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A Wider Notion of the Scope of Water Services in EU Water Law

Boosting Payment for Water-Related Ecosystem Services to Ensure Sustainable Water Management?

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1. Introduction

The services ecosystems providing for mankind, like the provision of (clean) water for drinking and other purposes, are under pressure. Payment for ecosystem services, incentive pricing policies and the recovery of service costs are instruments to attain a sustainable use of scarce environmental resources and ecosystems. Sustainability has become an integrated concept in EU legislation. In European water legislation striving for sustainable water use is laid down explicitly in the Water Framework Directive¹ (WFD), together with obligations to ensure action.

The WFD starts in the preamble with positing the specific position that water has for mankind, not being a commercial product like any other, but a heritage which must be protected, defended and treated as such. Furthermore, sustainable water use is explicitly incorporated in the purpose of the Directive. One of the provisions to ensure this sustainability has been laid down in Article 9 WFD, a provision which obliges Member States to recover the costs of water services.

Based on this provision Member States shall take account of the principle of the recovery of the costs of water services. I will further elaborate upon this. Article 9 WFD obliges Member States to provide in their water pricing policies adequate incentives for users to use water resources efficiently and thereby to contribute to the environmental objectives of the WFD. Furthermore, Member States need to ensure an adequate contribution of the different water uses, at least divided into the categories of industry, households and agriculture, to the recovery of the costs of water services.

But does the WFD thereby actually embrace the concept of payment for water-related ecosystem services? Does the WFD text offer enough possibilities to actually integrate the concept of payment for water-related ecosystem services or should adjustments or supplements be made? As I will show, the answer to these questions depends, amongst other things, on the interpretation (narrower or broader) of 'water services' as defined in the WFD.

In order to provide an answer to the question whether the WFD embraces payment for water-related ecosystem services, an analysis is made of the purpose of the WFD (Section 2). The reason for starting with an analysis of the purpose of the WFD is that provisions in the WFD should be looked upon in view of the purpose of the Directive. Following European case law, terms must be interpreted in the

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1 Directive 2000/60/EC, OJ L 327, 22.12.2000, p. 1.

light of the aim/purpose of the Directive.² By analyzing the purpose of the WFD the scope is provided in which interpretative questions regarding ‘water services’ will need to be resolved. Secondly, in Section 3 a general overview is first provided of the WFD provision regarding the cost recovery of water services (Article 9 WFD), highlighting the concepts of ‘water use’ and ‘water service’ as mentioned in the WFD and outlining the possible different views on the extent of the definitions (narrower or broader). Besides the WFD and related European parliamentary documents, and the lack of any specific case law relating to the definition of water services in the WFD, other sources like the guidance document of the Common Implementation Strategy,³ press releases by the European Commission and information available from other stakeholders are used to assess which interpretation, a narrow or a broad one, should prevail. In Section 4 the congruence of ecosystem services with WFD water services is addressed outlining the consequences that a narrow or broad interpretation of water services can have on the scope of application of the WFD cost recovery provision.

With regard to referrals to the text of the WFD in this paper, these refer to the English text of the Directive. Examples used in this paper relate to the Netherlands unless mentioned otherwise.

2. The Purpose and objectives of the WFD

The WFD aims to maintain and improve the aquatic environment in the European Community. The purpose of the Directive, as outlined in Article 1, is:

‘to establish a framework for the protection of inland surface waters, transitional water, coastal waters and groundwater, which:

- a. Prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- b. *Promotes sustainable water use based on a long-term protection of available water resources* [emphasis added];
- c. Aims at enhanced protection and improvement of the aquatic environment, *inter alia*, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
- d. Ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and
- e. Contributes to mitigating the effects of floods and droughts and thereby contributes to
 - The provision of the sufficient supply of good quality surface water and groundwater as needed for *sustainable, balanced and equitable water use* [emphasis added],
 - A significant reduction in pollution of groundwater
 - The protection of territorial and marine waters, and
 - Achieving the objectives of relevant international agreements, including those which aim to prevent and eliminate pollution of the marine environment, by Community action under Article 16 (3) to cease or phase out discharges, emissions and losses of priority hazardous substances, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.’

The environmental objectives to be attained are outlined in Article 4 of the WFD. Roughly, for surface waters the objectives relate to implementing measures to prevent deterioration and aiming at the improvement of the surface water status and ecological quality. For groundwater measures need to be taken to reduce the input of pollutants and to prevent deterioration. Also a good groundwater status is an

² E.g. C-188/07, *Commune de Mesquer*, Para. 38.

³ Common Implementation Strategy of the Water Framework Directive (2000/60/EC), *Guidance document no. 1, Economics and the environment, the implementation challenge of the Water Framework Directive*, European Communities 2003.

objective which needs to be ensured by balancing abstraction and recharge. And the status of protected areas⁴ needs to be compliant with the objectives and standards within 15 years after the date of the entry into force of the Directive, unless other Community legislation provides differently.

The environmental objectives are to be achieved by establishing a programme of measures (Article 11). This programme of measures needs to be made for each river basin district.⁵ The programme of measures consists of ‘basic measures’ and ‘supplementary measures’. Basic measures are the minimum requirements that Member States need to comply with.

One of the basic measures mentioned in the WFD – Article 11 sub. (b) – are ‘measures deemed appropriate for the purposes of Article 9’. From the coming about of Article 9 WFD and the definitions of water service and water use (see hereafter), in my view ‘the purposes of Article 9 WFD’ refers to the purposes as outlined in Article 1 WFD (purpose of the Directive), as the concept of water use applies to the purposes of Article 1 (see the definition of water use in Article 2 (39) WFD).

3. Article 9 – Recovery of the costs for water services

Article 9 (1)⁶ WFD states:

‘Recovery of costs for water services

1. Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs, having regard to the economic analysis conducted according to Annex III, and in accordance in particular with the polluter pays principle.

Member States shall ensure by 2010:

- that water-pricing policies provide adequate incentives for users to use water resources efficiently, and thereby contribute to the environmental objectives of this Directive,
- an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of the costs of water services, based on the economic analysis conducted according to Annex III and taking account of the polluter pays principle.

Member States may in so doing have regard to the social, environmental and economic effects of the recovery as well as the geographic and climatic conditions of the region or regions affected.’

The preamble to the Directive under (38) seems to outline a weak obligation by stating that the use of economic instruments by Member States ‘may’ be appropriate as part of a programme of measures. The use of the word ‘may’ implies that the use of economic instruments as part of a programme of measures is not obligatory. In the articles of the Directive themselves, the obligation for Member States to actually recover the costs of water services also seems rather weak (‘shall take account of the principle of recovery of the costs of water services’).

However, Article 9 (1), under the two dashes, obliges Member States to *ensure* that by 2010:

- a) water pricing policies provide adequate incentives for users to use water resources efficiently and thereby contribute to the environmental objectives of the Directive;
- b) an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture is made to the recovery of the costs of water services, based on the economic analysis conducted according to Annex III of the Directive and taking into account the polluter pays principle.

4 I.e. areas designated as requiring special protection under specific Community legislation (see Art. 6 WFD).

5 Art. 2 sub. 15 WFD: a ‘river basin district’ means the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters, which is identified under Art. 3 (1) as the main unit for the management of river basins.

6 For the purposes of my outline, I will focus on Art. 9 (1) and will not address the remainder of the article unless specifically mentioned.

One could state that these obligations are rather vague and ambiguous as no further details are provided as to what ‘adequate incentives’ are and what an ‘adequate contribution’ is, resulting in, at most, an obligation of best efforts⁷ for the Member States. However, such a view negates the wording of the text. Even though there is non-clarity as to what adequate incentives are, pricing policies are evidently not allowed to be non-incentive in nature. A pricing policy based on digressive prices for water use, in my view, immediately conflicts with the obligation to ensure that water pricing policies provide (adequate) incentives for water users. Furthermore, a specific deadline (‘by 2010’) was inserted into the WFD in order for Member States to have taken their responsibilities for ensuring compliance with Article 9 WFD.

Taking into account the worded obligation to *ensure* by 2010 the *provision of adequate incentives* via water pricing policies and *ensuring an adequate contribution* to the recovery of the costs of water services, the view that the content of Article 9 is non-obligatory cannot be upheld⁸ as the text is straightforward regarding the obligations of the Member States with respect to incentive policies and contributions to be made by users of water.

3.1. Water use and water services

The text of Article 9 WFD (see above) speaks of ‘water services’ and ‘water use(s)’. In this section the content of water use and water services is further examined, starting with an elaboration on water use.

Article 2 (39) WFD defines *water use*:

“Water use” means water services together with any other activity identified under Article 5 and Annex II having a significant impact on the status of water.

This concept applies for the purposes of Article 1 and of the economic analysis carried out according to Article 5 and Annex III, point (b).’

From this definition, one can see that water services include a form of water use, but not all water uses are necessarily water services. This is relevant with regard to the contribution that has to be paid for water services. Member States need to ensure an adequate contribution *of the different water uses* to the recovery of water services. Therefore, what constitutes a water use is of relevance for the coverage of the costs of water services.

Water use means:

- water services; and
- any other activity identified under Article 5 and Annex II having a significant impact on the status of water.

Water services (elaborated upon hereafter) are considered to be water use. What water services are will be elaborated upon later on. At this point the other elements of the definition of water use are examined.

Article 5 WFD roughly outlines that each Member State shall ensure that for a river basin district an analysis of its characteristics is made, a review of the impact of human activity on the status of surface waters and on the groundwater is also made and that an economic analysis of water use is carried out. As the analysis of the characteristics and the economic analysis of water use itself cannot have a significant impact on the status of water, the impact of human activity is meant in the definition of water use. It refers to that specific human activity that is not a water service, but only a ‘water use’ as defined in Article 5 and has ‘a significant impact on the status of water’ (and will therefore be identified under Annex II, see hereafter).

7 An overview of the difficulties that arise in assessing the nature of the obligations (an obligation of best efforts or an obligation of results?) is provided by J. van Kempen. He outlines that the absence of a deadline is a hint for an obligation of best efforts, but the presence of a deadline does not automatically result in an obligation of results. Furthermore, he outlines that the presence of exemptions implies an obligation of results, but the absence of exemptions does not automatically lead to an obligation of best efforts. J. van Kempen, ‘Countering the Complexity of Obligations in European Environmental Law, illustrated by an analysis of article 4 of the European Water Framework Directive’, 2012 *Journal for Environmental Law*, accepted, forthcoming.

8 See likewise H. Unnerstall, ‘The principle of full cost recovery in the EU-Water Framework Directive – Genesis and Content’, 2007 *Journal of Environmental Law* 19, no. 1, p. 33.

If it does not have a significant impact,⁹ it is not a water use under Article 2 (39) WFD, and no adequate contribution to the recovery of the costs of water services will thereby be due. Howarth¹⁰ thinks differently about this. He holds the view that ‘where an activity gives rise to an increased cost to a water service provider, there is an obligation to ensure that those engaged in the activity make a corresponding contribution to meet that increased cost.’ Based on the text of the WFD I disagree with this view, as only uses (not being a water service) mentioned in Article 5 and Annex II having a significant impact on the status of water can be identified as a water use and thereby need to contribute adequately to the recovery of the costs of water services.

Annex II outlines, amongst other things, that Member States should identify anthropogenic pressures to which the identified surface water bodies in a river basin district are liable to be subject. It mentions (under 1.4):

- significant point source pollution;
- significant diffuse pollution;
- significant water abstraction for urban, industrial, agricultural and other uses, including loss of water in distribution systems;
- significant water flow regulation, including water transfer and diversion;
- significant morphological alterations to water bodies;
- other significant anthropogenic impacts on the status of surface waters;
- land use patterns, including identification of the main urban, industrial and agricultural areas, fisheries and forests (the last two only if relevant).

For groundwaters the following have to be identified:

- The impact of human activity (2.3 – only for bodies of groundwater being at risk of failing to meet the environmental objectives under Article 4 WFD). This includes amongst others, the rates of discharge of identified substance into the groundwater body and the identification of land use in the catchment(s) from which the groundwater body receives its recharge, including pollutant inputs and anthropogenic alterations to the recharge characteristics such as rainwater and run-off diversion through land sealing, artificial recharge, damming or drainage.
- The impact of changes in groundwater levels.
- The impact of pollution on groundwater quality.

Article 2 (38) WFD provides a definition of *water services*:

“Water services” means all services which provide, for households, public institutions or any economic activity:

- (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater;
- (b) waste-water collection and treatment facilities which subsequently discharge into surface water.’

It is the European Commission’s opinion that a number of Member States take the position that only the supply of drinking water and the disposal and treatment of waste water are water services.¹¹ This can be considered a ‘narrow view’ of the definition of water surfaces, as certain other water-related activities are excluded, like water use for hydropower production or water use for agricultural irrigation.

⁹ Recreational angling as an example will not qualify as water use, as it does not have a significant impact on the status of surface water or groundwater.

¹⁰ See differently: W. Howarth, ‘Cost recovery for water services and the polluter pays principle’, 2009 *ERA Forum*, DOI 10.1007/s12027-009-0134-3.

¹¹ European Commission, Press release IP/11/1101; IP/11/1264; IP/11/1433.

3.2. Interpreting ‘water services’

For the cost recovery of water services as mentioned in Article 9 WFD, but also for the (scope of the) economic analysis as mentioned in Article 5 WFD, the interpretation of water services is of great importance. Different interpretations are possible, ranging from a ‘narrow view’ of water services to a ‘broad’ view. In order to outline the consequences of a broad view of water services in relation to water-related ecosystem services, in this paper both a narrow view and the very opposite, a broad view, will be used as a reference. Hereunder, first a reflection is provided on the different views on water services.

3.2.1. Interpreting ‘water services’ – Guidance document

Guidance document no. 1 of the Common Implementation Strategy¹² provides a view on the interpretation of the definition of water services in the WFD. This document reflects an ‘informal consensus position on best practice’ of all participants involved in drafting the document, but does not reflect the formal position of any of them.¹³ Furthermore, a guidance document is not legally binding for the Member States.¹⁴

According to this guidance document a water service can be considered an intermediary between the natural environment and the water use itself. It states that the purpose of a water service is the modification of the key characteristics of natural or discharged water. This is a rather strange formulation – the purpose of the water service being a modification of the key characteristics – which, in my view, means that the water service itself is (or leads to) a modification. The guidance document mentions as examples of a water service the provision of drinking water, waste water treatment and purifying waste water before returning it to the environment. The guidance document also provides some examples of modifications to the characteristics of waters¹⁵ that exist through a water service:

- its *spatial distribution*, e.g. a water supply network for ensuring that water is reallocated spatially to every individual user;
- its *temporal distribution/flows*, e.g. dams;
- its *height*, e.g. weirs and dams;
- its *chemical composition*, e.g. treatment of water, and waste water;
- its *temperature*, e.g. the temperature impact on water.

3.2.2. Interpreting ‘water services’ – The European Commission

The Commission’s position on ‘water services’ has become clearer over time.

As in 2002 a question¹⁶ regarding water services was raised at the Commission and it related to whether the use of hydroelectric power is a water service, the answer was provided that it is ‘impossible to provide a general response on the role of hydroelectric power plants in the context of cost recovery for services.’ This answer seems to reflect a Commission still *in dubio* on the exact meaning of water services.

The Commission seems to have made up its mind. It sees water services ‘as a wider notion that also includes water abstraction for the cooling of industrial installations and for irrigation in agriculture; the restriction of surface waters for navigation purposes, flood protection or hydro power production; and wells drilled for agricultural, industrial or private consumption.’¹⁷ In taking that position, the Commission found that several Member States were not interpreting ‘water services’ in line with the Commission’s

12 Common Implementation Strategy of the Water Framework Directive (2000/60/EC), *Guidance document no. 1, Economics and the environment, the implementation challenge of the Water Framework Directive*, European Communities 2003.

13 Ibid. Participants for this guidance document were the European Commission, all Member States, Accession Countries, Norway and other stakeholders and NGOs.

14 See on the difficulties in the implementation of environmental directives, outlining also the function of guidance documents therein: B.A. Beijen, ‘The Implementation of European Environmental Directives: Are Problems Caused by the Quality of the Directives?’, 2011 *European Energy and Environmental Law Review* 20, no. 4, pp. 15-163.

15 Common Implementation Strategy of the Water Framework Directive (2000/60/EC), *Guidance document no. 1, Economics and the environment, the implementation challenge of the Water Framework Directive*, European Communities 2003, p. 73.

16 Written question E-1571/02 by Rolf Linkohr (PSE) to the Commission, 4 June 2002.

17 European Commission, Press release IP/11/1101.

view. The Commission takes the position that those countries cannot therefore be applying Article 9 WFD correctly.

It started several pre-litigation procedures by sending a formal notice¹⁸ to Germany, Ireland, Belgium, Denmark, Finland, Sweden, Austria, Estonia, Hungary and the Netherlands. The countries involved mostly hold the view that the cost recovery for water services is only applicable for the supply of drinking water and the disposal and treatment of waste water. The sending of such a notice, addressing the supposed non-compliance with European legislation and requesting a response from the Member State, is the start of an infringement procedure (Article 258 TFEU). The Member State may provide its observations on the matter to the Commission. If the differences in views are not resolved and the Commission still holds the position that the Member State is non-compliant, a reasoned opinion will follow to pressure the Member State into changing its ways. If the Member State concerned does not comply with the opinion within the period laid down by the Commission, the Commission can bring the case to the European Court of Justice (ECJ).

And that is what it did when referring the case against Germany to the ECJ. In the Commission's view Germany incorrectly applies the principle of the cost recovery of water services in the WFD, due to an incorrect interpretation of water services.¹⁹

3.2.3. Interpreting 'water services' – NGOs

In taking the above outlined position on the interpretation of water services, the Commission seems to acknowledge the view of the World Wide Fund (WWF) and the European Environmental Bureau (EEB) on water services. These organizations filed a complaint²⁰ with the Commission with regard to the – in its opinion – failure of several Member States to comply with Article 5 (1) of the WFD, due to not accurately defining water services.

The WWF and the EEB complained to the Commission and requesting it to take action to come to a similar ('broad view') understanding of water services in the Member States. The WWF and the EEB initiated the complaint on non-compliance by the countries involved with Article 5 (1) WFD. Article 5 (1) WFD states:

- '1. Each Member State shall ensure for each River basin district or for the portion of an international river basin district falling within its territory:
- an analysis of its characteristics
 - a review of the impact of human activity on the status of surface waters and on groundwater and,
 - an economic analysis of water use
- is undertaken according to the technical specifications set out in Annex II and III and that it is completed at the latest four years after the date of entry into force of this Directive.'

The complainants hold the view that an economic analysis as meant in Article 5 (1) WFD can only be satisfactory from an environmental point of view if 'water services' are broadly defined. And as – in their view – several countries hold a 'too narrow' view of water services, a meaningful economic analysis is not possible, thereby undermining the purpose of the WFD ('sustainable water management').

Annex III of the WFD outlines what the economic analysis should contain, i.e. 'enough information in sufficient detail (taking account of the costs associated with the collection of the relevant data) in order

18 European Commission, Press release IP/11/1101; IP/11/1264; IP/11/1433. The three press releases differ slightly on the formulation of the services ('impoundment or storage of surface waters for navigation purposes' vs. 'restriction of surface waters for navigation purposes') and the consequences of the exclusion of water services by the country involved ('exclusion hinders the full and correct application of the Water Framework Directive' vs. an extra addition 'contributing to inefficient or wasteful use of water').

19 European Commission, Press release IP/12/536; The Commission also notes that similar cases are being investigated in several other Member States (Austria, Belgium, Denmark, Finland, Hungary, the Netherlands and Sweden) and if these cases remain unresolved, the Commission will also refer those countries to the European Court of Justice.

20 Complaint to the European Commission concerning the failure of Austria, Belgium, Denmark, Estonia, Finland, Germany, Hungary, Ireland, Poland, Sweden and the Netherlands to comply with the provisions of the EU Water Framework Directive 2000/60/EC ('WFD') Article 5§1, Brussels, 17 July 2006, WWF/EEB.

to: '(a) make the relevant calculations necessary for taking into account under Article 9 the principle of recovery of the costs of water services (...) (b) make judgments about the most cost-effective combination of measures (...) under Article 11 (...)’.

The complainants have raised the following arguments that call for a broad interpretation of water services:

1. The WATECO guidance document suggests a broad interpretation of water services (see above Section 3.2.1).
2. Member States identified hydro-morphological impacts arising from dams, weirs and dikes as major environmental problems for achieving the objectives of the WFD; by this exclusion the economic analysis cannot comply with the content of Annex III (above).
3. An argument of proportionality ('narrow interpretation') with regard to the interpretation of water services is not applicable; I understand this argument to relate to the collection of data on water services (and the means and possibilities theretofore doing this) for the economic analysis.
4. A water service does not only exist in case of remuneration. Taking an opposite view (i.e. remuneration is essential) amounts to a too narrow interpretation of water services. The complainants state that a narrow interpretation like this 'would run against the intention of the WFD to use water pricing to provide incentives for achieving the environmental objectives, as all activities not currently remunerated would not be automatically excluded. (...) And indeed, in most cases, Member States have already identified "self services" - which are not remunerated - as water services.'

3.2.4. Interpreting 'water services' – the European Court of Justice

When writing this paper no case law was as yet available with regard to the question of how to interpret the definition of water services. In interpretation matters, the ECJ will not only rely on the exact wording (also taking into account any differences in language versions²¹ of the WFD), but will also take into account the Directive and its purpose as a whole.²² Even the content of the preamble, although not legally binding, is relevant as it can cast a certain light on the purpose of and the way the Directive itself came about.

One can assume that the ECJ will view WFD interpretation issues in a similar way as in other environmental cases where interpretation issues were addressed.

For example, with regard to the interpretation of the concept of waste, case law has shown a non-restrictive interpretation. In e.g. *Commune de Mesquer*²³ the Court considered:

'Thus, in the context of that directive [i.e. Directive 75/442], the scope of the term 'waste' turns on the meaning of the term 'discard' (Case C-129/96 *Inter-Environnement Wallonie* [1997] ECR I-7411, paragraph 26), and consequently, in accordance with the Court's case-law, those terms must be interpreted in the light of the aim of the directive (Joined Cases C-418/97 and C-419/97 *ARCO Chemie Nederland and Others* [2000] ECR I-4475, paragraph 37), which, in the words of the third recital in the preamble to the directive, consists in the protection of human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste, having regard to Article 174 (2) EC, which provides that Community policy on the environment is to aim at a high level of protection and is to be based, in particular, on the precautionary principle and the principle that preventive action should be taken (...) The Court has also held that, in view of the aim pursued by Directive 75/442, the concept of waste cannot be interpreted restrictively (see *ARCO Chemie Nederland*, paragraph 40).'

21 See C-72/95 *Kraaijeveld* [1996] ECR I-5403, Para. 28.

22 H.F.M.W. van Rijswijk, 'Transities in het Europese waterrecht: Kansen, bedreigingen en misvattingen rond de Kaderrichtlijn Water', in S. van der Arend et al. (eds), *Tien Jaar Ervaring met de Europese Kaderrichtlijn Water, Ambities en Ambivalenties*, 2010, p. 20.

23 C-188/07, *Commune de Mesquer*, Para. 38.

If a similar view is applied in the cost recovery for water services, a non-restrictive interpretation of water services would apply. As mentioned above, the first case law on water services and cost recovery is still to come.

3.3. Arguments in favour of a narrow interpretation?

As mentioned above, a number of Member States take the position that only the supply of drinking water and the disposal and treatment of waste water are water services,²⁴ thereby holding a so-called 'narrow view' of water services. However, the motivation for taking this position remains unclear. For example:

The Netherlands²⁵ acknowledges that hydro power production can be considered a water service, but justifies not attributing it as a water service on the minimal use²⁶ of hydro power in the Netherlands. The minimal use of a water service is however not a justification for Member States not to appoint it as a water service. Any exemption regarding the recovery of the costs of such (minimal) water service should be based on the exemption possibilities as mentioned in Article 9 WFD. Member States may, with regard to the cost recovery obligation, have regard to the social, environmental and economic effects of the recovery as well as the geographic and climatic conditions of the region or regions affected. Therefore, the sole argument that hydropower in the Netherlands is only minimal use does not in itself justify the non-appointment as a water service. Nor is the absence of a significant (negative?) effect on water relevant, as the significance of the impact on water is only relevant to determine water uses, and not water services (see Article 2 (39) WFD in comparison to Article 2 (38) WFD).

The same goes for the following example: the Netherlands sees the impoundment of surface waters for navigation purposes and water for recreational purposes as water use not being a water service.²⁷ It is, however, unclear to what exemption in the WFD the Netherlands relies upon in taking this position or why these water activities would not fall under the definition of water services in the WFD (lack of motivation).

Also some scholars seem to hold such a narrow view. Brouwer,²⁸ in his inaugural speech, interpreted the definition of water services also (very) narrowly, relating it to just drinking water, waste water collection and treatment, but not elaborating upon why he takes this position.

But what could justify such a position? And should water services be interpreted more broadly than the Member States involved, and (perhaps) Brouwer, have done?

3.4. Arguments in favour of a broad interpretation

Which arguments can be found in favour of a broad interpretation of water services?

First of all, the coming about of the Directive implies that a broad interpretation is allowable. The explanatory memorandum with the first formal Directive proposal²⁹ mentions with regard to charges for water use:

'However, there is scope for improving the efficiency of water use and the effectiveness of environmental provisions relating to its use by ensuring that, so far as is reasonable, the price of water is a genuine reflection of the economic costs involved, including the environmental and resource costs. This concept was not outlined in the Commission's Communication, but has

24 European Commission, Press release IP/11/1101; IP/11/1264; IP/11/1433.

25 See also H.F.M.W. van Rijswijk & H.J.M. Havekes, *European and Dutch Water Law*, 2012, p. 431, remarking that in the implementation process of the WFD in the Netherlands, the position was taken that the concept of water services should be interpreted broadly, referring to Dutch parliamentary documents: *Kamerstukken II 2002/2003*, 28 808, no. 3, pp. 16-17. However, regardless of this remark in parliamentary documents a number of water-related activities/services were not appointed as a water service.

26 The Netherlands holds the view that hydro power is not a water service due to its very limited use in the Netherlands (not significant) and the fact that it has a limited effect on water. What limited effect it does have is not mentioned, however.

27 Rijkswaterstaat, 'Kostenterugwinning van Waterdiensten in Nederland', RWS Waterdienst rapport 2008.051, p. 11.

28 R. Brouwer, *Payment for Ecosystem Services: Making Money Talk*, 2010, p. 21.

29 Proposal for a Council Directive establishing a framework for Community action in the field of water policy, COM(97) 49 final, pp. 16-17.

emerged from the consultation exercise as a means of more fully implementing the polluter-pays principle in this sector.

To this end, Article 7 [now 5] of the Directive requires an economic analysis of different water uses to be carried out which, *inter alia*, will allow a more realistic view of the economic costs of different water uses in the River Basin Districts to emerge. Article 12 [now 9] then requires that prices for water use reflect the economic costs more closely. (...) Article 12 [now 9] of this Directive obliges Member States to ensure that all costs (as specified) for *all services in relation to water use* [emphasis added] are fully recovered, overall, *i.e.* from the entirety of users, and by economic sector, *i.e.* from within each economic sector when splitting up all water uses of that particular service of that particular sector into at least the following three economic sectors: households, industry and agriculture by 2010.’

It must be said that in that proposal a definition of water services was lacking. The text only speaks of the recovery of all costs for ‘services provided for water uses’. ‘Use of water’ in this first proposal was defined as:

- ‘(a) abstraction, distribution and consumption of surface water or groundwater;
- (b) emission of pollutants into surface water and waste water collection and treatment facilities which subsequently discharge into surface water;
- (c) any other application of surface water or groundwater having the potential of a significant impact on the status of water.’

Then in the amended proposal³⁰ (Article 12 (1)a) Member States were addressed to take into account the principle of the recovery of the environmental and resource costs of water use, ‘with a view to setting charges at a level which encourages the attainment of the environmental objectives³¹ of this Directive’. The definition of water use did not change.

‘Water services’ was defined for the first time in the Common Position³² in Article 2 (34):

“‘Water services’ means:

- (a) Abstraction, distribution and consumption, or use in any economic activity of surface water or groundwater;
- (b) Emission of pollutants into surface water and waste water collection and treatment facilities which subsequently discharge into surface water.’

Water use was defined in Article 2 (35) as:

“‘Water use’ means water services together with any other activity identified under Article 5 and Annex II having a significant impact on the status of water. This concept applies for the purposes of Article 1 and of the economic analysis carried out according to Article 5 and Annex III, point (b).’

The Commission³³ again reworded the definition of water services (Article 2 (34)) and water use (Article 2 (35)):

30 Amended proposal for a European Parliament and Council Directive establishing a framework for Community action in the field of water policy, (COM(1997) 49 final), COM(1999) 271 final, p. 26.

31 Although in this conceptual text the Member States needed to take into account the principle of cost recovery with a view to setting charges at a level which encourages the attainment of the environmental objectives, therefore limiting it to the objectives mentioned in Art. 4 and no longer to Art. 1 WFD, this changed again in later versions by redefining ‘water use’ and relating this water use (including services) to the purposes of Art. 1 WFD (see Art. 2 (39) WFD second sentence).

32 OJ C 343, 31.11.1999, Art. 2 (34).

33 COM(2000) 219 final.

“Water services” means:

- a. All services providing abstraction, impoundment, distribution and treatment of surface water or groundwater;
- b. Waste water treatment and waste water disposal into surface water.’

“Water uses” includes the main economic sectors such as domestic, agriculture and industry, amenities or other legitimate uses of the environment together with any other activity identified under Article 5 and Annex III having a significant impact on the status of water. This concept applies for the purposes of Article 1 and of the economic analysis carried out according to Article 5 and Annex III, point (b).’

The cost recovery article in the WFD (the former Article 12) was also reworded (Article 9), stressing that the charging system for water services would act as an incentive for the sustainable use of water resources and directly relates to achieving the environmental objectives of the Directive, having the various economic sectors contribute fairly to the costs of water services.

No further explanation or clarification of the interpretation of the final text of Article 9 or the definitions of water services and water use was provided, when a joint text³⁴ between the Parliament and the Council was attained. The final text therefore became (Article 2 (38) WFD):

“Water services” means all services which provide, for households, public institutions or any economic activity:

- (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater;
- (b) waste-water collection and treatment facilities which subsequently discharge into surface water.’

Secondly, a broader interpretation is compatible with the purpose of the Directive (Article 1 WFD), where the recovery of the costs of water services contributes to sustainable water use and compliance with the polluter pays principle therein prevents the (further) pollution of surface waters and groundwater. Any narrow interpretation, reducing water services to only the supply of drinking water and waste water treatment, would degrade the purpose of the Directive as outlined in Article 1 WFD to an almost empty shell.

Thirdly, a broader interpretation is not related one-on-one to the obligatory payment of the services, as Article 9 WFD explicitly provides for an exemption³⁵ under which Member States can take certain circumstances into account. Member States may, with regard to the obligations concerning the drawing up of incentive-providing water pricing policies and ensuring adequate contributions of water uses to the costs of water services, have regard to the social, environmental and economic effects of the recovery as well as the geographic and climatic conditions of the region or regions affected.

Fourthly, the existence of a water service is not connected to the existence of a technical means. Unnerstall,³⁶ for instance, interprets water services as a wider notion, but relates the existence of a water service to the water use in conjunction with a *technical means* or in relation to an economic activity. In his view a technical means, which changes the key characteristics of water is a necessity to be a water service. He states ‘Similarly in the WFD, water extraction itself is no water service, but only in connection with technical means, which changes the water in key characteristics or if it is used for an economic activity.’

34 The European Parliament / The Council, ‘Joint text approved by the Conciliation Committee provided for in Article 251 (4) of the EC Treaty 1997/0067 (COD), C-5-0347/00, PE-CONS 3639/00 ENV 221 Codex 513 (2000)’.

35 See also Van Kempen on the presence of exemptions in Directives in J. van Kempen, ‘Countering the Complexity of Obligations in European Environmental Law, illustrated by an analysis of article 4 of the European Water Framework Directive’, 2012 *Journal for Environmental Law*, accepted, forthcoming.

36 H. Unnerstall, ‘The principle of full cost recovery in the EU-Water Framework Directive – Genesis and Content’, 2007 *Journal of Environmental Law* 19, no. 1, p. 35.

Although acknowledging that water services will exist more evidently in case of a technical means as an intermediary, the Directive itself does not outline the necessity of technical means to establish, for instance, the modification of the key characteristics of water.

4. Water-related ecosystem services

The purpose of the WFD, as outlined in Article 1, is amongst others the prevention of further deterioration and the protection of the status of aquatic ecosystems as well as the promotion of sustainable water use based on long-term protection of available water resources (Article 1 (a)/(b) WFD). No definition of an ecosystem is provided in the WFD.

Depending on the point of view, an ecosystem is defined differently. Ecologists³⁷ may use a different definition than, for instance, economists or legal scholars. For this paper the descriptions of an ecosystem, a water-related ecosystem and water-related ecosystem services as used in the Recommendations on Payment for Ecosystem Services (UNECE, 2007)³⁸ suffice:

‘Ecosystem: means a dynamic complex of plant, animal and microorganism communities and their nonliving environment interacting as a functional unit. Ecosystems vary from relatively undisturbed ones, such as natural forests, to landscapes with mixed patterns of human use and ecosystems that are intensively managed and modified by humans, such as agricultural land and urban areas.’

‘Water related ecosystems: means ecosystems such as forests, wetlands, grasslands and agricultural land that play vital roles in the hydrological cycle through the services they provide.’

‘Water-related ecosystem services: means such services as flood prevention, control and mitigation; regulating runoff and water supply; improving the quality of surface waters and groundwaters; withholding sediments, reducing erosion, stabilizing river banks and shorelines and lowering the potential of landslides; improving water infiltration and supporting water storage in the soil; and facilitating groundwater recharge. Water-related ecosystem services also include cultural services, such as recreational, aesthetic and spiritual benefits of forests and wetlands.’

Also with regard to sub-defining water-related ecosystem services several divisions can be made. Some³⁹ make a sub-division into:

- production services (e.g. drinking water supply);
- regulating services (e.g. water regulation);
- cultural services (e.g. water for recreation/religious purposes etc.);
- supporting services (e.g. water as a medium for processes like navigation or nutrient transport).

As the focus of this article is not on the different purposes of water use, but on the congruence of ecosystem services with WFD water services, another more functional division is made. For this article the division made in the Recommendation on Payments for Ecosystem Services (UNECE, 2007) is used.

37 E.g. D.M. Post et al. (eds.), ‘The problem of boundaries in defining ecosystems: A potential landmine for uniting geomorphology and ecology’, 2007 *ScienceDirect Geomorphology* 89, p. 113: ‘They also provide us with a useful definition of an ecosystem – a region of strong interactions among organisms and between organisms and the flux and flow of energy or material.’ Also see the other definitions of ecosystems provided in this article.

38 Recommendation on Payments for Ecosystem Services in Integrated Water Resources Management, UN Doc. ECE/MP.WAT/22 (2007), p. 2.

39 T.C.P. Melman & C.M. van der Heide, ‘Ecosysteemdiensten in Nederland: verkenning betekenis en perspectieven. Achtergrondrapport bij Natuurverkenning 2011’, WOt rapport 111 (2011).

Water-related ecosystem services can be differentiated into:

- services regarding the water quantity;
- services regarding the water quality.

Water *quantity* services are for instance flood protection and water regulation. The means by which this ecosystem service can be provided are, amongst others:⁴⁰

- forestation;
- specific forms of agriculture;
- flood plain restoration.

These activities can provide, in the form of an ecosystem service, better flood protection and/or water regulation due to the fact that they create a better run-off of excess water, better infiltration possibilities or a better retention and storage of excess water.

With regard to water *quality* services, one can think of activities concerning restricting/curbing water pollution and water purification activities. The means by which these ecosystem services can be provided are, amongst others:

- creating swamps;
- introducing pollution quotas;
- more extensive land use.

It is important to realize that the above segregation in quality and quantity services is an artificial one as the ecosystem services regarding the quantity of water also affect the quality of water.⁴¹ However, for the focus of this article some of the above examples are used to outline the crux of the analysis.

4.1. Water-related ecosystem services and water services (WFD)

Water-related ecosystem services are not always evidently also a water service as defined in the WFD. As Table I shows and is elaborated upon below, depending on the interpretation of water services (WFD) being narrow or broad, a water-related ecosystem service can be distinguished more or less evidently to be also a WFD water service.

If a 'narrow' interpretation of water services should be the leading one, i.e. only the supply of drinking water and the disposal and treatment of waste water are water services, only *ecosystem services relating to purification* can be identified to be a WFD water service. These activities can be stipulated as (waste) water treatment. Examples thereof are the restoration of wetlands as well as their creation and preservation, paddy cultivation and land buffer zones.

Curbing water pollution (as a *quality* ecosystem service) by means of the extensification of (agricultural) land use is, in a 'narrow' view, not a WFD water service, as it does not provide the supply of drinking water or the disposal and treatment of waste water.

From a 'broad' point of view, however, it is already more doubtful. If the extensification of land use directly relates to curbing water pollution, one can take the position that curbing water pollution as an ecosystem service is indeed a WFD water service, as the service effectively provides for the storage, treatment and distribution of surface water.⁴² The WFD definition of water services is not bordered by the intention relating to the activity being performed. Therefore, the fact that the extensification of land

40 Recommendation on Payments for Ecosystem Services in Integrated Water Resources Management, UN Doc. ECE/MP.WAT/22 (2007), p. 4.

41 See for instance Millennium Ecosystem Assessment, <<http://www.maweb.org/en/Condition.aspx>>, Chapter 7, p. 185 (last visited 5 November 2012).

42 Recommendation on Payments for Ecosystem Services in Integrated Water Resources Management, UN Doc. ECE/MP.WAT/22 (2007), p. 4: 'Conservation agriculture refers to a range of soil management practices that minimize effects on composition, structure and natural biodiversity and reduce erosion and degradation (...) Furthermore, *less contamination of surface water* [emphasis added] occurs and water retention and storage are enhanced, which allows recharging of aquifers.'

use is – in this example – directly related to/institigated by the target of curbing water pollution, the effect of the activity can still be determined to be a water service which provides for the storage, treatment and distribution of surface water. The same applies for the restoration and preservation of natural land cover.

Differently, the water quality ecosystem service of curbing water pollution⁴³ by means of the introduction of *pollution quotas* does improve the water quality, but cannot be considered as a WFD water service, both in a narrow and a broad interpretation of water services. It is not a water service which provides for households, public institutions or any economic activity in the abstraction, impoundment, storage, treatment and distribution of surface water or groundwater.

Table I The coming together of water services and ecosystem services

Interpretation	Water service WFD	Quality ecosystem service	How/means
Narrow	Supply of drinking water		
	Waste water collection		
	Waste water treatment	← Purification	Wetlands' restoration/creation/preservation; Paddy cultivation; Land buffer zones;
Broad	Service which provides for storage, treatment and distribution of surface water	← Curbing water pollution	Extensification of land use
	Service which provides for storage, treatment and distribution of surface water	← Curbing water pollution	Restoration/preservation natural land cover
Interpretation	Water service WFD	Quantity ecosystem service	How/means
Narrow	Supply of drinking water		
	Waste water collection		
	Waste water treatment		
Broad	A.o. flood protection	← Flood protection/water regulation**	Forestation
			Specific forms of agriculture (conservation agriculture)
			Flood plains (creation/restoration)

** run off/infiltration/retention/storage

The same ambiguity holds true for water quantity ecosystem services. In interpreting water services 'broadly' as the Commission⁴⁴ does, also water-related ecosystem services such as *flood protection* would fall under the definition of WFD water services. As certain water-related ecosystem services contribute to flood protection or mitigating the effects of floods, logically these activities are then to be considered as a water service. That again implies that the costs of the activities concerning the ecosystem service, i.e. for instance forestation, stimulating specific forms of agriculture and the creation, restoration and conservation of flood plains, need to be paid for via cost recovery under Article 9 WFD, including the disaggregation into at least industry, households and agriculture.

However, one should take into account that the European Union has a more limited competence to harmonize in water quantity matters. Based on Article 191 TFEU Union policy shall contribute to the

43 Recommendation on Payments for Ecosystem Services in Integrated Water Resources Management, UN Doc. ECE/MP.WAT/22 (2007), p. 4.

44 European Commission, Press release IP/11/1101; IP/11/1264; IP/11/1433.

pursuit of, amongst others, the objective of prudent and rational utilization of natural resources. The European Parliament and the Council act in that respect according to the ordinary legislative procedure⁴⁵ (co-decision) in deciding what actions are to be taken to achieve this objective. The WFD itself came about based on this procedure.

If, however, measures to achieve the objectives in Article 191 TFEU are to be taken that affect the quantitative management of water resources or affecting, directly or indirectly, the availability of those resources, and measures that affect land use, a specific legislative procedure applies. Article 192 (2) TFEU provides for such decisions a derogation from the ordinary legislative procedure to a procedure based on unanimity.

In which situations measures ‘affect’ the quantitative management of water resources or land use is not very clear. Jans & Vedder, in my opinion correctly, reflect that ‘the current text of the Treaty which speaks of “affecting” rather than “concerning” makes clear that the mere fact that a measure which has consequences for the physical layout of the territory of a Member State does not mean that it should be taken unanimously.’⁴⁶ In *Spain vs. Council* this view seems to be confirmed. In that case the Court addressed the scope of Article 130s (1) TEC, now Article 192 (1) TFEU and Article 130s (2) TEC, now Article 192 (2) TFEU.⁴⁷ It considered:

‘In that regard, it should be pointed out first of all that it is clear from the objectives of Community policy on the environment and from a reading of Article 130r in conjunction with Article 130s(1) and (2) of the Treaty that the inclusion of the ‘management of water resources’ in the first subparagraph of Article 130s(2) of the Treaty is not intended to exclude any measure dealing with the use of water by man from the application of Article 130s(1) of the Treaty. (...) The territory and land of the Member States and their water resources are limited resources and the second indent of the first subparagraph of Article 130s(2) of the Treaty therefore refers to the measures which affect them as such, *that is measures which regulate the quantitative aspects of the use of those resources or, in other words, measures relating to the management of limited resources in its quantitative aspects* [emphasis added] and not those concerning the improvement and the protection of the quality of those resources.’

This jurisprudence, however, does provide a limit to the width of interpretation of ‘water services’ as mentioned in the WFD. As mentioned earlier, the WFD itself is based on (the now) Article 192 (1) TFEU. The purpose of the Directive is not to provide measures which regulate the quantitative aspects of the use of water resources. Therefore, any measures that are (to be) taken with the purpose of regulating the quantitative aspects of the use of water resources fall outside the scope of Article 9 WFD.

On the other hand, it is too rigorous to state that quantity ecosystem services should per se be excluded from being ‘water services’ as defined in the WFD.

5. Conclusion

The European Commission has started several pre-litigation procedures on the topic of the interpretation of water services and has referred its first case to the European Court of Justice. The case law emanating therefrom may provide more clarity as to the scope of application of also Article 9 WFD (the cost recovery of water services) to water-related ecosystem services and the necessity to adjust water legislation, on both the European and national level.

From the elaboration of the interpretation of water services in this paper several concluding remarks can be made:

⁴⁵ Art. 294 TFEU.

⁴⁶ J. Jans & H.H.B. Vedder, *European Environmental Law, After Lisbon*, 2012, p. 62.

⁴⁷ C-36/98, *Spain vs. Council*, Paras. 50, 52.

1. The text of the WFD on water services and the coming about of the Directive provide room for a broad interpretation of water services (being more than only the supply of drinking water and the disposal and treatment of waste water).
2. If 'water services' are interpreted broadly, the WFD embraces the concept of payment for water-related ecosystem services. Water-related ecosystem services such as flood protection, purification and – to a certain extent – curbing water pollution fall within the scope of the WFD.
3. A broad interpretation of water services incorporates water-related ecosystem services in the WFD, which is compliant with the purpose of the Directive, striving to attain sustainable water use based on a longer protection of available water resources.
4. Unclear is where the boundaries of a broad interpretation of water services lie. The broader the interpretation of water services, the more water-related ecosystem services should be stipulated to be a WFD water service, resulting also in obligatory cost recovery as Article 9 WFD requires. The question is how to deal – for instance – with activities falling under the concept of multi-layer flood risk management,⁴⁸ where the prevention of floods and mitigating the effects of floods is not only found in higher and/or more stable dykes, but also in better spatial planning and flood-proof building.

In the Netherlands, public project costs⁴⁹ regarding private building initiatives for – for instance – flood-proof building are fully retrieved from the private initiator. Should flood-proof building be required due to flood protection policies and – in line with a broad view on water services – be considered a WFD water service, the full retrieval of water service costs (i.e. flood protection) on exclusively the private initiator would be contradictory to Article 9 WFD, as an adequate contribution of the different water uses (industry, households and agriculture) to the recovery of the costs should be ensured and flood protection reaches further than only the private initiator.

Those measures can hardly be seen as regulating the quantitative aspects of the use of water resources or its availability. The system of Article 9 WFD would bring along that the costs concerned would adequately have to be paid for by industry, households and agriculture in situations where it currently may not be.

5. The broadness of interpreting 'water services' is limited by the intent of a regulation. As the WFD itself is based on (the now) Article 192 (1) TFEU and the purpose of the Directive is not to provide measures which regulate the quantitative aspects of the use of water resources, any measures (to be) taken with the purpose of regulating quantitative aspects of the use of water resources fall outside the scope of Article 9 WFD.

As the Commission has referred its first case on the interpretation of 'water services' to the ECJ, it is to be hoped that the Court will provide some clarity on the interpretation of this term and the scope of application of Article 9 WFD and thereby perhaps boosting the payment for water-related ecosystem services.

⁴⁸ See a.o. Rijkswaterstaat, 'Syntheserapport Gebiedspilot meerlaagsveiligheid', no. 0243629.00, (2011).

⁴⁹ See Art. 6.2.4 Besluit ruimtelijke ordening (21 April 2008); e.g. environmental research costs, costs for backfilling of surface waters, plan costs, compensation costs for loss of water facilities, damage costs.