 EC) which applies to the relation between the Member States and the institutions. It does not necessary constitute a legal obligation for the Member States but is rather of political nature.

In the context of the Floods Directive, the solidarity principle means that ‘Member States should be encouraged to seek a fair sharing of responsibilities, when measures are jointly decided for the common benefit, as regards flood risk management along water courses and the obligation of Art 7(4) of the Floods Directive to coordinate measures that might have significantly increase flood risks upstream or downstream of other countries.

Solidarity under the Helsinki Convention already goes beyond mere obligations to attempt to set up a cooperation. Additionally to the general obligation to avoid significant adverse transboundary impact of activities in a riparian state it obliges the riparian states to set up joint monitoring and assessment programs that monitor the status of the transboundary waters including special events like floods. They shall share the information and set up warning and alarm systems in case of calamities. But most important in the context of solidarity is that they are obliged to provide

177 Ibid p 13 f
178 Ibid p 40
179 Consideration 15 Floods Directive
180 Different: Keessen, Kempen, van Rijswijk p 41 , ‘The Floods Directive even forbids Member States from taking measures to combat flood risks if this increases the flood risk in other states.’ (emphasis added)
181 Art 1(2) Helsinki Convention
182 Art 11 Helsinki Convention
183 Art 13, 14 Helsinki Convention
mutual assistance upon request in case of calamities. For this purpose the riparian states should set up procedures that regulate the planning, involved facilities and services as well as cost-sharing provisions.\(^{184}\) This can be seen as a missed opportunity as neither the Floods Directive nor the WFD provide for mutual assistance in case of transboundary emergencies.\(^{185}\) The Floods Directive failed to bring an added value compared to the Helsinki Convention when it comes to solidarity between the Member States.

### B. Thematic Scope

#### 1. The Flood Risk Management Cycle

The Commission Communication in 2004 called for flood risk management programmes incorporating the following steps: prevention, protection, preparedness, emergency response and recovery and lessons learned as experience had shown that this was the most effective approach to flood risk management.\(^{186}\)

Art 9(3) of the proposal for the Floods Directive still reflects this idea by stating that the flood risk management plan shall address all phases of the flood risk management cycle focusing on prevention, protection, preparedness. Additionally, the European Parliament proposed to include an assessment of rescue and recovery measures into the flood risk management plans but the Council did not take up this proposal.\(^{187}\) Furthermore the Floods Directive does not contain any explicit reference to the flood risk management cycle anymore. Instead, Flood risk management plans shall address all aspects of flood risk management, focusing on prevention, protection, preparedness including flood forecasts and early warning systems.\(^{188}\)

The last stage - recovery and lessons learned – cannot be found anywhere in the Floods Directive at all. Member States are not even encouraged in a non-binding manner to include measures in their flood risk management plans that would help ‘returning to normal conditions as soon as possible and mitigating both the social and economic impacts on the affected population’. Emergency response and the re-building of normal life in case the remaining risk realizes and there is a flooding is entirely left to the Member States discretion and the European Union Solidarity Fund.\(^{189}\)

It is not quite traceable why the risk management cycle has not been manifested in the Floods Directive\(^{190}\) although it was considered the best approach a long way through the legislative process.

#### 2. Protected Goods

What is unusual is the wide range of goods protected by the Floods Directive: ‘to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community.’\(^{191}\) Most existing national risk assessments are based on

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184 Art 15 Helsinki Convention  
185 Keessen, Kempen, van Rijswick p 44  
187 Mosterd, Junier p 4966  
188 Art 7(3) Floods Directive  
189 Consideration 8 Foods Directive  
190 Mosterd, Junier p 4966  
191 Art 1 Floods Directive; emphasis added
economic values or the number of affected persons.\textsuperscript{192} The UNECE Draft Guidelines on Floods protect ‘human health and safety, on valuable goods and property, and on the aquatic and terrestrial environment.’\textsuperscript{193} The Danube Flood Action Programme declares ‘to protect human life and property, while encouraging conservation and improvement of water related ecosystems’.\textsuperscript{194}

However, it is no doubt a technical challenge to incorporate goods that are not strictly economic like the environment or human health into the structure set up by the Floods Directive.\textsuperscript{195} If we recall the elements of flood risk maps, they are supposed to include the following aspects:

(a) the indicative number of inhabitants potentially affected;

(b) type of economic activity of the area potentially affected;

(c) installations covered by the IPPC Directive;

(d) other information which the Member State considers useful.

Human health, the environment and cultural heritage will therefore have to be considered by the Member States as ‘other information’. It will certainly pose a challenge to objectively consider all these aspects but not an impossible one. An example for a way to consider cultural heritage can be found in the preliminary risk assessment of Austria. The data taken to locate cultural heritage are Navteq 2007 Points of Interest and UNESCO World heritage sites.\textsuperscript{196}

3. Climate Change and Floods as an Increasing Threat

Thinking through the definition of ‘flood risk’ given by the Floods Directive, it means that a flood in itself is not a threat yet, it only becomes one if it affects one of the protected goods. The basic realisation in the more recent flood policy within the EU is that floods have become a bigger problem, first of all based on their increased occurrence due to the climate change and second because of increased activity within flood prone areas.\textsuperscript{197}

The Danube Flood Action Programme states:

‘The prediction of climate change, which has all but become a certainty, has been another driving force for preventive action. Climate change is expected to further aggravate the situation, leading to an increased risk of damaging flood events. Floods are the result of meteorological processes and are thus natural events and part of the natural water cycle. Massive damage is caused where humans increase the risk of flooding through inappropriate land use in high-risk areas or through serious interference in natural processes.’\textsuperscript{198}

\textsuperscript{192} Mosterd, Junier p 4970

\textsuperscript{193} UNECE guidelines Annex p 3 para 1

\textsuperscript{194} Danube Flood Action Programme p 4

\textsuperscript{195} Moel, van Alphen, Aerts p 299

\textsuperscript{196} Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, ‘Vorläufige Bewertung des Hochwasserrisikos 2011, Bericht zur Umsetzung in Österreich’ (Vienna, 2011) p 9

\textsuperscript{197} Klijn, Samuels, Van Os p 309; Klaus Wagner, ‘Der Risikoansatz in der europäischen Hochwassermanagementrichtlinie – Bewertung der Richtlinie 2007/60/EG über die Bewertung und das Management von Hochwasserrisiken aus politikwissenschaftlicher Sicht’ (2008) 30 Natur und Recht p 774

\textsuperscript{198} Danube Flood Action Programme p 4

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The Commission sees climate change as the main contributor to the increasing magnitude and frequency of floods.\textsuperscript{199} It bases its assessment of the influence of climate change on the Third Assessment Report of the Intergovernmental Panel on Climate Change.\textsuperscript{200} It advocates the adaptation to climate change and considers the adaptation capacity of a country as key to limit the impacts of floods and droughts on human welfare.\textsuperscript{201} In the Rhine Ministerial Declaration climate change and adaptation come necessarily hand in hand and flood resilience is an important aspect of it.\textsuperscript{202}

Climate change is considered to have an impact on likelihood and adverse impacts of floods in consideration 2 and Art 4(2) of the Floods Directive. Besides that, the impacts of climate change on the occurrence of floods need to be considered when reviewing flood risk management plans.\textsuperscript{203} The Floods Directive does not specifically mention adaptation or resilience as targets. Considering that it is set up within the EU environmental policy, an explicit integration of the topic or at least a more decisive approach could have been expected.\textsuperscript{204} However, compared to the WFD which does not contain any reference to climate change and the effects it might have, this already means a certain progress. It was an achievement of the consultation process for the Floods Directive, that climate change found its place in the directive.\textsuperscript{205} This was certainly necessary because evaluations of national initiatives for mapping floods and flood risks show that they tend not to take the effects of climate change into account when assessing future threats.\textsuperscript{206}

4. Spatial planning

A widely accepted method to limit the risk floods pose to human health, the environment, cultural heritage and economic activity is avoiding to accumulate economic wealth or build settlements in flood prone areas.\textsuperscript{207} Furthermore, the concept of making more space for the river\textsuperscript{208} requires areas being designated as flood plains and existing flood protection infrastructure to be adapted.\textsuperscript{209}

The UNECE guidelines are making quite a strong point about the necessity of ‘physical planning as well as urban and rural development and construction’\textsuperscript{210} by recommending the following for land use, zoning and risk assessment:\textsuperscript{211}

\begin{itemize}
  \item COM (2004) 472 final p 3
  \item Intergovernmental Panel on Climate Change ‘Fourth Assessment Report: Climate Change’ (2007); available online under: <www.ipcc.ch/publications_and_data/ar4/wg2/en/ch3s3-4-3.html>
  \item International Commission for the Protection of the Rhine, ‘Communiqué of Ministers’ (Basel, 2013) p 11
  \item Art 4(2), 14(4) Floods Directive
  \item Reinhardt p 468
  \item Heintz, Hagemeier-Klose, Wagner p 136
  \item Moel, van Alphen, Aerts p 299
  \item UNECE guidelines para 18, 19
  \item Eg Annex COM (2006) 15 final p 8, 10
  \item Appendix I(1) UNECE guidelines
  \item Ibid para 18
  \item Annex 1(ii) UNECE guidelines: land use, zoning and risk assessment, recommendations to governments
\end{itemize}
11. Uses should be adapted to the hazards in the immediate and in the potential (dyke-protected) flood plains. [...]

12. Non-structural prevention and protection should include zoning, based on hydrological and risk assessment studies. Identification and mapping of hazards and high-risk areas should be integrated into land-use planning policies.

13. Specific activities and uses in designated areas should be subject to administrative permits or authorizations. Restrictions and prohibitions should be based on risk assessments.

14. Where this is not yet the case, and where necessary, immediate flood plains should be identified and designated by law. [...] 

In the Danube Flood Action Plan, measures relating to land-use, and spatial planning are the first ones mentioned to reduce damage potential and to preserve natural retention capacities in sub basins.\(^{212}\) ‘Implement preventive measures in the field of spatial planning by introducing and promoting uses adapted to the risk of flooding’ is number four of twelve measures for achieving the ambitious targets set in the Rhine Action Plan on Floods.\(^{213}\) 

In the 2004 communication, the Commission points out that Member States are engaging in the creation of flood risk maps and that they are generally used for spatial planning.\(^{214}\) Flood risk maps therefore were also supposed to serve as input to spatial planning.\(^{215}\) 

Furthermore the Commission Staff working paper argues that if no action is taken on EU level ‘the potential damage caused by flood events is expected to increase, on the one hand because of climate change, and on the other hand because of houses and offices are built in flood-prone areas, [...] without knowing the risk of flooding, so it costs more to protect them against flooding’.

According to Art 4(2) d of the proposal for a Floods Directive, a preliminary flood risk assessments should include ‘a description of development plans that would entail a change of land use or of allocation of the population and distribution of economic activities resulting in an increase of flood risks in the area itself or in upstream or downstream regions’. Art 9(2) of the proposal states in the context of flood risk management plans that Member States ‘shall establish appropriate levels of protection specific to each river basin, sub basin or stretch of coastline, focusing on the reduction of the probability of flooding and of potential consequences of flooding to human health, the environment and economic activity, and taking into account relevant aspects: water management, soil management, spatial planning, land use and nature conservation.’

In the final version of the Floods Directive, these direct references to spatial planning and land use cannot be found anymore. The Floods Directive itself does recognize the general concept that ‘some human activities (such as increasing human settlements and economic assets in floodplains and the reduction of the natural water retention by land use) [...] contribute to an increase in the likelihood and adverse impacts of flood events.’\(^{216}\)

\(^{212}\) Danube Flood Action Programme p 22 
\(^{213}\) International Commission for the Protection of the Rhine ‘Conference of Rhine Ministers 2001, Rhine 2020, Program on the sustainable development of the Rhine’ (Koblenz, 2001) p 15 
\(^{214}\) COM (2004) 472 final p 7 
\(^{215}\) COM (2004) 472 final p 11 
\(^{216}\) Consideration 2 Floods Directive
The only remaining reference is Art 7(3) of the Floods Directive which lists spatial planning and land use as one of the relevant aspects that should be considered when setting up risk management plans next to costs and benefits, flood extent and flood conveyance routes and areas which have the potential to retain flood water, such as natural floodplains, the environmental objectives of Art 4 the WFD, soil and water management, nature conservation, navigation and port infrastructure.

It is however not surprising that there is no significant mentioning of spatial planning or land use left in the Floods Directive. After all, town and country planning as well as land use are areas where unanimity in the Council is required for adopting legislative measures. The Commission therefore did not have the possibility to include any binding measures that could be attributed to these areas into the Floods Directive. It is very unlikely that unanimity could have been achieved if the proposal would have been based on Art 192 (2)b TFEU.

The areas in which the EU has legislative competence are limited to what the treaties explicitly confers upon them. The treaties outline these areas of competence, the extent to which the EU shares them with the Member States and the competent institutions. If the references to spatial planning or land use would have remained in the proposal and passed by qualified majority, this could have been interpreted by the Commission or other institutions as widening the competence of the EU in matters of land use and town and country planning. This phenomenon is known as ‘competence creep’ and is often in conflict with interests of national sovereignty because it takes competence away from the Member States.

C. Binding Targets and Legal Value

The Floods Directive is heavily criticized for not even aiming at setting binding targets or imposing concrete measures. It obliges the Member States to conduct assessments and determine ‘appropriate objectives’ and put ‘measures for achieving the objectives’ in place. So de facto it only creates a procedural framework for the assessment and management of flood risks. This is what the title of the directive promises but it falls short of any expectations to materially contribute to the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage and economic activity.

It lags behind compared to the concrete quality targets set by the WFD as an example for EU environmental legislation as well as the Rhine Action Plan on Floods which is exemplary for high ambitions in regional cooperation. Considering the remarkably short period it took from the first proposal of the Floods Directive to its final decision, this lack of substantial regulations can probably be attributed to the need for apolitical compromise.

All three steps of the Floods Directive can be criticized for lacking tangible criteria and legal value. The criteria chosen for assessing the flood risk are highly abstract and the scenarios for flood risks

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217 Art 192 (2)b TFEU
218 Art 5 TEU: ‘Doctrine of conferred powers’
220 Reinhardt 468
221 Wagner p 778
222 Heintz, Hagemeier-Klose, Wagner p 136
223 Reinhardt p 469
equally vague\textsuperscript{224} and leave a lot, maybe even too much space for interpretation through national and regional authorities. This could counteract the aim of a uniform or approximated assessment throughout the EU. Another point of critique is the phrasing of criteria for defining areas for which flood hazard and flood risk maps need to be created. They are so vague that they lead one author to doubt whether the Floods Directive can even be considered as a directive with legally binding results to be achieved by each Member State in the sense of Art 288 TFEU (ex Art 249 TEC). Art 5(1) engages the Member States in identifying ‘those areas for which they conclude that potential significant flood risks exist or might be considered likely to occur.’\textsuperscript{225} It is a valid question what the actual result to be achieved by this provision is supposed to be.\textsuperscript{226} The flood hazard and risk maps pose a similar problem as their legal value is difficult to determine.\textsuperscript{227}

The provisions on flood risk management plans leave it up to the Member States what they consider appropriate measures for achieving the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage and economic activity.\textsuperscript{228} Art 7(3) gives however some indications as to the preferred kind of measures that should be used by urging the Member States to consider among others conveyance routes and areas which have the potential to retain flood water, such as natural floodplains. The annex only prescribes the components that a flood risk management plan should have. The reason advanced for the lack of qualitative targets are the regional differences and needs on one hand. While this might be an argument to leave the Member States the choice of measures, it is hardly a reason for not setting targets for the standards of flood risk management to be achieved.\textsuperscript{229} On the other hand, it can be argued of course that it would contradicting to set any kind of quantitative or qualitative targets and in the same directive own that floods are a natural phenomenon. The achievement of such targets would never be fully in the hands of the Member States.\textsuperscript{230} This argument is however simplifying the matter because it could just as well be used to claim that any attempt to create a regulatory framework on flood management is meant to fail due to the nature of floods.

\textbf{D. Implementation and Compliance}

The attested lack of binding targets and legal value raises the follow up question of how the implementation of and the compliance with the Floods Directive can be tracked or evaluated. The Commission’s Floods Directive Scoreboard only checks the notifications of the transposition of the Floods Directive into national law, the notification of the competent authorities and units of management and the reporting on the completion of all three steps of the Floods Directive. So far only the status of the notifications and the reporting of the preliminary flood risk assessment have been published and all Member States have submitted the required information.\textsuperscript{231} The Commission brought two actions for failure to adopt the laws, regulations and administrative provisions

\textsuperscript{224} Ib\textit{id} p 471
\textsuperscript{225} Emphasis added
\textsuperscript{226} Reinhardt p 470
\textsuperscript{227} Ib\textit{id} p 471
\textsuperscript{228} Art 7(3) Floods Directive
\textsuperscript{229} Wagner 778
\textsuperscript{230} Keessen, Kempen, van Rijswick p 35 f
\textsuperscript{231} European Commission, ‘Timetable Flood Risk’
necessary to comply with the Floods Directive before the ECJ. This means in these cases that the Member States did not assign competent authorities or did simply not notify the Commission within the deadline of the changes they made in their national systems to provide for the implementation of the Floods Directive. Both cases were however removed from the register.

The guidance document on reporting under the Floods Directive does give the Member an ‘overall methodological approach’ for the reports to the Commission but also does not give any indicators on the desired content or the criteria based on which it might be evaluated. It plainly requires plausible and consistent data that can be cross-checked and cross-referenced.

The lack of concrete, quantifiable targets can be perceived an advantage and a disadvantage. On the one hand, it leaves ample space for national and regional specificities and allows the Floods Directive to combine well with existing national measures and international forms of cooperation like international river basin conventions. On the other hand, there is a risk that Member States will chose for a pro-forma implementation. As there are no quality requirements for preliminary flood risk assessment and flood hazard and risk maps or fixed targets for flood risk management plans, the mere formal drawing up of these instruments will be sufficient to fulfil the obligations of the Floods Directive. Whether the plans are followed by policy change and concrete action, is outside the scope of the Floods Directive. The Commission has no tools available for a follow up, except the supervision of the regular revision of all instruments.

As was explained above, the obligation to cooperate within a river basin when drawing up flood risk management plans is not absolute. If it fails, each Member State remain responsible for the implementation of the Floods Directive in its own national territory. This could negatively influence the willingness of Member States to invest resources into transboundary cooperation.

The Floods Directive also obliges Member States to consult and agree on a solution with the affected Member States if it takes measures which, by their extent and impact, significantly increase flood risks upstream or downstream. If the question of correct implementation arises between two Member States because one refuses to cooperate along the river basin or passes on a flood related problem to a downstream Member States without agreement, the Commission is given first of all the role as a mediator. It cannot make any legally binding decisions on a dispute but can give an advice to the Member States on the resolution of the conflict. If mediation fails, the Commission or a Member States can bring a case for compliance with the obligations before the ECJ.

The Member States do not only have an implementation obligation to implement a Directive towards the Commission or other Member States. Also individuals have the possibility to claim damages resulting from lacking or insufficient implementation of a directive. Such claims need to be made before national courts and the procedures are subject to national law. In an ideal scenario, citizens

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234 Wagner p 779
236 Art 7(4) Floods Directive
237 Ibid p 46
238 Art 19(1) TFEU, Joined Cases C-6/90 and C-9/90 Francovic and Bonifaci v Italy [1991] ECR I-5357
would have the right under national law to claim compensation in case they suffer damages from (transboundary) flood management measures. However as the Floods Directive is lacking qualitative targets, it is questionable how effective such private enforcement can be. As the Floods Directive is clearly anchored in environmental law, the Aarhus Convention could over time prove helpful with this approach, as it obliges the signatory states to give access to information, public participation in decision-making and access to justice in environmental matters.

The flood management plans, which are the element most likely capable of giving raise to claims from other Member States or individuals are however only due in 2015, therefore there is no legislation yet on this point. The future will have to show how the ECJ will rule if they are used as a legal basis for a claim.

E. The Risk Management Approach

Although the regulatory content of the Floods Directive is rather thin, some authors argue that it still brings one fundamental change to the way floods were dealt with in the past. That is through introducing the risk management approach. The traditional way of dealing with floods is based on the assumption, that floods need to be prevented and absolute safety needs to be created. It builds on protective measures against floods, triggered by extreme flood events with a preference for structural defence like dykes and dams measures. Less attention was paid to regulating the activities and land use in flood prone areas and dealing with the remaining risk if the defences fail. But since a flood only poses a risk if people, property or other protected goods are at stake, not only the flood itself needs to be managed, but also the society that is at risk needs to be considered. The realization emerging within Europe that floods have to be managed in a more holistic way has been integrated into the Floods Directive.

The risk management approach as understood by the Floods Directive is a management process consisting of the three steps of identifying the risk (preliminary flood risk assessment), mapping the risk (flood hazard/risk maps) and developing management plans (flood risk management plans). This approach is meant to set up a procedural framework that enables (even obliges) the Member States to set up their own, regionally adapted plans to manage the flood risk. National and regional databases have to be created that have to enable the involved policy makers and authorities to take rational decisions. A study on flood maps in Europe of 2009 shows that throughout Europe many

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239 Reinhardt 473
240 Olivia O Green and others p 4
241 Heintz, Hagemeier-Klose, Wagner p 137, ‘[...] the directive brings about a paradigm shift in the way we handle floods and offers the chance to establish a risk culture and a policy change from the prevalent flood protection to a holistic flood risk management.’
242 Appendix I UNECE guidelines (18) ‘However, flood protection is never absolute; only a certain level of protection against flooding can be guaranteed.’
243 Dworak, Görlach p 100
244 Klijn, Samuels, Van Os p 309
245 Wagner p 774 f
246 Wagner p 776
247 Ibid p 776 f
248 Moel, van Alphen, Aerts
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states already worked on assessing and mapping flood events, however ‘most countries have yet to make the step from hazard to risk map’. 249

A concrete example is the German part of the Rhine river basin, which is also part of the Rhine Action Plan on Floods. Even here, where an elaborate international action plan is in place, the Floods Directive triggered significant changes in the flood policies of the federal states due to the need to incorporate the risk management approach and it has widened the geographical coverage of the three tools. 250

When looking at other flood mapping exercises examined in the study, remarkably ‘none of the mapping projects have taken into account the effect of climate change on future flood hazards.’ 251 The Floods Directive foresees regular reviews of all instruments 252 which will oblige the Member States to account also for these future risks and therefore add value even to the pre-existing instruments.

Of course this added value will depend on the willingness of the Member States to turn the tools provided for by the Floods Directive into effective flood management. If the Member States chose for a pro-forma implementation, then also the risk management approach will remain an empty structure. 253

IX. Conclusions

Whether the EU regulatory framework on flood management for transboundary rivers can receive a positive evaluation at the end of this paper will depend on the initial expectations towards such a regulatory framework. To find a standard for comparison, this paper looked different aspects: It gave an overview over the historic development of European water law and the emergence of flood management policies at European level. Then it outlined other EU policies and instruments that complement the Floods Directive and provided financial and scientific support to the development of national and European flood management policies. The Floods Directive also has to be seen in connection with other EU legislation, like the WFD and the SEA Directive. Regional River Conventions showed possible ways to cope with flood risk that were developed before as well as parallel to the Floods Directive. They also give an insight into the practice of implementing the directive in large river basins.

The paper looked at important elements of the Floods Directive and their development throughout the legislative process, the legislative process itself and important principles that underlie the Floods Directive. Important elements of the thematic scope were explained in detail to support the general conclusions with examples from the content of the Floods Directive. It evaluated the targets set by the directive and their legal value. Following this assessment, conclusions about the Commission’s possibilities for tracking implementation and compliance and the extent of Member States’ obligations could be dawn. Finally, a case was made for the Floods Directive bringing fundamental change to the way floods are dealt with in practice throughout Europe by introducing the risk management approach.

249 Ibid p 299
250 Heintz, Hagemeier-Klose, Wagner p 143
251 Moel, van Alphen, Aertsp p 299
252 Floods Directive Art 14
253 Wagner p 779
One standard of comparison can be derived from the historic development of EU and non-EU instruments related to water and flood management. The UNECE guidelines on sustainable flood prevention of the year 2000 can rightfully be considered as the starting point of European efforts to jointly manage floods. They are a non-binding instrument that has served as an inspiration for the Floods Directive. The importance of the UNECE guidelines for EU flood policy was confirmed and even strengthened by being updated in 2004. Yet in the end, the directive in the end has made very little of the guidelines. The Floods Directive could have had an added value by of transforming some of the essential elements into legally binding obligations. Instead, they largely still are what they used to be – guidelines. The directive has failed to make a significant change to the status quo.

The WFD is aimed at establishing a framework for Community action in the field of water policy and the Floods Directive is integrated in its institutional framework. However, this setup falls short of a ‘holistic approach to water management’ which the guidelines strongly recommend. The first only focuses on the quality of a water body and the second only on the management of flood risk.

The river basin approach advocated by the Helsinki Convention and UNECE guidelines is obligatory under the Floods Directive, but trans-boundary cooperation in the end not. It is entirely up to the Member States, which administrative entities are involved and if they cover different levels or are centralized. The Floods Directive does not aim to create an interdisciplinary environment for flood management and relies on EU funds for research to create input from the scientific community.

The good practices given by the UNECE guidelines give very detailed and clear recommendation for flood management like water retention measures, land use and zoning related issues, structural measures and warning-systems. The Floods Directive refrains from taking them up or even suggesting them as non-binding options. In the vital area of spatial planning, this can be explained by the structure of EU decision making and the political sensitivity of the topic. The aims of the Floods Directive had to be formulated without interfering in the Member States competence in the town- and country planning and land use.

In a similar way as spatial planning, other concepts that were strongly advocated at the emergence of the European policy on flood management changed throughout the legislative process. A change that certainly went into a positive direction, was the stronger consideration of climate change. It was recognized as one of the two essential reasons why floods pose an ever greater risk to the society. The second is society itself, which needs to change the way it faces flood risks.

But the Floods Directive is even a step back looking at EU water policy as a whole and from what has been achieved in the WFD. Even if the WFD cannot claim to provide for holistic water management, it at least has clear, binding (ecological) targets. The Floods Directive is seven years younger but instead following this progressive approach, it falls back into merely setting up administrative obligations. The Rhine Action Plan on Floods shows that even in a transboundary context it is possible to agree on very concrete targets.

Compared to other regional flood management measures, the Floods Directive widens the scope of protected goods. Translating these values into maps and plans is of course a challenge because values like cultural heritage cannot easily be transferred into monetary values but it is certainly a challenge worth facing because it broadens the view on flood management compared to a pure economic point of departure. Studies also show, that the Floods Directive serves to widen the geographic scope of good practices and initiatives that were started within regional co-operations. Although the Rhine and the Danube flood management plans avoid to explicitly clarify their relationship with the Floods Directive, it is clear that they influenced each other and that the
respective commissions are eager to fulfil their responsibility as coordinator for the implementation of the directive within the international river basins.

Yet another way to look at the Floods Directive as it stands, asking if it fulfils the requirements of the flood risk management cycle. It was advocated throughout the development of the directive, but did find its way into the final version. It consists of different phases: prevention, protection, preparedness, emergency response, recovery and lessons learned. The directive itself can only provide a framework for prevention, protection, preparedness of the Member States. EU policies other than the Floods Directive itself can complement it in order to enable the EU regulatory framework to cover more elements flood risk management cycle. The LIFE programme as well as the ERDF provide funding for concrete projects for prevention, protection and preparedness measures. The European Solidarity Fund is available to the Member States in the recovery phase. Research funding can contribute to preparedness as well as processing lessons learned at the level of the Member States and EU. A strong point of critique is, that the Floods Directive missed out on the opportunity to provide for emergency response in the sense of immediate help between the Member States in the river basin. The provisions about solidarity and consideration of interests upstream and downstream were watered down throughout the legislative process and in the end even remain more vague and abstract than the obligations provided for by the Helsinki Convention. The real added value of the Floods Directive can therefore not be found creating a flood risk management cycle for the Member States.

The Floods Directive can also be evaluated from a more technical angle by looking at the legislative process, underlying principles and the legal value of the end product. It can be challenged that the EU competence in the area of environmental policy is the correct legal basis for the Floods Directive. Contrary to what it claims, it is mainly concerned with the assessment and management of a natural hazard. However it has been accepted by the legislator and was not challenged in any proceedings before the ECJ and has not created problems in practice so far.

One of the severest points of critique is reached when looking at the legal nature of the Floods Directive. As a directive, it is meant to impose legally binding results to be achieved by each Member States. The Floods Directive does create a procedural framework for the assessment and management of floods, which is what the title promises. But the tools it prescribes for the Member States (preliminary flood risk assessment, flood hazard and risk maps, and flood risk management plans) are so vague that some authors even deny them the quality of ‘legally binding results to be achieved’. Contrary to the WFD, the Floods Directive does not contain any quantitative targets for risk reduction or qualitative targets for the assessments, maps and plans that the Member States have to deliver.

The consequences of this substantial problem manifest themselves in difficulties with tracking implementation and compliance to the Floods Directive. They are not as such procedural difficulties. As the obligations of the Member States only go as far as having assessments, maps and plans in place, the Commission can easily track if it has been notified of the existence of such tools. In no way can the Commission track however, if these tools have been followed up by policy changes or concrete actions. Any implementing measures based on risk management plans, the targets that they set and the legal value they have in Member States is completely up to the national legislator. As flood risk management plans are only due end of 2015, the future will have to show if they can be suitable as a legal basis for damage claims between Member States or a Member States and individuals.
It was argued in the paper, that a strictly legal analysis of the Floods Directive ignores the fundamental change which it brings to flood policy in Europe by introducing and codifying the risk management approach. It is a management process with three steps which are translated into the preliminary flood risk assessment, the flood hazard and risk maps and the flood risk management plans. Studies showed, that even good case practices such as the Rhine lack one or two of the elements. And even in river basins where such an approach is taken, not necessarily the entire river basin is already included. If the Floods Directive therefore manages to widen the geographical scope of application of the risk management approach, it will certainly have an added value, especially for regions which have some kind of flood management plan but lack a holistic approach.

Even the most enthusiastic authors have to admit however, that from the point of the flood risk management plans it will largely depend on the Member States if the Floods Directive really bring an added value to the status quo. If a Member States choses for a pro-forma implementation, the improvement of flood management on European and national level is meant to fail and there would be no legal consequences for the respective Member States. The situation strikingly resembles the scenario set out by the Commission if the European legislator hat gone for the option of a strictly voluntary approach in the form of a Commission communication with non-binding recommendations.

The Floods Directive has a not quite suitable legal basis and thematic categorization. It is necessarily dependent on politically sensitive topics like climate change and strictly national competences like spatial planning. Its content has rather little legal value but is rather programmatic. And on top of it all it has to rely on Member States willingness to make a difference. But after all, like many an EU instrument, the Floods Directive is the result of a political process. There were many opportunities to incorporate good practices and solutions provided by pre-existing tools and regional agreements but is a compromise between what was aimed at and what was reasonable and acceptable for the Member States.

The Floods Directive does create a procedural framework for the assessment and management of floods as the title promises. It does also create the opportunity for change and provides together with other EU and non-EU tools guidance and practical assistance. But it is far from directly contribute to the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage and economic activity. It provides an opportunity for improvement and an optimist would assume that Member States make use of it. If they have to invest time and resources into drawing up flood risk management plans, they might as well do it properly and use all tools and support that is made available by the EU regulatory framework.
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