Article

Law and politics in river basin management; the implementation of the Water Framework Directive in the Netherlands

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Abstract: This article discusses the implementation of the Water Framework Directive (WFD) in the Netherlands and intends to show how law and politics combine in river basin management. Initially, the implementation of the WFD in the Netherlands was approached as a technical and administrative issue, handled by water quality and ecology experts, but in 2003 this approach was broken open by the agricultural sector, who were worried about stricter regulation. Subsequently, the environmental objectives of the WFD were set as low as possible and they are not used in authorising individual projects. Yet, in 2015 of the European Court of Justice determined that the environmental objectives have binding effect and that Member States have to refuse authorisation for projects that endanger the achievement of these objectives. In the future, the European Court of Justice and national courts may force the Dutch government to change its approach. They may only do so because and as long as they enjoy sufficient social and political support and function relatively independently. The article concludes that, to understand river basin management fully, one has to open up the black box of water law and become a kind of water lawyer.

Keywords: Water framework directive; European Union; the Netherlands; water law; politics

1. Introduction

On 1 July 2015, the Court of Justice of the European Union, or in short the European Court of Justice, issued a preliminary ruling in the case between the Bund für Umwelt und Naturschutz Deutschland (a German environmental NGO) and the Federal Republic of Germany concerning the deepening of the Weser estuary [1]. The deepening would most likely have some negative effects on the estuary. This might conflict with the Water framework directive (WFD) since one of the environmental objectives of the WFD is to prevent deterioration of the water status. The case was brought before the Federal Administrative Court of Germany, but it was not clear for this court whether the negative effects count as "deterioration" and, if so, whether this implies that the deepening project cannot be authorised. Hence, it decided to stay the proceedings and referred these two questions to the European Court of Justice for a preliminary ruling.

The European Court ruled that the environmental objectives of the WFD are not mere management objectives but have binding effect, and that Member States have to refuse authorisation for projects that jeopardise the achievement of these objectives. In the Netherlands, however, individual projects are not or not fully assessed against the environmental objectives of the WFD [2-4]. Instead, the environmental objectives have to be incorporated in the different water plans and the different water plans have to be implemented. According to the junior minister for water management, this would ensure that the environmental objectives are reached [5]. This is, however, questionable.

The purposes of this article are, first, to describe the implementation of the WFD in the Netherlands and explain why the Netherlands do not comply with the Weser ruling and what the consequences of this could be. Much has already been written about the implementation in the Netherlands from a policy perspective (e.g. [6-16]), but this body of literature only covers the period

until 2012, when the first river basin management plans were adopted, and does not go into detail concerning the legal aspects. There is also a smaller body of legal literature, but this literature does not discuss the political aspects of implementation (e.g. [2,17,18]). In this article I try to integrate these two perspectives in order to give a more comprehensive view.

The second purpose of this article is to illustrate how law and politics combine in river basin management. This importance has been recognised before, but law is often conceived as a normative domain distinct from politics [19], as a means of political domination [20], or as consciously designed rules for rational natural resources management [21,22]. In this article I follow a different approach, that of the French sociologists Pierre Bourdieu [23,24], who conceives law as a relatively independent social "field" with its own actors and principles.

This article is based to a large extent on literature study. In order not to miss any important publications on the implementation of the WFD in the Netherlands, I conducted two literature searches in Google scholar, using the search term "Aquarein" (see below; 102 hits) and the search terms "C-461/13" (the number of the Weser case) AND "Kaderrichtlijn water" (WFD in Dutch; 12 hits). In addition, I consulted original sources, such as the WFD, the ruling in the Weser case, the most relevant Dutch laws and byelaws, and the most relevant policy documents. Finally, I have been involved in an advisory capacity in the implementation of the WFD (e.g. [25-27]) and as a result I have interacted directly with some key stakeholders.

The article is structured as follows. In the next section, the WFD and its environmental objectives are introduced, focusing on its environmental objectives. In section 3, the implementation process in the Netherlands until 2015 is described. In section 4, the Weser judgement and the Dutch reaction to it are discussed. In section 5, the importance of water law for the implementation of the WFD and water management more generally is discussed. The article ends with a short conclusion.

2. The Water framework directive and its environmental objectives

The WFD has been interpreted as an important innovation in European water governance [28] and as a missed opportunity for introducing integrated water resources management [29]; as an ambiguous document trying to combine expert-based and participatory approaches [30] and strict regulatory and flexible economic approaches [31]; and as the victim of political convenience and vested interests [32]. But whatever else it is, the WFD is also an EU directive.

EU directives are binding upon the Member States as to the result to be achieved, but the Member States can chose the form and methods to achieve these results. Unlike EU regulations, they generally do not apply directly in the EU and first have to be transposed into binding national law.

EU law generally is enforced strictly. The European Commission can start an infringement procedure if a Member State does not implement EU law correctly, and if the Member State does not give a satisfactory explanation, the Commission can issue a "reasoned opinion", indicating the changes the Member State has to make by which date. If the Member State does not comply, the Commission may bring the Member State before the European Court of Justice. If the Member State does not implement the Court's decision, the Commission may (since the entry into force of the Maastricht Treaty in 1993) bring the case before the Court for a second time, and then the Court may impose a lump sum or penalty payment.³ Member States may also be brought before the Court by

¹ Art. 288 Treaty on the functioning of the European Union (TfEU)

² Provisions of directives that are specific and leave little room for discretion have direct effect (apply directly). EU generally applies directly. This was ruled in by European Court of Justice in 1963 in the Van Gend & Loos case: the "Community constitutes a new legal order (…), the subjects of which comprise not only Member States but also nationals. (…) Community law therefore not only imposes obligations on individuals but it also intended to confer upon them rights which become part of their legal heritage" (quoted in [33], p. 60). There was nothing in the treaties founding the (predecessors of the) EU that compelled the Court to interpret EU law in this way. Arguably, it was a political decision, couched in legal terms, to promote European integration by legal means ([33], see also [34]).

³ Art. 258 and 260 TfEU

other Member States, but this happens rarely.⁴ In addition, national courts have to interpret rules of national law in a way that is consistent with EU law and they have to apply some rules of EU law directly. If they have questions concerning the correct interpretation of EU law, they may refer these questions to the European Court for a preliminary ruling, as happened in the Weser case.⁵

Concerning environmental law, the Commission received 339 complaints on incorrect implementation in 2018, started 73 new infringement procedures, and referred 10 cases to the European Court of Justice. In addition, the Court issued three preliminary rulings [35]. The fines imposed by the Court can be very high. For instance, on 31 May 2018 the Court ordered Italy to pay a lump sum penalty of EUR 25 million for non-compliance with the Urban wastewater treatment directive and a further EUR 30 million for every 6 months of delay until full compliance is achieved [36].

While the legal status of EU directives is generally clear, the same could not be said of the environmental objectives of the WFD. According to article 4 of the WFD, Member States have to prevent deterioration of the water status and protect, enhance and restore all water with the aim of achieving a "good water status" by 2015. For surface water bodies, good water status means a good chemical status, as defined by the Environmental Quality Standards Directive (EQSD), and a good ecological status, defined as a slight deviation from undisturbed conditions. For water bodies designated as artificial or heavily modified, the ecological objective is a good ecological potential, which takes into consideration their artificial or heavily modified character. For groundwater bodies, a good water status means a good chemical status as defined by the Groundwater directive (2006/118/EC), and a good quantitative status, e.g. no over-abstraction.⁶ If Member States cannot reach a good status or potential by 2015, they may extend deadlines by six years maximally twice and set lower objectives, but only if reaching the objectives in time is technically not feasible or disproportionately expensive.

This description of the environmental objectives is only an incomplete summary. As printed in the Official Journal, article 4 is nearly three pages, annex V with more specifics 31 pages, the Environmental Quality Standards Directive 14 pages, and the Groundwater directive 13 pages. Still, until the Weser ruling of 1 July 2015, it was not clear whether the environmental objectives entailed an obligation of result or only an obligation of effort. In other words, do Member Status have to prevent deterioration and reach a good status or potential, or do they only have to make a serious effort?

This ambiguity in the WFD can be explained by how it was developed ([37], [13], Annex V). In the EU, proposals for new directives are drafted by the European Commission, usually after extensive consultations and lobbying. Proposals for new environmental directives then have to be adopted by both the Council (the environmental ministers of the Member States), and, since 1 May 1999, the European Parliament. The Council was against binding environmental objectives, while the European Parliament was in favour. Eventually a conciliation procedure was necessary, involving representatives of the Commission, the Council and the European Parliament.⁷ The compromise reached was to formulate the objective of reaching a good status or potential as an obligation of effort (Member States have to take action "with the aim" of achieving a good status or potential), and the no-deterioration objective as an obligation of result (Member States shall implement the "necessary measures" to prevent deterioration; see also recital 25).

3. Implementation of the WFD until 2015

In the Netherlands, preparations for the implementation of the WFD started already in 1997. The activities initially focused on the system of river basin management required by the WFD. 8 Issues

5 Art. 267 TfEU

⁴ Art. 259 TfEU

⁶ Annex V WFD

⁷ Art. 294 TfEU

⁸ Cf. art. 13 and 14 WFD and annex VII.

addressed included the incorporation of river basin management plans in the Dutch planning system [25,26], coordination in the river basin districts [38], the information needed for the river basin management plans [39], and staff requirements [40]. Occasionally, it was noted that the environmental objectives of the WFD differed from the current ecological standards: the environmental objectives would be binding and apply to all waters, whereas the current ecological standards were policy objectives for waters with a high nature value only (e.g. [41]). Few people had heard about the WFD [40], and a common opinion among those who had was that water management in the Netherlands was functioning well and achieving the environmental objectives would therefore not be a major issue [42].

Yet, around 2000 ideas about the implementation of EU directives were already changing. Several directives had been causing problems [43,44]. For example, in 1998 the Commission had started an infringement procedure against the Netherlands for not correctly implementing the Nitrates directive, and in 2003 the European Court decided that the Netherlands had indeed not fulfilled its obligations under this directive [45]. Consequently, agriculture had to face stricter controls on the use of manure.

In March 2003, the junior minister for water management submitted a bill to Parliament to facilitate the implementation of the WFD.9 The bill dealt primarily with administrative issues, such as the boundaries of the different river basin districts in the Netherlands. Yet, when it was discussed in the water committee of Parliament, MPs from the Christian Democratic party, which traditionally has strong links with the agricultural sector, used the bill as an opportunity to criticise the implementation process so far. They saw this as highly bureaucratic and called for a more open approach.10

Plenary discussion of the bill was scheduled for 2 December 2003, but Parliament removed the item from the agenda as a result of the publication of the Aquarein study in November [46]. The Aquarein study explored the consequences of the WFD for agriculture. It concluded that, to reach a good ecological status, two-third of the agricultural area would have to be taken out of production, and to reach a very good ecological status the whole agricultural area. It did not consider the possibility to designate water bodies as artificial or heavily modified, extend deadlines and set lower objectives. Significantly, the Aquarein study had not been commissioned by the interdepartmental working group coordinating the implementation of the WFD, but by the Ministry of Agriculture on its own. According to one of its authors, a former staff member of the Ministry of Agriculture, the strategic purpose of the study was to break open the bureaucratic implementation process and put the WFD on the political agenda ([42], p. 305). At the conference where the results of the Aquarein study were presented, the representative of the national agricultural organisation LTO was more outspoken. According to him, the implementation process so far had been left to "civil servants and scientists who care primarily about water quality", but "the implementation of the WFD should not be left to ecologists" ([47], p. 32–33).

The agricultural lobby was quite effective. In April 2004, the junior minister for water management published a policy note with the Dutch ambitions concerning the implementation of the WFD [48]. According to the note, the Netherlands would do nothing beyond what is required by "Brussels". Existing land use would not be questioned, and ample use would be made of the possibilities for designating water bodies as artificial or heavily modified and extending deadlines.

The bill to implement the WFD was finally adopted on 7 April 2005. Despite these delays, the Netherlands managed to adopt the first river basin management plans before the deadline of 22 December 2009. A total of 723 surface water bodies were identified, of which 711 were designated as artificial or heavily modified, as well as 23 groundwater bodies. For 625 surface water bodies and 7 groundwater bodies the deadline for reaching the environmental objectives was extended. Still, many measures for improving the water status were adopted. These included the construction of 2540 km of nature-friendly banks and the adaptation of 628 water management works to allow fish migration

⁹ See art. 3 WFD

¹⁰ Second Chamber of Parliament, 28 808, No. 5

[49]. The Dutch approach stands in stark contrast to the approach taken in Germany and France, where the environmental objectives were ambitious but it was not clear whether the necessary measures would be taken [7]. Most of the Dutch measures were taken by water managers and had a technical character: changes in land use and agricultural practices were not considered [50].

The river basin management plans and the national programmes of measures were integrated in the existing Dutch water plans: the river basin management plans became an annex to the national water plan, and the programmes of measures consisted of measures included in the State water management plan, the 12 provincial water plans and the water management plans of the 27 regional water authorities (currently 21). To facilitate planning, coordination structures at the national and the river basin level had been set up in 2002. In addition, "active involvement of all interested parties" had been organised.¹¹ At the national and the river basin levels, this was limited to the exchange of information with organised interest groups in so-called sounding board groups [9,51,52]. The agricultural sector and industry were satisfied with this opportunity to monitor the implementation process (probably because they could exert real influence elsewhere), but the environmental NGOs less so.

The second river basin management plans from 2015 did not bring much news. The coordination in the river basin districts was functioning well and several revisions were made to the plans, but the Dutch policy with respect to the WFD did not undergo major change.

4. The Weser ruling and the Dutch reaction

Then, on 1 July 2015, the European Court of Justice issued its preliminary ruling in the Weser case [1]. In accordance with its own jurisprudence, the Court did not only consider the exact wording of the WFD, but also its objectives and the history of its development. Specifically concerning the nodeterioration objective, the Court stated that the phrase "Member States shall implement the necessary measures" attests to the binding force of that objective. These necessary measures may include refusing authorisation of new projects. Concerning the environmental objectives more generally, the Court referred to the text of art. 4, section 1, which states that the objectives should be taken into account "in making operational the programmes of measures". According to the Court, this implies that the objectives entail obligations that must be complied with when approving individual projects. In addition, the Court referred to recital 25, which states that environmental objectives should be set "to ensure" that a good status is achieved and deterioration is prevented, and to art. 1(a), which states that the purpose of the WFD is to establish a framework that "prevent(s) further deterioration and protects and enhances the status of aquatic ecosystems". On this basis, the Court concluded that the environmental objectives do "not simply set out, in programmatic terms, mere management-planning objectives, but has (sic) binding effects" ([1], point 43). Consequently, Member States have to refuse authorisation for an individual project when it may cause deterioration of the water status or jeopardises the attainment of a good water status or potential (see also [18]).

For the Netherlands the most problematic aspect of the ruling is that individual projects have to be assessed against the environmental objectives. In the Netherland, this is not done. The environmental objectives have been transposed into a Cabinet order, the Decision Quality Standards and Monitoring Water 2009 (in short DQMW 2009). The DQMW 2009 includes the water quality standards from the Environmental Quality Standards Directive and the Groundwater Directive, which define the "good chemical status" of surface and groundwater. For the good ecological status, the Cabinet order refers to the definitions in the WFD and to the official Dutch monitoring programme. This monitoring programme in turn refers to the so-called Ecological Quality Ratios system, developed by STOWA, a foundation of the regional water bodies that funds water research [53]. According to the DQMW 2009, water bodies can be designated as artificial or heavily modified, deadlines can be extended, and lower objectives can set only on the grounds mentioned in the WFD.

¹² Ministerial regulation monitoring WFD

¹¹ Art. 14 WFD

For the largest surface waters, the so-called State waters, the environmental objectives are set in the State water management plan, and for the other waters in the provincial water plan.

The national, provincial and regional water authority have to ensure that the environmental objectives are reached, and measures for reaching these objectives included in these plans have to implement the measures included.¹³ There is, however, no legal obligation to implement measures included in the municipal water plans, which deal, among others, f with sewer management. Moreover, in practice new projects may be proposed that were not considered when the water plans were drafted. Before such projects can be authorised, the effects on the quality of the receiving waters has to be assessed, but this assessment considers only concentrations of substances and not for instance the effects of morphological alterations [4].¹⁴ Furthermore, achieving the environmental objectives may require action outside of the water sector, such as changes in land use or agricultural policy [2]. According to Dutch law, water managers have to be consulted in the development of landuse plans, but they lack any formal powers to stop new developments. With respect to agricultural policy there is even less regulated.

The Dutch approach to the environmental objectives of the WFD can be explained by three factors. First, there is the Aquarein study and lobbying by the agricultural sector, discussed in the previous section. Secondly, there were important economic and political developments in the early 2000s. In 2008, the Netherlands faced the global financial crisis and in 2010/2011 the national budgets for implementing the WFD and nature policy were cut significantly. In addition, in October 2010 the Netherlands got a new cabinet, with a junior minister (Hein Bleker) for agriculture and nature who was very much supporting agriculture. As he recently told the Dutch newspaper NRC (27 December 2019), he would have cut the budget for nature even without the financial crisis.

Thirdly, the implementation of the WFD followed the approach developed for implementing EU air quality directive. In the early 2000s the Netherlands had experienced problems with meeting the air quality standards from this directive, which had been transposed into Dutch law as assessment criteria for new projects. Subsequently, the Dutch courts nullified several authorisations for new projects [43]. In response, national government developed the so-called "programmatic approach". This involves the development of a programme of measures that should ensure that environmental quality standards are met while creating space for new development. New projects are no longer assessed against the environmental quality standards and can be authorised if they fit in the programme. A programmatic approaches has been developed not only for air quality and the WFD, but also for Nitrogen deposition in Natura 2000 areas (a European network of nature areas). [54-56]).

Yet, a programmatic approach has to comply with European law too. This became crystal clear in the preliminary ruling of the European Court of Justice of 7 November 2018 concerning the Dutch Programmatic Approach Nitrogen and the subsequent decision by the Dutch Council of State of 29 May 2019 [57,58]. This programmatic approach conflicts with the Habitat Directive, in particular the directive's requirement to compensate for negative effects of new activities, and consequently it may not be used to authorise such activities [59]. Currently, the Netherlands are facing a "Nitrogen crisis": many building projects are on hold, agriculture will be facing stricter controls, and builders and farmers have organised large demonstrations and blocked highways.

Back in 2015, a question was asked in Parliament to the minister for water management concerning the implications of the Weser case for the Netherlands. According to the minister, the ruling supported the Dutch approach for implementing the WFD. The Court had decided that the environmental objectives have to be applied to individual projects, but not how this should be done, and it did not rule out a programmatic approach [5]. That in itself is correct. Yet, one cannot infer from the fact that a programmatic approach is not ruled out that the Dutch approach for implementing the WFD complies with EU law. For the reasons given above, this is questionable.

The European Commission has not (yet?) started an infringement procedure against the Netherlands. However, in its evaluation of the river basin management plans for 2015–2021, it

¹³ Art. 4.1 and 7.1 DQMW 2009, art. 8.1 Water decision (a Cabinet order)

¹⁴ Art. 9.2 and annex Regulation environmental law

recommended the Netherlands to complete the assessment of the effectiveness of the existing agricultural measures and identify which additional measures are needed to achieve the objectives of the WFD. Moreover, it expressed some doubts about the large number of exemptions and their justification ([60], p. 19). According to analyses by the Netherlands Environmental Assessment Agency, additional measures will be needed to meet a good water status or potential by 2027 [61]. If these are not taken, the only option left is to lower the environmental objectives, and this will have to be justified in the river basin management plans.¹⁵

5. The power of law

The implementation of the WFD in the Netherlands can be read in different ways. One reading is purely political: implementation was determined by national politics and more specifically the relatively strength of different interest groups. The WFD itself is of course a legal document, but it is also the result of a political process, in which many efforts were made to limit its practical implications. Still, these efforts were made to prevent legal problems with the European Commission, the European Court of Justice and national courts, and legal problems may still occur.

In this section, I give a somewhat different reading. While recognising the importance of politics, the implementation of the WFD and river basin management more generally are also about law. Following Bourdieu [23], I approach law neither as purely formal system of norms, nor as a mere instrument of power, but as a distinct social field. This field has its own structure and logic and its own type of capital, recognised legal expertise, which is linked with formal qualifications and positions (see also [62]). At the top in this field, in as far as European law is concerned, is the European Court of Justice. They have the final say as to the meaning and practical implications of EU law. Below the European Court are different rungs of national courts and the many civil servants, academics, barristers and attorneys that deal with European law in a professional capacity.

The juridical field is not completely independent from politics. The materials they work with include different regulations adopted by political bodies, such as the European Parliament, the Council of Ministers and national legislative bodies. However, they also develop and use their own jurisprudence, formulate their own legal principles, and interpret the different regulations in their own way (cf. footnote 2). They may also overturn political decisions. But the juridical field can only function in this way "to the extent that the law is socially recognized and meets with agreement (...) because it corresponds, at least apparently, to real needs and interests" ([23], p. 840). Put differently, the juridical field needs social and political support. If it loses support, courts may lose their independence, as may be happening in Hungary since 2010 and Poland since 2015 [63]. And if the EU juridical field loses support, Member States may decide to leave the European Union, as the United Kingdom recently did.

Paradoxically, the better the juridical field serves social and political interests, the more independence it can enjoy on a day-to-day basis. But this does not mean that law serves only the interests of those in power. At its best, law provides stability, predictability, freedom and equality before the law. It can also legitimise the exercise of power under the "mask" [33] of law, but only if those in power are seen as respecting the law and the law has some benefits for the less powerful as well. Hence, it can impose constraints on those in power—to make their power more bearable and acceptable and thereby more secure [24].

Zooming in on the Netherlands, we can observe that interest in EU matters is generally low, but the number of people wanting to stay in the EU is far larger than the number of people wanting to leave [64]. The European Court of Justice is generally respected and national courts are independent and can overturn political decisions. Recent examples include the decisions of the district court of The Hague of 24 June 2015 and the Court of Appeal on 9 October 2018 in the Urgenda case, which required the State to reduce greenhouses gas emissions by at least 25% in 2020 compared to 1990 to

15 Art. 4 WFD

mitigate climate change. [65]. In national politics, law may be ignored temporarily or, more commonly, interpreted restrictively to fit current policy, but when political decisions are overturned, the law takes precedence again. This has happened with respect to Programmatic Approach Nitrogen, mentioned above, and might happen in the future with respect to the WFD.

To understand how river basin management works, it is essential to understand how (water) law works. Key question are who make and interpret the law, who controls and enforces compliance and how, and what the law currently is. To answer these questions, it is essential to open up the legal black box. Laws can remain paper tigers, and rarely are they implemented exactly as intended by the legislators (who may not agree with each other anyway, witness the WFD: [37]). Yet, they can have a large impact on practice. Law never is a full answer to the challenges of river basin management. Effective river basin management requires cooperation and deliberation (e.g. [66,67]), and these cannot be legislated into being. Legislation may even frustrate cooperation and deliberation as it tends to be rather inflexible and sometimes bureaucratic (cf. [44]). Yet, legislation and especially the possibility to litigate is an important resource, and without this resource some parties would not be allowed to participate in water management or would not be taken seriously.

This article is not the first to emphasise the importance of water law, but the approaches to law differ widely. In addition to purely legal and purely political approaches mentioned before, there is also for instance the theory of common pool resources management, in which law figures in the form of consciously designed institutions for rational natural resources management (e.g. [21,22]). Yet, with one notable exception (the case of groundwater management in Southern California), lawyers and courts are mostly absent from this literature. This is probably because law is associated with government regulation, whereas the main interest of this literature is self-government by the resource users themselves.

6. Conclusion

This article set out to describe the implementation of the WFD in the Netherlands and show how law and politics combine in river basin management. Although many measures for improving the status of the waters have been taken, the Netherlands do not comply with the European Court's of Justice preliminary ruling in the Weser case, which requires that new developments are assessed against the environmental objectives of the WFD and that authorisation is refused if they jeopardise the attainment of these objectives. This lack of compliance can be explained by a combination of a) lobbying by especially the agricultural sector; b) a political climate in which environmental issues got a lower priority and the EU is unpopular; and c) previous problems with implementing EU directives. For the time being this lack of compliance does not cause problems comparable to the current "Nitrogen crisis", but in the future the European Court of Justice may force the Netherlands to comply.

The implementation of the WFD in the Netherlands shows that in river basin management law and politics blend, but also that law cannot be reduced to politics or vice versa, assuming that the juridical field—the courts and the lawyers—functions relatively independently on a daily basis, as it does in the Netherlands. Law may simultaneously legitimise and constrain the use of power, but it has an internal logic and structure that should be respected if it is to have any effect at all. Anyone interested in river basin management should therefore develop a good understanding of water law and its functioning.

Acknowledgments: In this article I argued, among others, that law is a distinct social field with its own form of capital. The same is true for science [68]. In the Netherlands, the main form of scientific capital has become the acquisition of external funding, which reduces the possibilities for independent and innovative research. Dutch universities receive lump-sum funding for so-called "free research", but also this funding is used increasingly

¹⁶ The courts based their decision on their interpretation of the "duty of care" of the State towards its citizens and the right to life and to family mentioned in the European Convention on Human Rights.

on priorities set by funding agencies, to complement external funding and because researchers specialising in these priorities are more likely to attract external funding and therefore make a career in science.

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